

A Peer Revieved Open Access International Journal

www.ijiemr.org

COPY RIGHT





2021 IJIEMR. Personal use of this material is permitted. Permission from IJIEMR must

be obtained for all other uses, in any current or future media, including reprinting/republishing this material for advertising or promotional purposes, creating new collective works, for resale or redistribution to servers or lists, or reuse of any copyrighted component of this work in other works. No Reprint should be done to this paper, all copy right is authenticated to Paper Authors

IJIEMR Transactions, online available on 10th May 2021.

Link: https://ijiemr.org/downloads/Volume-10/Issue-5

DOI: 10.48047/IJIEMR/V10/I05/1

Title: ARCHITECTURAL AND CONSTRUCTIVE REQUIREMENTS FOR THE

CONSTRUCTION OF SECONDARY SCHOOL BUILDINGS

Volume 10, Issue 05, Pages: 1-4

Paper Authors:

Nematullah Kamal¹, Turayev Khumoyiddin Abdugafforovich²





USE THIS BARCODE TO ACCESS YOUR ONLINE PAPER

To Secure Your Paper As Per UGC Guidelines We Are Providing A Electronic

Bar Code



A Peer Revieved Open Access International Journal

www.ijiemr.org

ARCHITECTURAL AND CONSTRUCTIVE REQUIREMENTS FOR THE CONSTRUCTION OF SECONDARY SCHOOL BUILDINGS

Nematullah Kamal¹, Turayev Khumoyiddin Abdugafforovich² Magistrate of Engineering Graphics and Design Theory, Termez State University¹. Scientific consultant, Termez State University².

E-mail: nematullah786kamal@gmail.com E-mail: xumoyiddin.turayev.1991@bk.ru

Abstract: This article provides information on architectural and constructive requirements for the construction of secondary school buildings in general.

Keywords: building, construction, constructive, exterior, interior, monolith, tipovoy.

Introduction

Building - a terrestrial facility designed and adapted to a person's work activity, with an internal space-space.

Infrastructure - all devices built by people to meet the material and spiritual needs of society.

Engineering facilities - used in practical work activities, structures that are not connected to buildings: dams, bridges, television tower, tunnels, Metropolitan, large containers that store various products, etc.¹

Buildings can consist of the following parts:

- 1. Volumetric elements, that is, large parts of the building volume (separate rooms, sanitary cabins, etc.).
- 2. Constructive elements, that is, the main parts that determine the structure of the building (foundations, walls, fences, floor closures, closures, roofs, etc.).
- 3. Construction materials, that is, those that form a constructive element, are relatively small parts (concrete, window, steel, fittings, etc.).

Buildings differ from each other according to the following indicators:

1. Compliance with the task, that is, what process (purpose)the building is intended for, it must fully meet the same process requirement (for living, comfortable to work, adapted to rest, etc.).

- 2. Compliance with the technical side, that is, the building should be able to fully protect people from external influences (low or high temperature, precipitation, wind, etc.), be solid and master craftsman, maintain operational qualities for a long time.
- 3. The appearance of the building should be chosen in accordance with the requirements of architecture and artistry, the appearance of its exterior (exterior) and interior (interior) should be beautiful, comfortable, harmonious with the environment.
- 4. It is planned to reduce labor costs in terms of economic convenience, that is, in the construction of buildings and structures, saving construction materials and time.

The above-described building structures are affected by several different external and internal forces, the definitions of which are as follows:

- **1. External forces** the specific weight of the building elements (parts), the impact force of the wind, the impact on the result of an earthquake, accidental breakdown of equipment, etc.;
- 2. Environmental impact external temperature (the construction leads to a change in the linear dimensions), the effect of atmospheric and soil moisture (leads to a change in the properties of building materials), the effect of the direction of air flow (leads to a change in the microclimate in the room), the

DRAWING LESSONS GRAPHICALLY //Science and Education. $-2021. - T. 2. - N_{\odot}. 2. - C. 264-268.$

Vol 10 Issue05, May 2021

¹ Turayev X. A. et al. METHODICAL RECOMMENDATIONS ON THE IMPLEMENTATION OF THE THEME OF FORTY IN



A Peer Revieved Open Access International Journal

www.ijiemr.org

effect of sunlight energy (leads to a change in the physical and technical properties of building materials), the), violation of the normal acoustic regime in the room from the impact of noise inside or outside the building.

The loads that affect the structure and buildings are divided mainly into two groups according to the reason for their origin:

- 1. Natural loads;
- 2. Artificial loads.

Natural loads are divided into three, depending on the changing environment:

- 1. Meteorological;
- 2. Gravitational;
- 3. Convulsive.

Depending on the effect of the loads can be as follows:

- permanent and temporary;
- permanent-natural (weight of the main parts of the building);
 - Earth pressure.

Temporary loads are divided into longterm, short-term and specific loads:

- long-term shipments: technical equipment inside the building;
- short-term loads: people's weight, stored load, transport in motion, snow and ice coverage, wind force;
- specific loads: due to a violation of the structure of the Earth.

Snow load. Snow load often leads to an accident of structures. Snow loads are predetermined in mountain areas, uneven areas with the help of the gidromet service. Snow and rain in our republic depend on certain conditions, their impact on buildings is given in normative indicators. Their effects are mainly taken into account in the design and calculation of buildings and structures as a separate burden.

Wind effect. The wind of the storm causes the destruction of most engineering devices. The Shape of the buildings and structures - depending on their height, the aerodynamic effect will be different. If the roof of the building has two slopes, then the side on which the wind comes can rise. The force of the

wind blowing when the roof of the building is closed with light material can lift it, creating a lot of force from its weight. Masters should always consider this.

Earthquake force - the earthquake causes a lot of destruction. Therefore, it is necessary to take special measures in the regions where there will be an earthquake.

Any external forces that affect the structure are called loads. Loads are divided into different (classified) depending on the nature of impact, the appearance of impact, the method of impact, the place of impact):

1. Loads are divided into static and dynamic loads, depending on the duration of the loading time.

Static loads - it is placed so gently on the structure or its elements that the resulting acceleration in the elements is small enough that it does not take into account the value of the acceleration generated. In other words, under the influence of static loads, the vibration in the construction either does not wake up, or it is very small, even if it wakes up.

Dynamic loads - in its effect, the acceleration in the structure and its elements Awakens, which in turn causes vibrations to occur².

2. Loads can be permanent and temporary, depending on the appearance of the effect.

Temporary loads itself, in turn, are divided into long-term, short-term and special loads.

Constant load is a constant effect during the service life of the building without changing its value and direction. An example of this is the private weight of the building, soil and water pressure, etc. Long - term temporary loads include various equipment that serves a long time (for example, books in libraries), savings drapes, etc. The category of short-term temporary loads includes wind, climatic temperature effects, as well as snow, weight of people and furniture, etc. Effects of earthquakes

 $^{^2}$ Tangirov I. X. et al. GRAPHIC AND METHODICAL INSTRUCTIONS FOR MAKING A CIRCUIT //Science and Education. – 2021. – T. 2. – №. 2. – C. 94-98.



A Peer Revieved Open Access International Journal

www.ijiemr.org

and explosions, uneven deposition of grunds enter special temporary loads.

- 3. According to the method of action, the loads are divided into single-joint, repetitive-variable and movable types. The one-time loads include a system of forces that are laid on one sheet from zero to the final value of the unit. Repeated variable loads are one organizational part of the system of forces that affect the structure, this part is able to change its quantity and direction, without binding to other forces in the system. For example, the wind can influence the construction in any direction and value, with the exception of other forces. Any vehicles that affect the construction can be an example of moving cargo.
- 4. According to the place of impact, the loads are collected at one point, spread along the length or surface and divided into volumetric loads. It is worth noting that in real cases the load can not be collected at one point. The fact is that the load affects a certain surface. If the dimensions of the surface are small in relation to the dimensions of the elements of the construction, it is accepted that the load is placed in the center of the weight of the surface, with certain errors.

In addition to the loads that affect the surface of the body, there will also be forces acting along its volume. The private weight of the body, the forces of inertia and magnetism are in this sentence. In the calculation process, they are also collected to a certain point in the volume of the body.

Buildings are divided into different categories according to the following indicators.

According to the task:

1. Citizen (residential and public) - buildings designed for the household and public needs of people.

Residential buildings - houses built for living, bedrooms, hotels, etc.

Public buildings-administrative, educational, cultural-household, commercial, municipal, sports and other types of buildings.³

- **2. Industrial buildings -** it is designed to carry out the labor process in the production of an industrial product, and the premises into which the weapons of production are placed (workshops, workshops, garages, electrostances, workshop premises, etc.).
- **3. Agricultural buildings -** buildings that are used to meet the exteriors of agriculture (such as cattle houses, poultry houses, greenhouses, farms that store agricultural products, etc.).

According to the wall material:

- 1. Brick walled;
- 2. Stone walled;
- 3. Shaggy walled;
- 4. Wooden wall and others.

According to appearance and size:

- 1. Made of Fine Elements-brick, ceramic block, fine block, etc;
- 2. Structured from large elements large blocks, panels, volumetric blocks, etc.

According to the number of floors of buildings:

- 1. Gem storey-1-2 storey;
- 2. Average floor -3-5 floors;
- 3. Multi-storey 6-10 floors;
- 4. Very high 11-25 floor;
- 5. Skyscraper-above 30 floors.

By Lifetime:

- 1. Service period more than 100 years;
- 2. Service period from 50 to 100 years;
- 3. Service period from 20 to 50 years;
- 4. Service period from 5 to 20 years.

On fire safety (depending on the degree of combustion of building materials and structures):

- 1. Flammable;
- 2. Difficult to burn:
- 3. Combustible.

On fire endurance:

Buildings of Level 1, 2 and 3 - are built of stone material or baked bricks. It is required that the walls, supports, oraopments, intermediate walls of buildings of Level 1 and 2 be fireproof;

//Science and Education. – 2021. – T. 2. – №. 4. – C. 125-130.

³ Afzal Y. A. M., Turayev K. A. Technology of execution of modern urban project (example Bandikhon district)



A Peer Revieved Open Access International Journal

www.ijiemr.org

- 4 level buildings-with surface plastered wood;
- 5 level buildings-non-water wooden buildings;
- 4 and 5 level wooden buildings are not allowed to be built above two floors according to fire requirements.

On the importance of public ownership:

Class I-buildings of large industrial enterprises, 9-storey and even higher buildings with high export and architectural requirements;

Class II-residential and public buildings with a height of up to 9 floors.

Class III-residential buildings, whose height does not exceed 5 floors, with an average expansion and architectural requirements.

Class IV-temporary buildings with minimum exportation and architectural requirements.⁴

According to construction technology:

- 1. Buildings assembled from ready-made reinforced concrete structures-cut into halves, cut into halves-paneled, paneled, structure-connected buildings.
- 2. Buildings made of factory-made industrial structures-large-blocked, voluminous-blocked buildings.
- 3. Cast monolithic (monolithic) reinforced concrete buildings are buildings that are restored using pouring into special molds at the site of construction.
- 4. Buildings whose walls are restored from tiny blocks and similar tiny elements.

According to the widespread:

- 1. Public buildings built on the basis of a model (tipovoy) project residential buildings, schools, pre-school educational institutions, polyclinics, cinemas, etc.
- 2. Rare buildings built on separate projects theaters, museums, sports buildings, administrative buildings, etc.

Literature:

- 1. Abdurashidov K.S. v/b. "Qurilish mexanikasi". T.: "FAN". 2000-y.
- 2. QMQ 2.02.01-98. "Bino va inshootlar zaminlari".
 - 3. QMQ 2.08.01-94. "Turar-joy binolari".
- 4. To'ychiyev N.J. "Fuqaro va sanoat binolari konstruksiyasi". T.: "TDAI bosmaxonasi". 2002-y.
- 5. To'ychiyev N.J. v/b. "Ko'chmas mulkni baholash asoslari". T.: "Adolat". 2000-y.

State University) //Science and Education. -2021. - T. $2. - N_{\odot}.$ 4. - C. 119-124.

Vol 10 Issue05,May 2021

⁴ Nasriddin A. A. T., Turayev K. A. Design of buildings and structures technology (on the example of Termez