

**IMPLEMENTATION OF ENGINEERING AND PREPARATORY WORKS AND
IMPROVEMENT IN THE CITIES**

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Abstract: *This article provides basic information on engineering selection and landscaping of an urban area to be built in response to emergencies.*

Keywords: *city; general plan; release; groundwater level, climate zone.*

In the development and definition of the master plan of cities, a clear plan of zoning of individual districts by urban planning complexes and the level of activity of the city will be developed. With this project, architectural complex solutions of creativity will be identified and reconstruction solutions will be implemented in the coming years. The draft of the concrete plan is the basis for the formation of a creative project in the implementation of the project of complex and group placement of neighborhoods, quarters, houses. This project will be implemented in two stages. The first depends on the initial cost of construction, and the second depends on the cost of labor.

One of the main measures of engineering training is the landscaping of ravines, vertical planning, which is closely related to engineering landscaping. Engineering training plays an important role in improving the sanitary and hygienic conditions of the city. It will clear swamps, improve irrigation systems and water basins. Engineering measures allow for efficient and rational use of urban terrain. In this case, inconvenient and unsuitable areas in the territory of residential areas are partially or completely eliminated. Efficient use of urban space ensures a compact location of the city, which reduces the length of streets and public transport, which in turn provides great economic benefits in urban life.

Engineering measures will be carried out prior to the commencement of construction, taking into account the requirements of the buildings, architecture and master plan ideas used to maintain the state of the environment. Landscaping is carried out on the basis of vertical planning, the use of retaining walls, stairs, ramps and other types of engineering landscaping elements in the formation of various slopes. Engineering preparatory work is carried out as follows:

- (a) excavation, plowing and hydromechanization, filling pits and ditches, leveling hills;

- b) the use of open or closed (hidden) drainage systems;
- c) organization of irrigation systems;
- g) use of a drainage system that lowers the groundwater level;
- d) construction of structures that ensure the immutability of the terrain and use it for other purposes (retaining walls, dams, etc.);
- e) strengthening of various natural and artificial slopes.

Each city has its own natural conditions. These conditions are not the same even in close-knit areas.

The influence of water, wind and human activities on the formation of changing natural processes in nature is important in the formation of relief. Therefore, the selection of land for urban development takes into account the following important natural processes:

- flooding of some parts of the city by snow, rain or river water;
- the appearance of cliffs;
- landslides (landslides and landslides);
- floods;
- the presence of karsts and subsidence;
- erosion of the relief surface under the influence of water and wind.
- Human activity processes include:
- Disruption of relief as a result of mining;
- The risk of flooding of residential areas as a result of the construction of reservoirs and rising groundwater, etc.

The study of the natural conditions of a particular place depends on the shape of its relief, the condition of the ground, in particular the amount of snow and rainwater. Depending on the nature of the environment, it is important to decide on the allocation of urban areas, the planning of highways, the interdependence of traffic and the selection of green areas.

A well-designed engineering training plan will include vertical planning, snow and rain drainage, irrigation, groundwater drainage outside the city, and other specialized facilities related to engineering training. In this case, the scale is taken as 1: 1000-1: 2000, the construction project (M 1: 500-1: 1000) clarifies the engineering preparatory work.

As a result of the topography and changes in its shape, the physical process of the soil changes as the natural flow of surface water becomes more difficult. As a result, groundwater levels are rising

and swamps are forming in the area. Therefore, one of the main tasks of engineering measures is to ensure that the terrain does not change. The next task is to use "inconvenient" places for some urban purposes. Cities are an integral part of engineering activities related to landscaping and underground engineering equipment design.

Engineering measures will be carried out prior to the commencement of construction, taking into account the compliance of the structures, architecture and master plan ideas used to maintain the environment. Landscaping is carried out on the basis of vertical planning, the use of retaining walls, stairs, ramps and other elements of engineering landscaping in the formation of various slopes. Engineering preparatory work is carried out as follows:

- a) excavation, plowing and hydromechanization, shoveling, filling of pits and ditches, leveling of hills;
- b) the use of open or closed (hidden) sewage systems;
- c) organization of irrigation systems;
- (g) the use of a drainage system that lowers the groundwater table;
- d) construction of structures that ensure the immutability of the terrain and use it for other purposes (retaining walls, dams, etc.);
- e) strengthening of various natural and artificial slopes.

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