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СЪДЪРЖАНИЕ

LIGHT PERSPECTIVE IN THE PARK AREAS

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Abstract

Shadow is a place which is protected from the sunbeams or some other source of light. Namely, the shadow is nothing more but a relation between the human (subject, figure, and form), the sun (the light) and the wall (blacktop, concrete, and brick). That is, the appearance of the shadow is connected with the proportional lining of these three factors, which means if one of them is missing then the shadow is gone. But also if one of these factors is with inadequate quality then the shadow is weak, sometimes even unnoticeable. Taking into consideration the urban lifestyle, the shadow has bigger meaning. It is shadowing, crossover between the black and white, a shade that refines life and after all refines the person. The fact that says the brighter the sun the deeper the shadow is well known. And when there is no sun there are no shadows.

The effect that is made with lightning from below, it is mostly used for lightning landscape elements. This effect gives shinny silhouette to the object as a result of the higher contrast between the lines of the lightning and the dark backgrounds.

Key word: design, landscape, light, park, tree

Light and shadow in the park composition

The artistic expression of the landscape is enhanced a lot from the game of the light shadows on the vertical surface of the vegetation and for the horizontal surface of the greensward.

The hard objects like rocks, buildings, walls, fences, trees and the like do not transmit the sunbeams; they withhold one part and reflect another. The earth that withholds the beams is illuminated, and the other part remains in shadow. This shadow is called own shadow.

In the art of the parks, the own shadow represents self-eminent decorative item, which with proper use enhances the plasticity of the landscape. With the passing through leaves of the trees, the light, together with its own shadow, form original light effects.

If the shadowy part of the tree reflects on a water surface apparently that shadow enhances the depth of the water surface and the treetop reflects and looks like dark spots on the water surface.

This effect enhances even more at night when the moon rises. The own shadow has vertical effect. The combination with the shadow and the own shadow not only does it make bigger quality of the landscape but also manifests three dimensionality of the separate areas of the landscape, enhances the volume and depth.

Falling shadow is the shadow that forms on the ground. The form, size and the clarity of the formed shadow come from the natural size of the object itself.

For example, the hard profiling of a sharp object throws straight more sharp and severely formed shadow. On the other side round, spherical objects form a light air shadow. The density and the length of the shadow depend from the angle of the sunbeams, from the clarity and transparency of the air and the like.

Effects from the lightning

With the use of different types of light sources and their proper setting, there can be made different effects in the space, which primarily depends on the wishes of the investor and the desires of the projector.

The effect that is made with lightning from below, it is mostly used for lightning landscape elements. This effect gives shinny silhouette to the object as a result of the higher contrast between the lines of the lightning and the dark backgrounds.

The lightning from above is the most regular case and most adequate for the eye, which is used to that kind of position of the lightning source. With the placement of the lights above the treetop there is a contrast between the upper and the lower part of the leaf, which seems to be an interesting detail.

The moon effect is made with direct lightning of the objects or transmitting the light through the object. For example, transmitting the light through the treetop, and interesting effect can be made.

The effect of the oriented light can be made with a lot of lights, like the lightning from above, below and the like. The main aim is to be given sharp contrast between the lightning of the subject and the surrounding objects.

The effect of the silhouette is made with lighting the back of the object, so could the object itself look like some structure rounded with light. For better effect reflectors with pointing beams are needed and the background should be closer to the object. If the reflectors give too much light the object will lose the silhouette effect. On the other hand if the background is a lot further there won't be a contrast between the light and dark surfaces.

The reflecting light is made with the orientation of the lightning source towards the reflecting surface, which in that case will give out light in the intended direction. This effect is often called indirect lightning.

Aesthetic requirements of the lightning

The lights with its post are elements which can be seen clearly through put the day. That is way they should be decorated and also be embedded in the environment. This is very important when there are some objects with historical meaning. The style of the lights should match the style of the other elements in the area (park), bench, planters and the like.

Perceptible posts and lights should be avoided in front of monuments and entrances. In this case reflectors and lights for specially composed for entrances should be used.

The height of the lights should be adjusted to the height of the trees if there are any. If the thoroughfare has an avenue from both sides the best solution for the lights is to be put in the middle of the roadway.

When choosing the lights complicated shapes, worthless and overcrowded decorations, mixing of colors and colors of the lights that do not match should be avoided. It is recommended the color of the post, the carrier and the light should be in the same color in order to match the environment.

From all this we can conclude that the lights' primary role is to illuminate the area and also to make it more beautiful.

The lightning effects, the shadow and the colors are main factors in the park's composition. Their activity is basic and connected.

In the park composition the term "game of light and shadow" is often used. This emphasizes the importance of this element in the park composition. The changing of light throughout the 24h is of a great importance for the use of different areas in different hours of the day and night.

The using of the trees with bushy treetop and week shadow gives nice appearance for better usage of the area. Big group of tall trees with bushy treetop on a small area give monotony and even shadow. Thus, a combination is needed. That will give a nice shadow for rest and nice look of the ambient.

Whit the choosing of the types of trees in relation with the light and shadow it has to be taken into consideration that the light and shadow change throughout the day, thus in the morning hours the shadows are longer and in the afternoon they are sharp, short, the leaves reflect the sun beams and transport them into shinny, dazzling, white color which is really uncomfortable. Because of that, in the foresting of the weekend houses and individual buildings trees with smooth, skinny and naked leaves are avoided, and trees with small, gentle leaves are used especially the pine trees with their needles which soak the sun beams and give to the landscape tenderness and complacency. The trees with tender leaves like ash and maple will satisfy both the complacent look and shadow. And while in the afternoon the expression is “blunt” and the light is strong and often uncomfortable in the evening the shadow is long, the light is complacent and effective, especially on sunset when there are strong light contrasts.

Natural light

The light (the visible light) is an electromagnetic emission whose wavelength is can be visible to the human eye. It is defined as part of an electro-magnetic specter to which our eyes are sensitive. There are three extents that condition the light:

1. Intensity (amplitude), which is often connected to the human perception for the light’s force
2. Frequency or wavelength, which people recognize as color of light
3. Polarization or angle of shimmering which is unnoticeable to the human senses under normal circumstances.

The light influences the way we see the relief and affects the designs and makes them clearer or hides the details. For example, the rough look can seem even rougher when the light falls under parallel angle. This “tangent light” will emphasize the relief trough the lightened areas and shadows.

The smooth look can be even smoother with direct burst of light with the help of a reflector or similar lightning. Also, the clear light that shines directly on the design will emphasize its details and the weal light that throws shadow on the design will diminish the details.

The light may change the obvious identity of the color through the color and type of light that falls on the surface. Furthermore, the different materials can reflect light and color in different ways which affect the relation of the colors. The reflected light from the Earth and the next structures is often meaningful source of daily light.

The orientation refers to the direction of light. For example, the light that reflects blue sea or blue sky will give blue light to the landscape.

The natural light is not fully predictable. When there aren’t clouds or curtains on the window, the natural light can become too bright and intensive which gives shinny, excessive light in the visual field and can cause irritation and exhaustion.

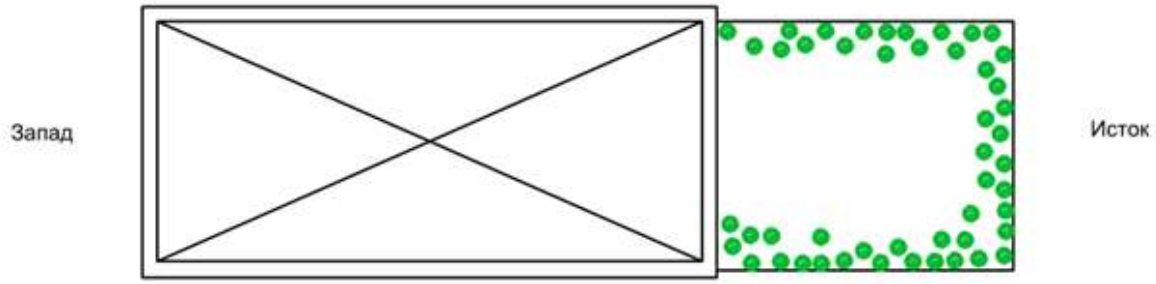
The reflected light from the lightly colored sidewalks and buildings can be substantial. The light that reflects from the reflection of the glass surfaces can be equalized with the direct sunlight.

Though, the conditions of the sky can be indefinitely variable, it is useful to understand the daylight in two extreme conditions; but it will also act under the other conditions of the sky. The daylight from the clear sky mainly consists of two components: light and direct sunlight. The light from the blue sky is diffused with small light, while the direct sunlight is oriented and extremely light.

It is very important not to foresee the drastic effect that the light of the mind and body can have. Many of us have felt changes in the mood as a response to the natural light. In the sunny days we feel easy and happy, while in the dark days we feel depressed.

All this will be shown with a concrete example in this case with concretely given green surface in front of a certain object.

On the picture, there is an object which is on the west side and the green surface on the east.



Given, that the sun rises on the east and sets down on the west it has to be taken into consideration that the people that are situated on the green surface in the morning hours should be situated in the east side because the sun is the most complacent for the youngest population in the morning. At noon is too strong for their age and in the afternoon sets down and starts the use of the artificial lightning.

A major role in the way how the light falls, at what time and where will be lightest, has the vegetation on the ground. So the vegetation has to be laid on the surface in order to “play” with its height and density. Namely there should not be put bigger parts with the same height and density of the treetops to avoid the lightning of a single area or respectively a single area subjected only to shadow.

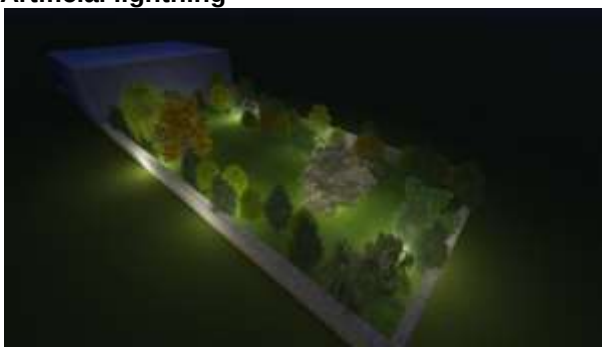
Examples for artificial and natural lightning of a given object in a certain situation

Natural lighting

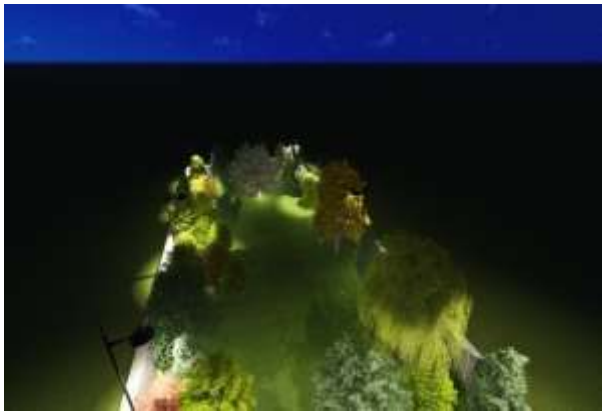
On the pictures is shown natural lightning in the early morning hours. It can be seen, given the fact that the sun rises in the east, the shadows from the vegetation in the object fall directly on the territory projected for the area for children. That is way is played with the height of the vegetation (as shown on the picture) because it is unnecessary to have the same volume of shadow and the same volume of sun beams that fall directly on the ground of the field.


On these pictures the natural lightning in the morning and noon hours is shown. There is a huge difference in the natural lightning in the morning hours in relation with the shadows. When the sun goes on the west the shadows are diminishing.

Artificial lightning




You can see on the pictures the artificial lightning of the vegetation and the whole area. For lightning in this case is used lower lightning in the direction of the light up to achieve the effect of a silhouette. Respectively, the so called indirect lightning is used with reflecting light that is pointed into certain object.




From the examples on the pictures can be seen that for the lightning of the whole area are used candelabras with average height in order to keep a complacent lightning.
For the lightning of the object wall lights are used, which are put on the upper part but lights with higher intensity are used in order to use much less lightning objects with higher intensity.
The setting is made in the upper part so the whole front side could be covered.

To achieve the effects of the lightning and properly to light and object in the landscape architecture, the view point should be determined first and then follows the correct projecting and installing of the lightning, in order to avoid the direct lightning of the object, respectively to achieve the lightning effects.

The most essential conditions for achieving the maximum effects of the lightning are choosing of the correct type of light and the correct pointing of the lightning beams.

After using all the benefits from the natural lightning, it is necessary to preserve several parameters which play a major role in this type of lightning.

Thus, the parameters like the type, height and size of the lightning object, the intensity of the light and the specter of beams that it releases should be preserved. One has to bear in mind what type of object is being lightened in order to determine the height and type of the lights as well as the pointing and the angle under which the light will send its beams to the object.

Conclusion

The artistic expression of the landscape is strengthened also from the game of the light shadows on the vertical area of the vegetation and the horizontal ground of the lawn.

Thus, we can say that the lightning, the light and the shadow play a major role in one composition, in relation to the effects, perception, the light, shadow, intimacy, places for quiet rest and the like.

We can conclude that the lightning is huge factor not only in the landscape architecture but also in the design of interior as well as the architecturally objects.

What is going to be lightened and how it is going to be lightened affects how it is going to be seen, that is one of the facts which counts for objects put in the composition.

The second fact is whether or how much will be lightened, or whether in the lightning of the area the sunlight will be left to penetrate when it is intense and a silhouette will be made in the tree area, which it will constrain.

In order to achieve a lightened area with all the parameters of correct lightning and each lightning effect a good plan should be projected to know how and where to put the lightning bodies for artificial lightning and how and where to lay the vegetation that plays a major role in the natural lightning and shadow.

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