

WAYS TO CAPITALIZE ON THE TERRACES OF URBAN LIVING SPACES

MODALITĂȚI DE VALORIFICARE A TERASELOR SPAȚIILOR DE LOCUIT DIN MEDIU URBAN

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Abstract: *The concept of terrace or green roof, arose from the desire to bring nature as close as possible. Thanks to the increasingly advanced technologies of recent years, we can achieve this goal even when we live in urban areas. The benefits of this work could be seen in the proposal of a design solution that aimed to reduce energy consumption and noise pollution, 60% rainwater retention and last but not least reduce the temperature of the roof by up to 7 degrees in the warm season and increase it by up to 5 degrees in the cold season. Thus, in this work, the suitability of some dendrological species for an arrangement located on a terrace located on the last level of a block of flats in the Tudor Vladimirescu neighborhood was analyzed. In carrying out this work, the choice of planting material was taken into account to ensure the decoration in a wide range.*

Key words: urban environment, landscaping, rehabilitation

Rezumat: *Conceptul de terasă sau acoperiș verde, a apărut din dorința de a ne aduce natura cât mai aproape. Datorită tehnologiilor din ce în ce mai performante din ultimii ani, putem atinge acest deziderat chiar și atunci când locuim în mediul urban. Beneficiile acestei lucrări s-au putut observa în propunerea unei soluții de amenajare care a avut ca finalitate reducerea consumului de energie și a poluării fonice, reținerea apei meteorice în proporție de 60% și nu în ultimul rând diminuarea temperaturii la nivelul acoperișului cu până la 7 grade în sezonul cald și creșterea acesteia cu până la 5 grade în sezonul rece. Astfel, în cadrul acestei lucrări, s-a analizat pretabilitatea unor specii dendrologice pentru o amenajare amplasată pe o terasă aflată la ultimul nivel unui al unui bloc din cartierul Tudor Vladimirescu. La realizarea acestei lucrări s-a avut în vedere alegerea unui material sădător care să asigure decorul într-un interval cât mai larg.*

Cuvinte cheie: mediul urban, peisaj, reabilitare

INTRODUCTION

Since the beginning of the world, God has placed man in a garden, the Garden of Eden, which was created as the purest garden in the world, a garden that took the place of "home". Man's first home as well as the first clothing was nature itself. Man's existence is directly related to nature, the garden being the right setting to support life (Căpiță and Ciupală, 2005).

In time, people began to build empires but even so, they were not without gardens, out of the desire to regain the paradisiacal state associated with life in

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the Garden of Eden. The suspended gardens of Semiramide, but also those of the Romans, either private or public gardens, show very clearly the attraction that man has towards the garden as a part of nature (Iliescu, 2014).

The attraction was amplified with the Renaissance period. The projection of the Renaissance garden grew by the desire to find the fine balance between the parameters of reason and creative fantasies (Voiculescu, 1993; Wojciechowki, 1974). The purpose of the garden was often found in the refuge of intellectuals, the inspiration of literary artists, graphic artists, a place to contemplate the spiritual state during ceremonial events or just a private relaxation area. In history, people especially played an important role in the development of landscape art because they focused on gardens, having a constrained relationship with nature, using these gardens as therapeutic centers or the desire to regain the paradisiacal state associated with life in The Garden of Eden they had lost (Kluckert, 2007). Over the years, the civilization and development of metropolises began to eat literally from the green spaces, being a period of decline in terms of attention paid to gardens (Rosario Assunto, 1988).

Today we live in a crisis of green spaces, so this paper aims to present a way to integrate vegetation even in small spaces of terraces showing how it can be enlivened with vegetation even a dull terrace on the top floor of a flat block in a metropolis as crowded as Iasi (Dascălu, 2010).

MATERIAL AND METHOD

At present, for the construction of a building we must respect the legislative basis in force which says: *“The development of buildings that have the least impact on the environment is not only a necessity in the context of concerns for improving the quality of life, but also a boost to investment in the current economic context.”* (Geiss, 2002). Thus, the proposed landscape in this work is located on the ninth floor of a building in the Tudor Vladimirescu neighborhood, close to the center (fig. 1.). The solution is not only meant to enjoy visually but is also legally supported (Dumitraș et al., 2008).

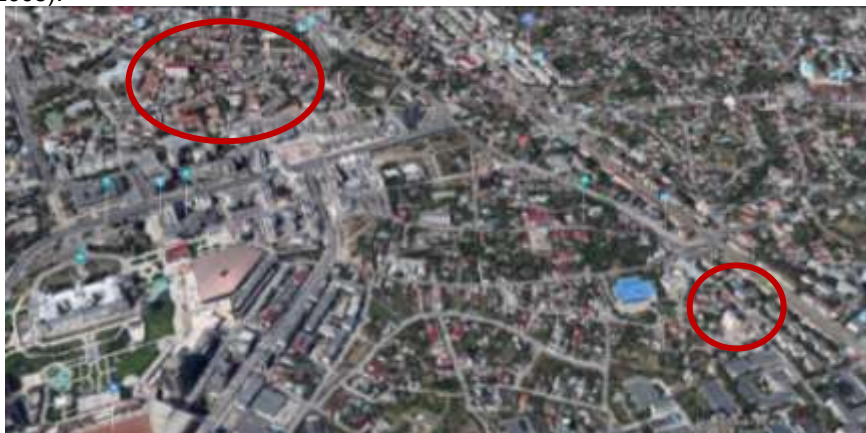


Fig. 1. Satellite view of the site where the landscaping proposal was made

This space, which has a total area of 195.5 square meters of which 91.12 square meters belong to the terrace to be arranged (fig. 2) belongs to an architectural office, and is intended for breaks during the day, meetings, team buildings, meetings with customers and even barbecue weekends. The terrace is divided in two, one part of 40.8 square meters and is covered by the extension of the roof of the block, and the other part is directly exposed to sunlight and has an area of 50.32 square meters. The terrace also looks like a concrete surface, without cracks, with a slight slope towards the drain.



Fig. 2. Architectural plan of the whole office

The plants were specially chosen to adapt to the existing climatic conditions (Draghia and Chelariu, 2011; Sandu, 2009), pruning and growing them in planters; the pieces of furniture were designed and built according to the sketches of the proposal. The proposed idea was realized in the modern style, with the help of 3D design and rendering programs Lumion and SketchUp. The advantages of using these 3D programs are that any idea can be processed so that everything reproduces as accurately as possible the proposed layout ideas. Thus, there were used the two programs, the first, called SketchUp, to set the dimensions and build 3D of each object, and with the second program, called Lumion, that managed to give the right texture to each plant and piece of furniture.

Both dendrological and floricultural species presented in table1 were used as planting material.

Table 1

The total of dendrological plants used

Scientific name	Number of plants used	Container Type
<i>Acer palmatum</i> var. Garnet	1	3 K
<i>Berberis thunbergii</i> var. Red Rocket	1	2 K
<i>Buxus sempervirens</i>	7	2 K
<i>Corylus avellana</i> var. Purpurea	9	15 K
<i>Euonymus fortunei</i> var. Emerald n Gold	3	2 K
<i>Festuca glauca</i> 'Elijah Blue'	8	1 K
<i>Hedera helix</i>	5	1 K
<i>Lavandula angustifolia</i>	4	2 K
<i>Ligustrum vulgare</i>	10	5 K
<i>Pinus mugo</i> var. Mops	2	5 K
<i>Prunus laurocerasus</i>	11	5 K
<i>Sedum spurium</i>	30	9 cs
<i>Stachys lanata</i>	3	9 cs
<i>Wisteria sinensis</i>	1	7,5 K

RESULTS AND DISCUSSIONS

The terrace design project was created at the client's request and the design principles and rules, so that the proposed furniture and vegetation create a harmony and be decorative, specific to a relaxation area (Constantinescu, 1992; Iliescu, 2008). The substrate placed on the entire surface of the space, is the first material used on the terrace, which is possible by using special materials and following the order of execution of the work as we can see in figure 3.



Fig. 3. Isolation layers of the terrace

In order to carry out the landscape project, we also took into account the biological requirements of the vegetal material proposed by designing a gardening system that would allow the placement of the plants in a substrate between 30 and 100 cm depth.

In this proposal we used pieces of furniture made of solid wood boards. The furniture has been specially designed for this terrace and includes planters, seating, storage closet and serving bar.

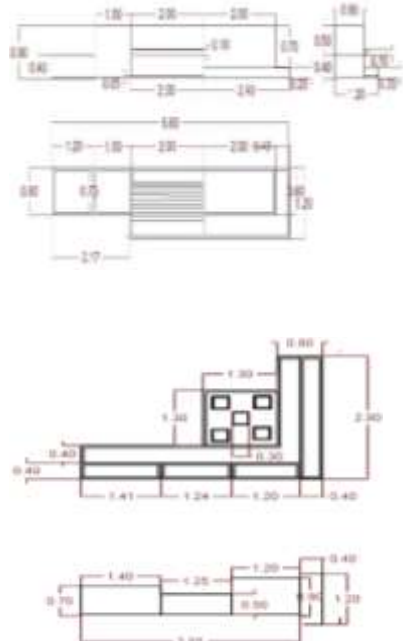


Fig. 4. Detail planters

One of the pieces of furniture built has the role only of a planter, consisting of games of its heights, having different heights, as represented in figure 4.

This piece of furniture is composed of a set of five planters of different heights, glued together. In figure 4 there can be seen the dimensioned axonometries, in total having a total length of 6.60 meters, width of 1.20 meters, and height of 0.90 meters. In the middle of the planters is a bench of 2 by 0.7 meters, located at a height of 0.4 meters.

Another piece of furniture is the U-shaped corner, the dimensions being represented in figure 5.

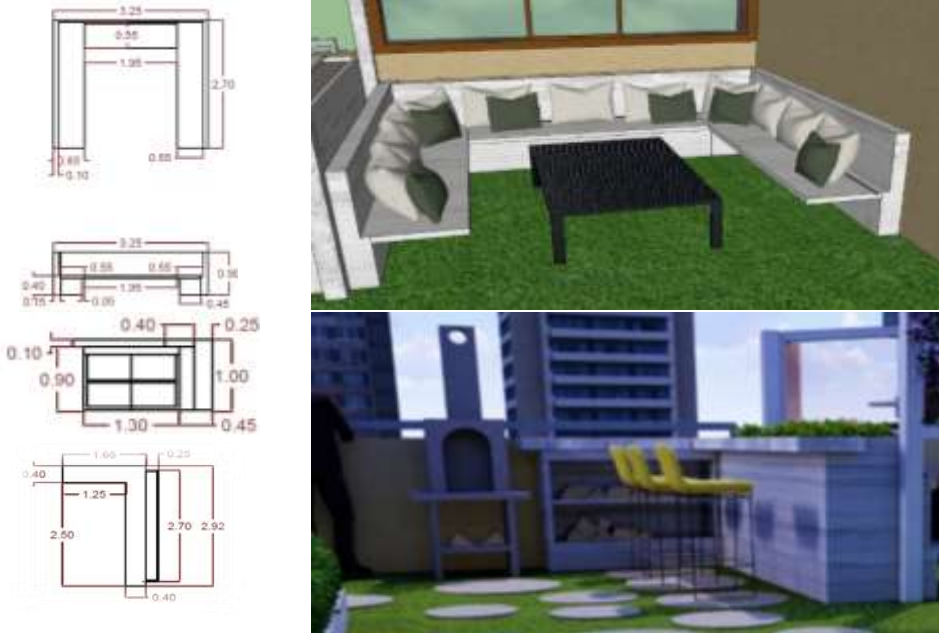


Fig. 5. Sitting areas details

In the barbecue area was designed a bar in the shape of a corner that also serves a space for storing wood but also a small space for filling with substrate and plants. The height of this object was the right height for a bar.

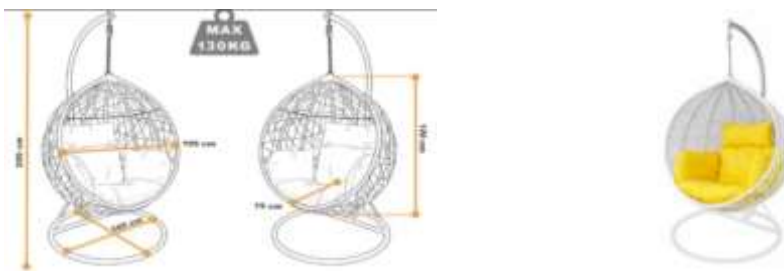


Fig. 6. Swing dimensions and perspectives

The furniture category also includes the two prefabricated swings, placed at the entrance to the terrace. The use of such swings is very common on terraces today. The frequency of use is due to the simple and elegant design that its shape offers. The convenience of this swing shown in figure 6 is also given by the large dimensions used for its manufacture.

To mask the pillars, we proposed the use of shrubs led in the form of vines, namely *Wisteria sinensis*, having a strong visual impact, due to the purple color of the flowers during spring (fig. 7).



Fig. 7. Top view and vegetal composition vegetale details

The only seating area exposed to the sun is in the front of the terrace, represented by a piece of wooden furniture, consisting of a bench associated with planters of different heights. They are intended for plant compositions that respect the principle of unity in diversity. Thus, the same floricultural and dendrological species were used in these planters, supplemented with *Sedum spurium*, *Ligustrum vulgare*, *Berberis thunbergii* and last but not least a specimen of *Acer palmatum*.

CONCLUSIONS

The actual landscape proposal aims to increase the degree of comfort and quality of life by organizing a green space, corresponding to the needs of those who frequent the office space.

With the help of the proposed vegetation, plant compositions were created in order to induce the state of relaxation, offering the beneficiary an improvement of the relaxation space with a special aesthetic.

By forming shade and increasing air humidity, plants contribute to creating a more comfortable environment, corresponding to human needs.

The colors used in the landscape proposal were designed so as to help the mental rest of the beneficiary.

To provide an image as close as possible to our vision, we used architectural and landscape design programs such as Autocad, SketchUp and Realtime.

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