

# Environment as a basis for the design of advertising structures by forming

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**Abstract.** A few different neighbouring styles of architectural forms are quite frequent in the cities of great historical past. As a result, a designer or architect has to solve the complex problem while designing the objects within such environment, i.e. one has to fit them naturally into the existing site development. Often, form making is found to be hard, due to the fact that the existing architectural forms of totally different stylistic execution coexist in the visual proximity. Presently, placement of the advertising bills in urban environment is both an urgent and debatable issue. On the one hand, advertising providers are keen to present their product bigger and brighter, on the other hand, the overall and eye-catching exhibition stands can be disharmonious with the surrounding architectural ensemble of the city. This situation is relevant for every cultural city.

## 1. Introduction

The emerging contradictions require a conceptual analysis based on the study of the historical city center and the necessity for placement of the major advertising and notice boards therein. Review of the existing structures which place the advertising bills in Tomsk city showed that they are executed in most cases against the style of the surrounding architectural ensemble, which is not infrequent. The typical examples are promotional structures of the stadium “Trud” (Figure 1a) and the Italian speciality restaurant “POMIDOR” (Figure 1b).



a



b

**Figure 1.** a - promotional structures of the stadium «Trud», Tomsk; b - promotional structures of the Italian speciality restaurant «POMIDOR», Tomsk.

Examples of promotional displays that consider the historical architectural space while forming the favorable cultural background site development are placed in Tomsk city near the main buildings of Tomsk State University (Figure 2a) and Tomsk Polytechnic University (Figure 2b).



a



b

**Figure 2.** a - promotional displays near the main building of TSU Tomsk; b - promotional displays at the main building of TPU, Tomsk

## 2. Form making of advertising structures

The advertising banners that hinder perception of the building architecture are also placed on the front of the grand concert hall in Tomsk city, Figure 3. The building of the grand concert hall has an architectural concept of the distinct geometric patterns with the elements of the modernist style in large frontal lanterns, Figure 4; the benches are in the immediate vicinity, Figure 5, and the elements of classicism are in street lights.



**Figure 3.** The building of the grand concert hall of Tomsk city



**Figure 4.** Street lights a la modernist style

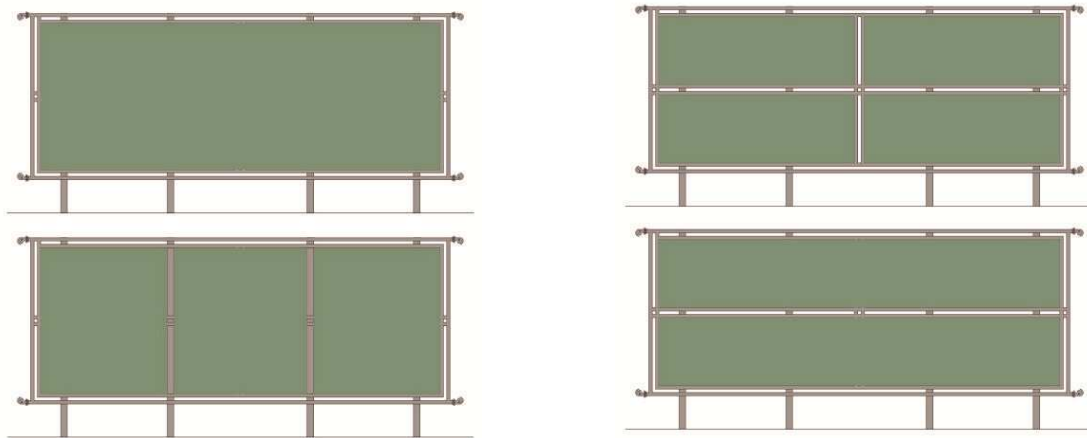


**Figure 5.** A bench a la modernist style

The principal task of the project was the development of the multiple solutions of the promotional displays to use them for placement of the different sized poster canvases, which generally made it possible to combine the ads, depending on the repertoire abundance. Thus, the primary advertising field can be presented in several ways, Figure 6.

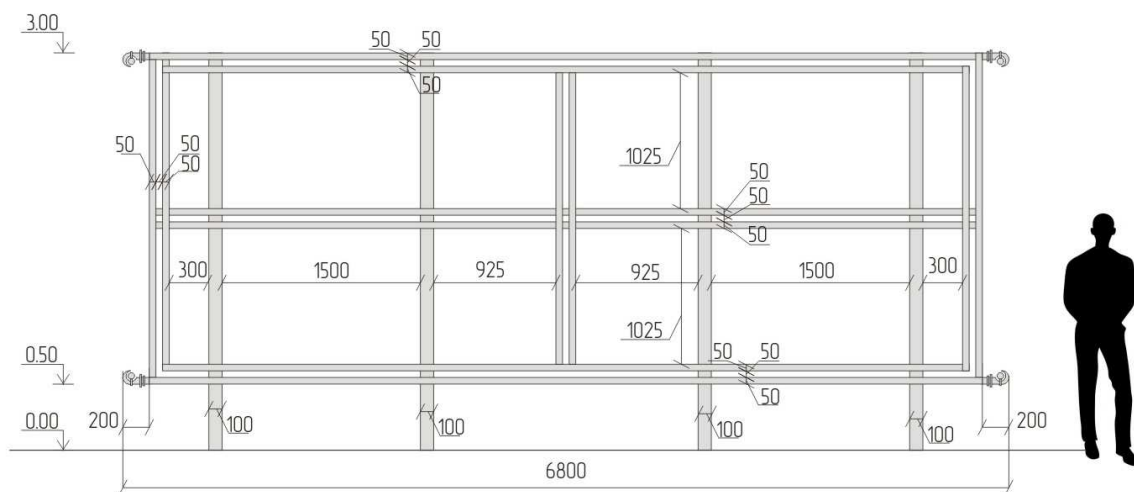
First of all, it was necessary to present the strict geometric image of the constructivist building in the advertising structures. The solution to the task was found in using two square tubes being parallel to each other in the pillar construction, while forming a geometric frame integrating the general composition of the object. The picturesque elements in the form of the stylized curls are placed in the pillars' corners to present the characteristics of the historic environment a la classicism and modernist style [1,2].

The overall dimensions of the structure are shown in Figure 7. The basic elements of promotional displays are metal profiled square tubes of 40x40x3 mm, metal profiled square tubes of 100x100x3 mm are used as bearing pedestal of the structure.

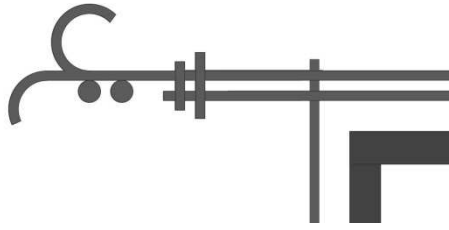


**Figure 6.** Multiple solutions of the poster canvases placement.

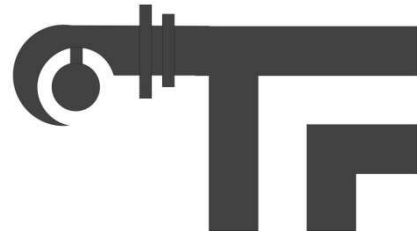
Two stylistic solutions of the structures for advertising bills were used in the project. Both structures are made a la modernist style with the specific picturesque elements: a fancy version with the forging elements, Figure 8, and a version which stylistically most fully conforms with hardscaping (benches and street lights) made a la modernist style, Figure 9.



**Figure 7.** The overall dimensions of the structure



**Figure 8.** A fancy version with the forging elements

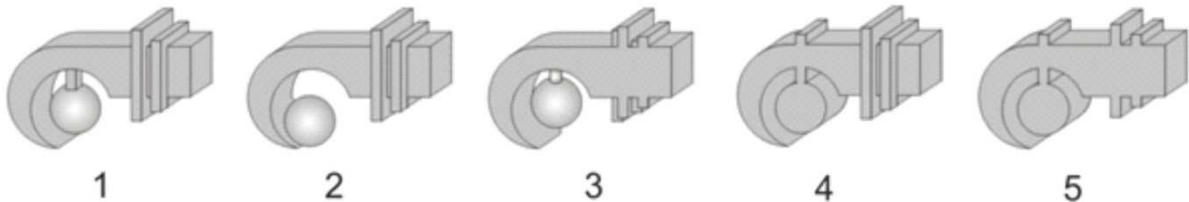


**Figure 9.** A version made a la modernist style

While designing the object, it was also important to determine its location in the current architectural environment. A characteristic feature of this project is distribution of advertising structures along the territory in front of the grand concert hall. The requirement was identified to locate the sufficient number of advertising structures provided that the significance of the building architecture is maintained, Figure 10.



**Figure10.** The building of the grand concert hall of Tomsk city with the proposed promotional displays.



**Figure 11.** Variants of picturesque elements

During the stylistic analysis of five picturesque elements arranged in the corners of the promotional displays, variant №4 was selected as the one most fully conforming with a la modernist style.

Three options were considered when analyzing the manufacturing methods for picturesque elements. The first option is cutting of three-millimeter steel sheets with laser, bending of some elements of the product and joining by manual arc welding and grinding. Laser cutting is done by means of flow-through burning of sheet metal with laser beam. Advantages of this manufacturing method are that the laser cutting allows working with the profile of any complexity, a perfect line of cut-out is produced without a requirement for any additional cleaning, while saving considerable time, which contributes to high performance, and high-priced die molds or casting molds are not required [3,4].

The second option of the picturesque elements manufacturing is waterjet cutting of the basic element out of fifty millimeter steel sheets and joining them to a decorative bend by manual arc welding (Figure 11-4). They are cut-out with laser out of ten millimeter steel sheets. With waterjet cutting, the particles of a very hard material – an abrasive material are added to increase the destructive force of the water jet. The waterjet cutting has the following distinctive advantages as compared to the technologies of heat treatment (oxygen, plasma, laser, etc.):

- better quality of the cut because of the minimal thermal effect on the workpiece (without melting, fusing and burning the edges);

- cutting opportunities for heat-sensitive materials (a number of fire and explosive, laminated, composite materials etc.);
- ecological cleanliness of the process, a total absence of harmful gas emissions;
- explosive and fire safety of the process .

The third possible option of the manufacturing concept of picturesque elements in the advertising structures is the traditional preparation of molds and casting. The picturesque elements are manufactured by metal casting and welded to the basic structure, followed by cleaning and grinding. The stands are treated with anti-corrosive primer and stained with paint for exterior use on metal surfaces [5,6].

The best possible and cost-effective method of all the above-mentioned methods is manufacture of the picturesque elements with water-jet cutting. Colouring of advertising structures is proposed to be black, because the hardscaping (benches and street lights) located in this territory are of this colour already.

### 3. Conclusion

Design of advertising objects is relevant and quite a challenge, which necessitates the solution of a wide range of major issues such as a design concept, stylistic solution to maintain the cultural characteristics of the environmental perception, placement within the urban site development and economically feasible design concepts manufactured of the structural components. All these issues are to be solved by a designer, on condition of preservation of individual characteristics of every object.

### 4. References

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