



PIAȚA SFATULUI – BRAȘOV CENTRAL SQUARE DESIGN COMPETITION

Annex 2.6 – Maximum Cost Estimate

1. MAXIMUM INVESTMENT ESTIMATE

In order to estimate the maximum cost of the investment value, a comparative study for similar investments is necessary. Given the manner in which the brief for the development of Piața Sfatului (Council Square) is contoured, the chosen investments must comprise:

- the development of certain pedestrian areas of great sizes (square);
- the development of certain roadway surfaces, some permanent (street / shared space) or occasional (supply, fire fighters);
- the rigorous management of rainwater and its transfer to the utility grids;
- the implementation of an adequate lighting system, that will allow for nocturnal passage, and that will discourage delinquency; an adjustable lighting system is preferred due to the lower energy consumption, correlated with the real use of the square;
- the implementation of an ambiance lighting system, that will emphasize the facades of the historical monuments in the square;
- the provision of urban furniture that will allow for unhindered relaxation in the square's space (steps, benches, chairs, bicycle racks);
- the provision of certain green spaces, including the possibility of planting certain trees for shade;
- the development of water surface areas, water courses or water fountains or jet fountains at the level of the pavement;
- the existence of certain temporary constructions (kiosks, booths, event stage) that can sustain various seasonal activities (fairs, shows);
- adding public restrooms to the square, which are currently underground.

Given the fact that Romania is part of the European Union, both politically and from the perspective of cultural aspirations, this comparative study began through the documentation of relevant examples in Europe, the primary documentation source being the site dedicated to exterior designs www.landezine.com

As such, similar urban developments examples were chosen, executed as recently as possible (>2010):

	NAME	COUNTRY	YEAR	EUR	S (M ²)	EUR /M ²
1	Grønnegade Square	Denmark	2012	2143312	6000	357
2	Grote Markt Vilvoorde	Belgium	2019	3878917	8000	485
3	Olai Square	Denmark	2015	401871	1200	335
4	Urban Space Paul Grimault	France	2011	1000000	3400	294
5	Pedestrian Bad Salzuflen	Germany	2014	1600000	2850	561
6	Brotorgetby	Sweden	2016	1600000	4900	327
7	Sovereign Square	England	2016	2925000	4550	643
8	Châtenay-Malabry	France	2016	1800000	4200	429
9	Place des Anciens-Fossés	Switzerland	2015	5300000	7850	675
10	The Pope John Paul II, Zadar	Croatia	2010	1700000	5655	301
11	Täby Torg	Sweden	2015	5850000	10000	585
12	Statens Museum for Kunst	Denmark	2014	2700000	7500	360
13	Place de la Fontaine Chaude	France	2013	3000000	10000	300
INVESTMENT VALUES MEAN						435

These were chosen as to comprise as many of the elements foreseen for the project:

	RESTORED PAVEMENT	URBAN FURNITURE	CONSTRUCTIONS	INSTALLATIONS WATER	VEGETATION	LIGHTING
1	X	benches	-	fountains/playground	-	interactive
2	X	benches, bicycle racks	covered space	fountains/playground	trees	adjustable
3	X	benches, sculpture	partial fencing	fountains/playground	-	conventional
4	X	benches	-	-	bushes, garden	conventional
5	X	benches, bicycle racks	-	fountains/playground	trees	conventional
6	X	tables, chairs	pavilions, stage,	fountains/playground	trees, lawn	conventional



			restrooms			
7	X	benches	-	fountains/playground	trees, garden	adjustable
8	X	steps	-	fountain	bushes	conventional
9	X	benches	pavilion	fountains	trees, bushes, garden	adjustable
10	X	benches	pavilion, restoration of fences and walls	fountain	trees, lawn	adjustable
11	X	bicycle racks	stage, commercial spaces	fountains	-	adjustable
12	X	bicycle racks, benches	-	water edge	trees, lawn, gardens	conventional
13	X	benches	-	-	-	conventional

In order to better refine this value, we chose to no longer take into consideration the developments that are smaller than 5000 sq. m. Furthermore, we have eliminated the Swiss example from the list, correlated with belonging to the EU. As such, the remaining 7 examples officially declare the following investment values:

	NAME	COUNTRY	YEAR	EUR	S (M ²)	EUR /M ²
1	Grønnegade Square	Denmark	2012	2143312	6000	357
2	Grote Markt Vilvoorde	Belgium	2019	3878917	8000	485
3	Olai Square	Denmark	2015	401871	1200	335
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5	Täby Torg	Sweden	2015	5850000	10000	585
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7	Place de la Fontaine Chaude	France	2013	3000000	10000	300
INVESTMENT VALUES MEAN						389

The mean value of the analyzed similar investments reaches **EUR 389/m²**, under the conditions of certain similar facilities. Another notable aspect would most likely be that these values should be interpreted from the perspective of the economic differences between north and south, and east and west, respectively, within the European Union. As such, the closest example is the Pope John Paul II Square in Zadar, Croatia, with a declared budget of **EUR 301/m²**.

Another relevant example, from outside of the European Union, yet in the proximity of the Balkans, is the development of **Skanderbeg Square in Tirana**, Albania, finished in 2017. This development won important awards from the field, such as the European Award for the Public Space - 2018 and a nomination for the 2019 Mies van der Rohe Award. These international recognitions demonstrate the level of attention and quality that the development of a public space must have. According to the statements made by project coordinator Genti Agolli, in the local press (2017), EUR 12 million were needed for the execution of the 40,000 square meter space.

Thus results the point of reference of a minimal investment of **EUR 300/sq. m.**, foreseen for a development that will contain all of the facilities described at the beginning of this study. The maximum investment cost estimate should be reported to this value, without adding more than 33% to it.

As such, for the 14,800 square meters proposed for development:

- **estimated investment cost: EUR 300/m² respectively EUR 4,440,000 (approx. EUR 4,5 mil.)**
- **maximum investment estimate: EUR 400/m² respectively, EUR 5,920,000 (approx. EUR 6,0 mil.)**

The design cost shall be added to these costs - 5% of the investment value according to the MLPAT (Ministry of Public Works and Territory Development) Pricing Calculator (Order 11N/1994), as well as the cost of associated studies for the investment (topographical mapping, geotechnical study, historical study, fountain specialized consultation, technical-economic documentation). The latter have been estimated at the value of 1% of the investment value by means of certain preliminary, generic offers.

For safety, these figures had to be compared to other investments underway in Romania. Unfortunately, there are not many examples in this respect. Even if the city halls invested in restoring certain deteriorated public spaces, the qualitative level does not satisfy what is currently being built in Europe: the use of concrete tile pavements that are easily perishable under local frost-thawing conditions or the use of certain undersized granite plates (2 cm granite glued with screed in Piata Amzei, Bucharest or 3 cm granite mounted on a bed of sand in Piata Unirii, Bucharest), that were easily deteriorated when used.

There is, however, a relevant example, respectively the Integrated Plan for Urban Development - PIDU Bucharest.

This project tries to recover the level of attention and quality that the development of a public space should have, as well as the need for its good in-time maintenance. Even if the initial investment is greater, it will amortize itself through its use over a longer period of time (50 years). For ecological reasons, this project has proposed

the use of certain local stones (andesite, dolomite) with a thickness of 6 cm for the pedestrian areas and respectively 12 cm for the roads.

As such, the area called the “**Ambiance Room**”, practically a street route (Verona, Xenopol, Eremia Grigorescu, George Enescu) that connects a series of small squares with special development (Cantacuzino, Lahovari, Romana). The mean investment value for the entire area is described under the following table, including the updated version with the successive inflation rates between 2013 - 2019:

NO.	PIDU ROUTE	M ²	RON WITH VAT/ M ²	RON/M ²	EUR/M ²	2019
8.7	VERONA	4382.0	1293.2	1086.7	244.2	265.60
8.8	XENOPOL	2600.0	1467.1	1232.8	277.0	301.32
8.9	EREMIA GRIGORESCU	3243.0	2289.7	1924.1	432.4	470.28
8.10	TACHE IONESCU	3854.0	1214.7	1020.8	229.4	249.49
8.39	CANTACUZINO	5714.0	1055.2	886.7	199.3	216.73
8.40	LAHOVARI	6190.0	1944.7	1634.2	367.2	399.41
11.2	PIATA ROMANA	5306.0	1707.6	1434.9	322.5	350.71
AMBIANCE ROOM		31289.0			296.0	321.9

For a better comparison, we have also detailed an amount for small grass medians, pedestrian developments, and road developments. The values calculated in the SF/DALI stage were updated with the successive inflation rates:

NO.	PIDU ROUTE	M ²	RON WITH VAT	RON/M ²	EUR/M ²	2019
18.2	PIATA DE FLORI	12446.0	1162.3	976.7	219.5	238.72
8.26	SQUAR QUINET	2452.0	1022.4	859.2	193.1	210.00



8.27	SQUAR ENEI	819.0	1497.5	1258.4	282.8	307.56
8.28	CRISTIAN POPISTEANU	4199.7	1539.6	1293.8	290.7	316.22
8.29	EXARCU EPISCOPIEI	2365.0	1232.0	1035.3	232.6	253.03
8.30	SQUAR VERONA	2445.0	1080.2	907.7	204.0	221.86
8.31	SQUAR AMZEI	1435.0	1152.7	968.7	217.7	236.75
8.32	SQUAR BERTHELOT	700.6	1044.1	877.4	197.2	214.44
8.33	SQUAR LUTERANA	1187.9	1288.0	1082.3	243.2	264.53
8.34	SQUAR STIRBEI	2233.8	1141.7	959.4	215.6	234.49
8.35	SQUAR CAMPINEANU	2592.0	991.7	833.3	187.3	203.68
8.36	SQUAR BREZOIANU	1320.7	1603.5	1347.5	302.8	329.34
8.36	SQUAR URANUS	4854.7	778.8	654.5	147.1	159.96
		39051.4			225.7	245.4

From this design experience (PIDU Bucharest), we can conclude that the areas to be minimally developed (the pedestrian and road areas, rainwater management, lighting, urban furniture) can be considered at an estimated value of **EUR 250/m²**.

The special areas in the square that additionally contain green space developments with the potential of planting trees, water surface areas or water fountains / ground fountains / interactive fountains etc., as well as temporary furniture or construction, may be considered at an estimated value of **EUR 320/m²**.

This difference is also confirmed through the estimation of a necessary investment of approximatively EUR 50/sq. m. as to provide a representative square with fountains and other water installations (EUR 600,000 estimated for this project).

Additional to these amounts, simultaneous with the development or remodeling works in Piata Sfatului (Council Square), a technical channel shall also be proposed for the utility grids, a channel which will cross the square and organize the existing buildings' connections, with separate compartments for each type of network.

In the documentation made available by Brasov City Hall, part of the competition documentation, the routes of these installations surround the square on all sides, to



which we add the connections necessary for Casa Sfatului. The approximative length of this drain is of 400 ml, with an estimated value of EUR 1000/ml, including the connections needed for the buildings in Piata Sfatului (Council Square).

As such, taking the aforementioned into consideration, the following estimated calculation can be made:

PIATA SFATULUI	M ²	EUR/M ²	EUR	
UNDERGROUND C.	150	400	60.000	development of underground restrooms
ROAD AREA	2800	250	700.000	Muresenilor/Baritiu road
DRAIN	400	1000	400.000	
PEDESTRIAN AREA	12000	320	3,840,000	existing square surface
CONSTRUCTIONS			5,000,000	ESTIMATIVE INVESTMENT

According to the MLPAT (Ministry of Public Works and Territory Development) Pricing Calculator, order 11N/1994, art. 5.12 (para. 32), “*depending on the placement, design, and execution conditions of each objective in part [...], the GENERAL INFLUENCE FACTORS defined below can be applied in a DIFFERENTIATED MANNER [...]*”

- *up to 1.5 at the price of the objective with SPECIAL STATUS, such as those at NATIONAL level or representative at CITY level...*
- *1.25 for the works and studies of objectives designed on UNEVEN TERRAIN with slopes greater than 10% or with MANDATORY CONDITIONS of organization of the PLACEMENT of objectives in the field (infilling buildings, expansions, re-functioning) and/or for other constructions with mandatory limits on its contour...”*

As such, in accordance with these prescriptions regarding the importance of investment, **the maximum investment cost estimate** has been supplemented by 30% compared to the usual estimative value, thus resulting in the amount of **EUR 6 500 000 + VAT**, to which we add the value of the design services and associated studies.

2. VALUE OF THE DESIGN SERVICES

The calculation of the design value shall be carried out in accordance with MLPAT (Ministry of Public Works and Territory Development) Pricing Calculator (Order 11N/1994). The objective of the development of Piata Sfatului in Brasov falls under Group IV - Real estate and urban-street development works (page 46), and has a design value of 5% of the investment value, according to the Table under Addendum 6.15.A., respectively **EUR 250,000+VAT**. The value of associated studies (geotechnical study, historical study update, topographical mapping, technical-economic documentation, specialized consultation on fountains etc.) shall be added to this value.

In comparison, the Order of Architects regulates only the value of the architecture price, according to the REFERENCE FEES approved by the National OAR Conference from May 30th - 31st, 2005. As such, according to this guideline, the Piata Sfatului (Council Square) development would fall under Class I (simple issue, low design requirements). For an investment value between EUR 3 300 000 - 10 000 000 (Table 3), as is our case, the architecture design value should be at about 3% of the investment value, respectively **EUR 150,000+VAT**. This value must also include design of temporary constructions, easy to take apart (kiosks, booths, benches, other urban furniture elements). The rest of 2% (EUR 100,000+VAT) of the design value must be reflected in the intake of the following specialties:

- road system expertise (existing situation, recommendations);
- road system design, roadway and pedestrian design with intermittent roadway (supply, fire fighters);
- rainwater management design (sanitary installations);
- hydraulic installations design (fountains, water shows);
- nocturnal lighting design, including the light-technical calculations (electrical engineering);
- underground construction expertise/design (structure specialist/sanitary specialist/electrical specialist/ventilations specialist);
- landscaping design that will specify the type and size of plants/bushes to be planted
- urban design (square orientation signage / advertising company rules)

For the rest of the associated studies, approximative, generic offers have been requested:

ADDITIONAL STUDIES	EUR	ERROR 20%
HISTORICAL STUDY	5000	6000
TECHNICAL ECONOMIC DOC.	2000	2400
FOUNTAIN CONSULTATION	25000	30000
TOPOGRAPHIC VERIFICATION	2000	2400

3D TOPOGRAPHY	3000	3600
GEOTECHNICAL STUDY	3000	3600
TOTAL ESTIMATE		48000

= 1% of the
investment value

The following studies, that do not pertain to the actual investment, shall not be included:

- design of utility grids crossing the square (enhancements, deviations etc.);
- design of perimeter buildings support or sub-foundation;
- traffic studies, necessary at the level of the city;
- archaeological studies and digs.

3. TOTAL VALUE OF THE DESIGN COMPETITION PROCEDURE

According to the present document, the following investment values have resulted:

PIATA SFATULUI	M ²	EUR/M ²	ESTIMATIVE	MAXIMUM COST ESTIMATE
UNDERGROUND C.	150	400	60 000	
ROAD AREA	2800	250	700 000	
DRAIN	400	1000	400 000	
PEDESTRIAN AREA	12000	320	3 840 000	
CONSTRUCTIONS			5 000 000	6 500 000
DESIGN - 5%			250000	250 000
ASSOCIATED STUDIES 1%			50000	50 000
TOTAL DESIGN CONTRACT ESTIMATED VALUE			300 000	300 000

These financial calculations do not include:

- urban planning design (PUD, PUZ)
- design of utility grids crossing the square (enhancements, deviations etc.);
- design of perimeter buildings support or sub-foundation;
- traffic studies, necessary at the level of the city;
- archaeological studies and digs.
- site supervisor (assessment of works quality)
- project management (organization of tender, organization of execution processes).



The value of the prizes, correlated to the estimated value of the design services costs:

2nd Prize: 15.000,0 EUR without TVA

3rd Prize: 8.000,0 EUR without TVA

Prize money total value: 23.000€ (15.000€ + 8.000€) (113,277 Lei, BNR 31.03.2021)

PIATA SFATULUI	MAXIMUM ESTIMATE
CONSTRUCTIONS	6.500.000 EUR
DESIGN CONTRACT	300.000 EUR
2 ND PRIZE	15.000 EUR
3 RD PRIZE	8.000 EUR

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