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**Town-planning concept**

*New Tauras Hill Park, a history of respect.*

a.- The outstanding situation of the existing building allows a unique visual from the city, but at the same time implies, in a project of these dimensions, an eminently horizontal profile. At the same time the building itself is like a wall that separates the park from the Old Evangelical Cementery gardens. (fig 1)

b.- To achieve a better slenderness in the architecture, and thinking in a more direct and clear connection between the park and the Old Evangelical Cementery gardens it is decided to fragment the program into three pieces (Main Hall, Small Hall and House of the Nation) joining together by a base (plynth) that acts as a continuous foyer. In this way a new visual connection of the territory with the city through a new green corridor is generated. These pieces are modeled in a polygonal shape and are oriented by responding to the diagonal visuals that are generated from the different arrivals to the park. (fig 2)

This polygonal structure establishes an interesting dialogue with some of the icons of the city such as Gediminas Tower, the communications tower, or so many others faceted buildings.

c.- The project is completed with a simple solution by extending the old evangelical cementery gardens to the base of the building as a garden roof, housing all the private uses of the complex. This operation generates a unique park as a result of the union of Tauras Hill and the Old Evangelical Cementery gardens. (fig.3)

d.- All the uses included in this continuous plynth are illuminated through a series of linear courtyards (patios) giving continuity to the existing sand paths of the Old Evangelical Cementery gardens that currently end abruptly and steeply. (fig.4)

This project seeks respect through integration and at the same time increases public space. The project is completely adapted to the building limits established in the program, since the existing parking space is kept covering this garden roof that does not modify or alter any of the values of the Old Evangelical Cementery gardens, so the stained glasses are incorporated to the building.

From right to left (fig 1, 2, 3, 4 and 5)
The New Tauras Hill Park, access to the territory.

This New Park is connected through the roof building by a series of stairs and ramps that unify the different levels in a natural way.
The uphill paths to the hill are reordered, enhancing the diagonal visual connections.
The new garden roof of the complex will become a new visual icon for the city.
New Tauras Hill park will enhance public transport and pedestrian accesses.
• Transport concept

The New Tauras Hill Park, access to the territory.

New Tauras Hill park will enhance public transport and pedestrian accesses. The installation of a public elevator is proposed in the area with the steepest slope that guarantees access for people with reduced mobility and the idea of the pedestrian and bicycle bridge over Tauro Street is preserved.

At the same time, the topography of the land is used to generate an outdoor multifunctional auditorium, which will allow auditions in summer, crowned by the new National Concert Hall. There are also areas for children’s games based on musical elements and urban furniture to enhance the lighting.

There are several bicycle covered parking spaces for more than 100 units. Logistics will be accessible from Tauras Street, with direct communication with basement and groundfloor parking. There are two loading bays one for small trucks in groundfloor and another bigger in the basement.

The staff parking will be located surrounding the south part of the complex, and will be covered by the connecting platform to the Old Evangelical Cemetery gardens. Taxis will have drop-off areas in both east and west entrances.
• Architectural concept

The concert centre will join together both tauras Hill Park and the Old Evangelical Cementery gardens creating more than a building a urban solution. The program is divided in premises with low height requirements and the halls and cultural ‘House of the Nation’ that need higher volumes. Architecture just follow this needs creating a roof garden in continuity with the Old Evangelical Cementery gardens level for the low premises, and a glass and wood envelope for the big ones.

The building and Landscape together create a sense of drama when illuminated, a new Icon in the city as the light expands outside the Venue. The beautiful light of the sky during summer nights will enter smothely through north facade, creating a perfect and magical atmosfear for Music lovers.
FLOOR & ENTRANCE DIAGRAMS.

**Front-of-House**

**Foyer**

1. Entrance Hall/Foyer (including orientation space)  
   - Can be divided in two independent areas.  
   **1874**
2. Information Centre/Reception/Box office/Ticketing  
   - two areas and with external access  
   **45**
3. Security  
   **25**
4. Cloakrooms/Lockers  
   - two areas, groups (gathering space) and individuals. becareful lines  
   **200**
5. Public restrooms  
   **285**
6. First aid room  
   **15**

**Food and Beverages**

7. Restaurants, bistro, cafe  
   - possible with independent access from outside.  
   **470**
8. recreational spaces  
   **20**
9. Bars (seating area in entrance foyer)  
   **225**
10. EXPO / educational space 'House of the Nation' area for activities and recreation  
    **625**
11. Main Kitchen (service area for restaurant/bistro/cafe)  
    **205**
12. Kitchen storage  
    **90**

**Concert Halls**

13. Main Hall. non less than 1500/1700 seats  
    - choir balcony included 50m2, niche for organs 60m2 hydraulic lift  
    **1500**
14. stage (hydraulic lift  
    **300**
15. small Hall. (multipurpose, multiple configurations)  
    **520**

**commercial premises of cultural content**

16. commercial premises for dissemination of cultural products  
    **320**
Ancillary Spaces, Back-of-House

**Staff Spaces**

17. Staff entrance  
18. Office space  
19. Meeting rooms  
20. Main office  
21. Staff closet (vestuaries)  
22. Coffee/staff room(s)  
23. Staff bathrooms

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<td>19</td>
<td>Meeting rooms</td>
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<td>20</td>
<td>Main office</td>
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<tr>
<td>21</td>
<td>Staff closet (vestuaries)</td>
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<td>22</td>
<td>Coffee/staff room(s)</td>
<td>40</td>
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<td>Staff bathrooms</td>
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**Backstage (why not to add a green room)**

24. Hall Backstage areas  
25. Sound, production and lighting storage  
26. Performers' dressing, lockers, restroom & shower facilities  
27. Performers' instruments/equipment storage room(s)  
28. Performers’ recording studio  
29. Stage manager room  
30. Performers' rehearsal rooms  
31. Library/archive

<table>
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<td>26</td>
<td>Performers’ dressing, lockers, restroom &amp; shower facilities</td>
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<td>27</td>
<td>Performers’ instruments/equipment storage room(s)</td>
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<td>28</td>
<td>Performers’ recording studio</td>
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<td>29</td>
<td>Stage manager room</td>
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<td>300</td>
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<tr>
<td>31</td>
<td>Library/archive</td>
<td>50</td>
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</tbody>
</table>

**Maintenance functions - Utility rooms**

32. Service entrance  
33. Security  
34. Loading Bay  
35. Delivery, packing, crate storage  
36. Preparation space and warehouse  
37. Workshops  
38. Workshop storage  
39. Workshop office  
40. Furniture and prop storage  
41. Janitors' room (s) Cleaners’  
42. Waste, Refuse and recycling room  
43. IT room

<table>
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<th>No.</th>
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<td>35</td>
<td>Delivery, packing, crate storage</td>
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<tr>
<td>36</td>
<td>Preparation space and warehouse</td>
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<tr>
<td>37</td>
<td>Workshops</td>
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<td>38</td>
<td>Workshop storage</td>
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<td>39</td>
<td>Workshop office</td>
<td>25</td>
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<tr>
<td>40</td>
<td>Furniture and prop storage</td>
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<tr>
<td>41</td>
<td>Janitors' room (s) Cleaners’</td>
<td>25</td>
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<tr>
<td>42</td>
<td>Waste, Refuse and recycling room</td>
<td>45</td>
</tr>
<tr>
<td>43</td>
<td>IT room</td>
<td>100</td>
</tr>
</tbody>
</table>

**Volume concert house**

20100 m³

**Underground parking**

44. Groundfloor Parking

1500

**SUB-TOTAL (Main functions without groundfloor parking)**

15945
• Environmental concept

The building must be durable, easy to maintain, and above all economically viable. To this end, the design makes use of simple geometries, which allow cost-effective construction employing industrialised local materials. The green roof acts as an extension to the park, collecting and recycling rainwater. The three pieces roofs also act as an energy collector, thanks to the solar panels incorporated.

ENERGY CONSUPTION

Temperatures in the Building must be in comfort Range, between 20° in winter period and 26° in summer. Offices will maintain an average of 23° during the whole year. The highly insulated envelope (U=0,09 W/m²K) and the radiant heating/cooling system will keep the energy consumption as low as 40 KWh/m² for the heating, and 7kWh/m² for cooling. For insulating the envelope 40 cm of insulation will be used, and 50 cm in the roof garden. The chosen material will be FOAM glass thanks to the lasting life material and the cost efficiency. Free energy sources as solar panels and geothermal energy piles in the foundations will reduce the electricity needs. Windows will be triple glazed with thermally broken frames. the high G value and high visual transmittance support the heating against overheating.

SOLAR & GEOTHERMAL ENERGY

Solar Energy: Harnessing the sun's energy for hot water and electricity. Geothermal energy: Thermal energy generated and stored in the Earth. Geothermal power is cost-effective, reliable, sustainable, and environmentally friendly. Humidity will be in range of 30 to 60%.

A radiant and cooling system with TABS system, combined with natural ventilation will assure an extremely low velocity of the air, around 0,15m/s. Displacement ventilation will included a very high and efficient heat recovery

WOODEN CONSTRUCTION

Wood insulates comparatively well and has a lower U-value than other building materials. Wood is naturally sound-damping, offering excellent noise control. As a result, wood has long been specified for applications requiring the amplification of sound (such as a concert hall) or its mitigation (such as a library). Wood can contribute to insulating and separating areas of a project. Wood is a natural insulator due to air pockets within its cellular structure, which means that it is 15 times better than masonry, 400 times better than steel, and 1,770 times better than aluminum. In addition, lightweight wood framing methods allow easy installation of additional fibre or foil insulation

As a result of this improved thermal performance, buildings produced using timber, particularly engineered timber such as Cross Laminated Timber (CLT), Glulam and Laminated Veneer Lumber (LVL) require less energy to heat and cool, resulting in reduced energy bills. In addition, timber is hygroscopic and has the ability to exchange moisture with the surrounding air which provides a buffer against short-term changes in humidity and temperature.
If a building is made of concrete, wood panels can be installed to reduce echo. Many theatres or auditoriums use wood in the flooring, ceilings, or in the form of wood acoustic tiles to increase the warmth and beauty of the sound. In addition to also being easy to clean, wood surfaces offer advantages beyond acoustics, including the ability to be sourced locally and store carbon, strong thermal performance, low VOC emissions, and reliable behavior during fire and seismic events.

WATER MANAGEMENT

Gray water are treated through a series of tanks and its treated liquid effluent reused for wc, irrigation and cleanliness. All the roofs act as a system-water collection. Sloping roof has been designed to evacuate rain and snow in main halls.

NATURAL LIGHT

Daylight is an essential natural asset. The design is perfect to achieve a maximum comfort in terms of natural light. The building is designed in a way that Natural light is always present, of course the North facades have a direct smooth incidence and backstage and offices have direct light through the patios. Even the Concert spaces have the possibility to receive Natural light through a prominent opening behind the stages that can be mitigated or even closed with sliding acoustic panels. The project has tried to offer the possibility to incorporate the stained glass windows in a powerful location better than shift them into a museum. A system of lighting sensors will be installed in every space to maintain the required illuminance levels, vacancy sensors will be installed as well, connected to the control system of the building.
• Functional layout of the National Concert Hall

The foyer is displayed towards the North, facing the park and the best views of the new and old city, connecting main and secondary performance venues with the ‘house of the Nation’ building and main café with outdoor terrace.
As required all the space is continuous, luminous and easy to understand and flow, but it can also can be sectorized by areas with independent accesses. Plus it can hold small events, (music performances, art shows, schools lessons…) . Different food pop-ups and commercial premises are spread out through it.

The whole complex is divided in two clear parts, one for public access, the previously mentioned continuous Foyer, and the second part for staff and musicians, that is connected through a big corridor.
Behind but really close to the stage in Main and Small hall is designed a green room, to allow musicians to relax and enjoy during concerts and events.
• Acoustic solutions of the National Concert Hall

The main hall has an outstanding acoustic and versality quality, the secondary hall follows the same idea giving consistent identity and allow cross-programming, offering a change of scale and orientation. Both halls allow natural daylight come in, to ensure easy orientation and a powerful and unique image, but also sliding panels are designed to darken the spaces. The existing stained glass works are installed in this prominent position (protected by acoustic glasses) recovering the importance they have in the site.

The 200 transformable seats are on flat surface near the stage, but the floor can be mechanically stepped if required to create an orchestra Pit, or other performance need.

Sound and lighting engineers control rooms are at the end of the hall with direct view to the stage, Stage manager room is located beside the stage.

The small hall is quite absorbent and diffuse area with electroacoustic enhancement system, and can be displayed in different positions mechanically. The envelope is in wood as well, with perforated panels to ensure perfect absorption (reverberation)

reverberation time of the hall (with full audience) will be 2.0/2.1 s at mid freq. And rise 5% per octave below 500Hz. Also is possible to reduce reverberation time below 1.5 s at mid freq, and below 2.0 s at 125Hz for different performance uses. The reverberation time will be uniform through the Hall.
• Engineering and technical systems of the National Concert Hall & • Structural concept

The halls have a concrete structure to ensure maximum noise isolation, with timber cladding walls designed to achieve outstanding acustic environment. The pattern of the hall, not only is designed to drive the sound through the space, but also to follow outdoor structural glass facades concept. The facades are designed with mixed steel and wood frames in a way that rigidization diagonal lines are displayed until horizontal slabs offering a vibrant solution that remember the powerful forests of Lithuania.
• Building finish materials

The main construction material will be wood, steel and Concrete (for main music halls). Concrete assures the quality of noise isolation and the main structural core of the Building. Wood and steel that have a long Life cycle and there's not downgrade in recycling. The loading capacity is assured and the industrialization is guaranteed, so the facades could be developed in a total industrialized way.

Reused metal allows to lower the global warming and energy consumption for production. Also less material than any other structural component is required, reducing even more the GWP. The Internal facades will be designed with composites panels of recycled wood. All the materials used in the project will be 100% recyclables and reusables.
• **KEY parameters of the National Concert Hall** *(ANNEX 3)*

- Project Code: VL 1397
- Total area (netto) of the building: 15,945 m²
- Footprint size (bruto) of the building: 7,060 m²
- The maximum building height: 28 m
- Number of the Grand hall seats: 1,780 seats
- Grand hall area: 1,800 m²
- Number of the Small hall seats: 550 seats
- Small hall area: 520 m²