1 DESIGN CONCEPT

DESIGN APPROACH | METHODOLOGY

DESIGN APPROACH

A critical approach based on the theory of restoration by Cesare Brandi

The approach to the intervention on historical and cultural heritage, and, similarly, the enhancement of historical centers, has been increasingly consolidating since 1964, when the *Charter of Athens* was approved and promulgated. It was to conclude a long and winding process that lasted a century and a half, which had finally asserted a more culturally advanced and functional attitude based on a critical rather than dogmatic and ideological approach.

In this process a key position had been taken since the late nineteenth century by the **Italian culture of restoration**, which had found its highest expression and coherent development in the theory of the restoration set up by **Cesare Brandi** in the 50s and the consequent practical activity he performed at the direction of the Central Institute of Restoration and through a continuous collaboration with the Offices for the protection of Cultural Heritage and specialists working in public and private restoration in Italy and abroad.

The cornerstones of this position are well known:

- **Absolute respect for the originality and authenticity of the work, but do not penalize the use,**

- **Consequent preservation of both the original formal value and, in parallel, of the historic stratification of the building**, anticipating the actual sensitivity and care for the matter of the work, whose signs can help us to reconstruct some aspects of the history and the national identity of a community.

According to the specific architectural theme proposed by the present design contest, the following points are taken as fundamental criteria of methodology in the field of protection and valorisation of cultural heritage:

1. **Conservation**. First aim is the best possible transmission to the future of a historical-artistic heritage that is by definition unique and unrepeatable (the functional issues and other practical problems are the means and not the end of the intervention); everything should be based first of all on justifications of a cultural and conservational character, with all other considerations remaining secondary.

2. **Minimum intervention**. From this criterion follows a design work that maximize the efficacy and minimize the weight of each intervention.

3. **Authenticity**. The universal value of historical heritage depends on its authenticity. The restoration, as it regards authentic historical heritage, must be connected to the philology and critical analysis of the textual evidence; therefore any temptation of falsification involving imitation of styles must be avoided, in the awareness that we are not operating with historical certainties, but at best on the basis of valid critical hypotheses.

4. **Distinctivity**: any additions should clearly demonstrate their modern character, with their own contemporary expressive efficacy, so that the new and the old will remain such, without any risk of introduction of counterfeit parts. The reconstruction of original parts or reinsertion of architectural and decorative elements should be visibly distinguished from the original parts.
   A reintegration is allowed under specific conditions, if it can be achieved without committing an artistic or historic fake.

5. **Reversibility** of any new intervention.

6. **Compatibility** (physical, chemical and aesthetic) of the restoration.

7. **Adaptability** of the new buildings to the progress of archaeological excavations.

8. **Maintenance program**.

The operative methodology in a broader concept of heritage

The issue of policies and procedures regarding the preservation of twentieth-century architecture – including works that range from iconic to “minor” and encompassing all nuances of rehabilitation, restoration, replacement, etc. – arose in the 1960s following a number of controversial demolitions. From the beginning, it became necessary to **expand the idea of heritage to include the architecture from our recent past** which, in general, struggles to be recognised as “deserving” of conservation because it seems too ordinary and mundane. A heritage which is heterogeneous, multifaceted, problematic and quantitatively very relevant as it is comprised of not only monuments but, above all, buildings in-use or subject to reuse (such as structures used for industry, public services and housing), infrastructure and entire company towns. Furthermore, there clearly arose an urgent need to **consider architectural works as a complex product involving historical, artistic and cultural values**, going beyond the theoretical debate about the authenticity of works which are often intended to last only a short time and belong to the age of technical reproducibility. Shall one conserve their material or intangible values?

Throughout the century – through the arc encompassing modernism, proto-rationalism, international style, post-modern, hi-tech, and, more recently, low-tech – techniques and materials have given shape to languages and trends in architecture. In a relationship at times contradictory and ambiguous the evolution of building techniques and materials has followed many non-linear, varied and often tortuous routes – varying of course according to geographical, cultural and economic conditions. The evolutionary routes have undergone accelerations and decelerations, developing through stages of breakthrough, permanence and continuity,

Heritage preservation

Contemporary insertion

The projects carried out so far have provided different, sometimes opposite, answers. However, they have all confirmed the central role played by the **direct handling of technical aspects**, which is all the more important for buildings (such as the modern ones) that have implemented often inadequate technical solutions, being experimental and untested.

The now numerous case studies testify to the complexity of intervention programs, which necessarily include different aspects. However, they have confirmed the central role of an architectural project based on the technical interpretation of the work. It is, in fact, only through the meticulous **exploration of a building’s unique characteristics** that one may measure the gap, ever-present, between design and implementation, between the blueprint and the finished work. Moreover, starting from the consideration that a building is never finished but rather is constantly being formed, deformed and transformed through use, the survey must be conducted over the entire course of its life. Each conservation and restoration project takes shape as an experiment and generates a construction site that is set up as a laboratory of knowledge in which to test techniques and materials. Every project opens a new horizon in the field of research because, whatever the technological “intensity” of the building is, each individual case helps to write the history of techniques, clearly defined as being a new historiographical frontier.

Compatibility

Careful juxtaposition

1 DESIGN CONCEPT

RESTORATION APPROACH & ANALYSIS OF THE BUILDING

RESTORATION APPROACH

A project of listening to the heritage instances for the new design of the Supreme Court and School of Magistrates of Albania

It is difficult to rely on a manualistic approach intervening on twentieth century architecture. Each architectural case is different and must be evaluated on its own, keeping the theories of Cesare Brandi as a necessary theoretical and methodological background. The project of conservation and rehabilitation must listen to the architectural identity features that identify the heritage accumulated over time.

Once these characters and their relevance in relation to the new destination are clearly identified, the most appropriate action - not rarely almost invisible - will naturally emerge.

Project phases:

1. **Understanding the architecture of the building**, to frame it in its role as cornerstone in the construction of 1940's Tirana and in the architectural production of Cesare Valle.
   In fact, 1940 was an autarkic period. Because of the prohibition to use iron in buildings, construction was back to wall structures using traditional techniques and local materials like – in this Cesare Valle's building – the stone arcade as base and support, the roof lug, the facades layout. These technical prescriptions have an immediate impact on the architectural language that even reaches a decline towards vernacular themes.
   The re-evaluation and re-discovery of regional variations - often forgotten or substituted by an image of a flat stereotypical modernity - is one of the most advanced and exciting frontiers of current research.

2. **Understanding the anatomy of the building** (constructive and technical analysis) through the reconstruction of design and construction phases. The complexity of the equipment is often revealed only by a careful study of the construction phases carried out both through historical documents and direct survey.
   In this case, the reference to constructive techniques of traditional masonry is only apparently in contradiction with the issues of "modernity" or 'rationalism' as commonly addressed. This highlights the local and regional variations of modernity, one of the most interesting them of current research. This analytic phase is essential to understand the building and define its potential transformations.

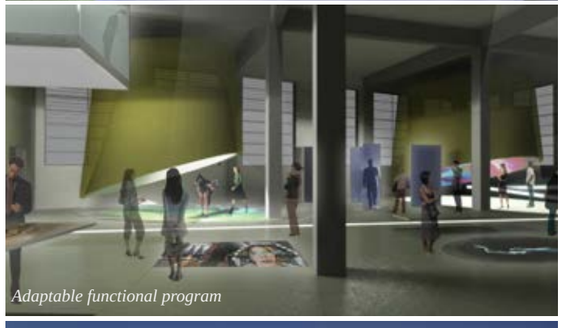
3. **Understanding the changes and transformations** that the building has undergone over time. It is essential to distinguish the original parts from subsequent additions or changes.

4. **Identification of peculiar spaces and elements that must be preserved and restored**, and those likely to be transformed.

5. **Definition of a hypothesis of new distribution and functional organization**. Re-design of parts and elements to be preserved with special attention to construction details which often, for method or materials, present a certain degree of originality.

Re-design modern architecture heritage

Targeted interventions



Adaptable functional program

Preservation of authenticity

Analysis of the building

The project of the female boarding school
The original design of the female boarding school by Cesare Valle consisted of **three separate buildings located around a main distribution atrium** which was marked by the presence of a tower building and used as a pivot, both functionally and even symbolically of the design composition.

The clarity of the layout plans, including the design of paths, patios and outdoor spaces, along with the spatial articulation of functionally separated volumes, can be attributed to the experience that Valle had matured in the design of new architectures for Youth (Valle designs 2 gyms, 8 youth Balilla houses, five of which were built, and an aviation college). The new social, sport and cultural architectures are often designed by young architects who have the opportunity to experiment modern and innovative solutions in terms of relationship with surrounding landscape, typological and compositional research, constructive aspects and architectural results. But in this new type of building the distinctive element is the **fluidity of the interior spaces** derived by new connection diagrams among the parts which were especially designed for the constant movement of youngsters.

Architecture plays simultaneously its **functional** (for typology) and **monumental** role, peculiar and identifying feature of Italian twentieth century architecture, especially Roman. Monumentality is here sought in the proportion of the parts and in the presence of some architectural elements such as the porch and the tower, which marks the intersection point between the rectilinear building and the curved one, which houses the study rooms as well as the dormitories.

Influenced by **autarkic climate**, Valle designed buildings in **masonry and pitched roof**; he makes the structure match with the distribution; he chooses the arch, instead of the frame, as architectural figure and as constructive element, mainly due to its traditionally wall essence; he adopts pitched roofs; he suggests local construction techniques and materials. The same 'regressive' tone towards the language of the modern movement that can be found in other buildings that were constructed in Tirana in the same years, such as the contemporary "Casa del Fascio" by Gherardo Bosio, characterized by its tone of fortress

1 DESIGN CONCEPT

RESTORATION APPROACH & ANALYSIS OF THE BUILDING

(thanks to an integral coating that alludes, in the ashlar finishing, to a masonry construction).

The project is clearly in the context of the activities of the Central Office for Housing and Urban Planning of Albania (*Zyra Qednore e Edilicjes dhe Urbanistikës se Shqipnis*) that operates between 1939 and 1943, coordinating and directing the design of the city from the urban scale to the building.

The Office, headed by Bosio, start reworking the master plan with the project for Viale dell'Impero (today *Bulevardi Dëshmorët and Kombit*) and Piazza Littorio (today *Sheshi Nënë Tereza*), where the main public buildings of the modern city are located: the "Casa del Fascio" (today Polytechnic), the House of Albanian Youth of Littorio (today archaeological Museum and University Library), the Albanian after work center (now Art Academy). The master plan provides the following prescriptions for the public buildings (height = 17 m, three floors above ground plus the ground floor) and unity of language based on stone cladding (minimum mandatory base = 1.80 m).

The graphic documentation of the project is fragmented and stored in the Valle Archive in Rome and in Tirana. In addition to the drawings no other documents or photographs have been found (besides the published ones).

A series of original drawings of the complex (plans, elevations, sections) are stored inside the Valle archive; they are not dated, but according to the Valle archive they are dated back to 1937.
The original copy of the project signed by Valle is kept in Tirana; It is dated April 1940 and it is the same which is preserved in the Valle archive in Rome.

According the original design the building consists of a basement and three floors. It is geometrically based on a circular crown, with central access on the south elevation; the distribution paths are articulated around a main staircase and a series of annular paths (north) which, at all levels, exploit the space between the structural walls. The ground floor houses the reading rooms, the first and second floors contain the dormitories; the basement has a central distribution corridor and contains the mechanicals and some common facilities. Each floor is divided into two symmetrical arms at the ends of which all the toilets are located.

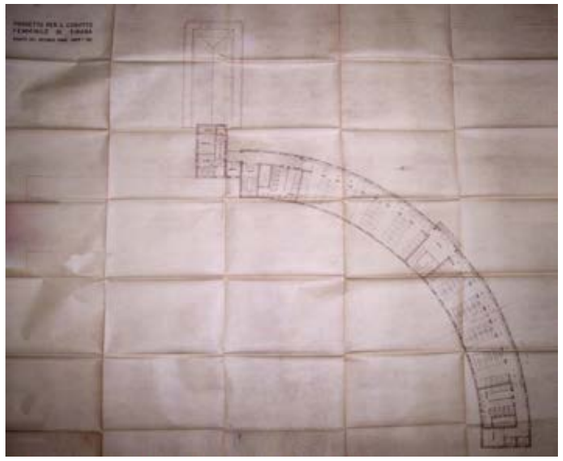
The **two elevations**, south and north, have a very simple layout but two different roles: **public** on the north side and **private** on the south one that overlooks the outdoor space and the public park. The north elevation is characterized by a very high mezzanine floor with a porch defined by 13 arches. This floor constitutes the **base of the building, wrapped in local stone**, on which the high plastered volume rests, crowned by the projected eaves of the pitched roof which is marked by a close sequence of shelves at the roof joists. The south elevation, which is also wrapped in local stone at base, is closed by a more 'ordinary' and 'familiar' pitched roof; this elevation is serially punctured by the windows of study rooms and the dormitories, the narrow openings of the toilets are densely located at the edges. The building meets the requirements of the Central Office for Housing and Urban Albania: height = 17 m., three floors plus the ground floor and stone cladding of the minimum height of 1.80 m.

The built project
The curvilinear building is the only portion of the original project designed by Valle that still exists today. The lack of documentary materials and photographs does not allow to clearly understand if the complex was only partially realized. In the board "Master Plan. General plan", January 25, 1942 (reported in the book by M.A. Giusti, *Albania: architecture and city from 1925 to 1943*, p. 47) the building of Valle is integrally reported. But another clue, the fact that the lower part of the east side is wrapped with stone whereas the west side, adhering to the atrium, is not, suggests the most plausible hypothesis, namely that construction was started in the autumn 1941 (Istituto Luce photo dated 21/11/1941) with the most challenging portion of the complex, that of the dormitory, and then the construction site was interrupted.

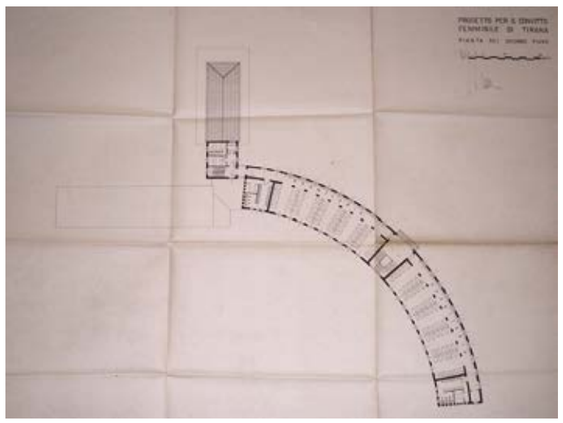
The building constructed by SIACEA (Società Italo Albanese Costruzioni Edilizia e Affini) Italo-Albanian Construction Company and Similar Products (P. Capitolino, Tirana 1923-43, Rome 2011) presents some differences compared to the original design, which were explained a variant project of the first floor plan, dated June 1940 and preserved in the Archives of Tirana.

The change that can be read in the plan of the first floor concerns the length of the symmetrical arms that extend to form an exact quarter of circle. The arms are stretched by the insertion of two small cloisters located before the toilets and the addition of a service staircase at the west end. This change entails the addition of two arches in the elevation, they thus become 15 instead of 13.

The present building (which has obviously suffered from other undocumented changes in the course of time) does not present the two little cloisters shown in the variant project, but the



April 18th, 1940 (Archives of Tirana, Original Archive Valle), 13 arches



June 30th, 1940 (Archives of Tirana), 15 arches

service staircase is clearly recognizable. In addition, although the internal distribution seems to have maintained the original scheme, it has certainly varied . But the main differences between the building and the project can be identified as follows:

- The addition of an **external staircase** that corresponds to the central arch of the north elevation and that has become the main entrance to the building;
- Introduction of a **double pitch roof** (which resulted in the reduction of height of the north elevation);
- The absence of the stone cladding on the west side and on the south elevation;
- The reduction of the openings at the balconies on the north elevations and at the staircase on the south elevation;
- The abolition of the bas-relief on the north elevation.

Structural and architectural aspects
The structure consists of curved load-bearing masonry walls. The presence of openings on the axis of the walls between the arches suggests a certain 'autonomy' of the north wall (See foundation sketch drawing) which is thought by Valle as a real wall made of blocks of local stone (see detail drawing of the arch where the thickness of the wall appears on the side of the arch unlike what has been done with the coating that "turns" on the side), with slabs radially supported by the south wall and the spine wall that defines the loggia on the first floor and the hallways of the upper floors.

The section of the spine walls tapers as to become pillars at the first and second floors. From rare photos of the construction site it is visible that the bearing wall is a **Roman masonry**, (local stone, tufa pieces in rome, or lines of bricks every 70-80 cm to regularize the wall).

There are also the supporting walls of the main staircase and the service staircase. The interior partitions of the various levels, as well as the location of toilets, do not match the project by Valle.

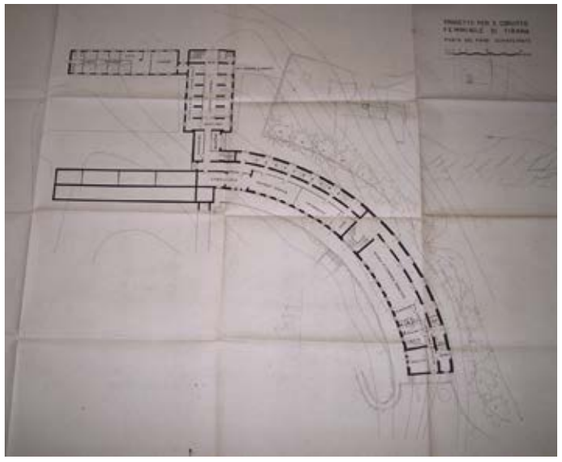
Elevations
The north elevation differs from the original design for the treatment of the base (the wall in stone blocks in the design compared to coating in the built project), for the addition of the

1 DESIGN CONCEPT

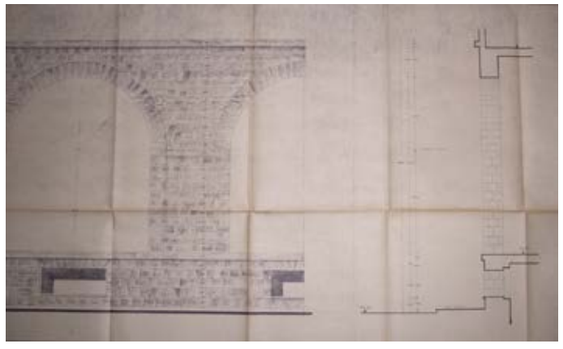
RESTORATION APPROACH | PROJECT UNDERSTANDINGS

central staircase coated with marble tiles, for the reduction of the building height (due to the introduction of the double pitch roof), the reduction of the openings of the main staircase, the removal of the bas-relief.

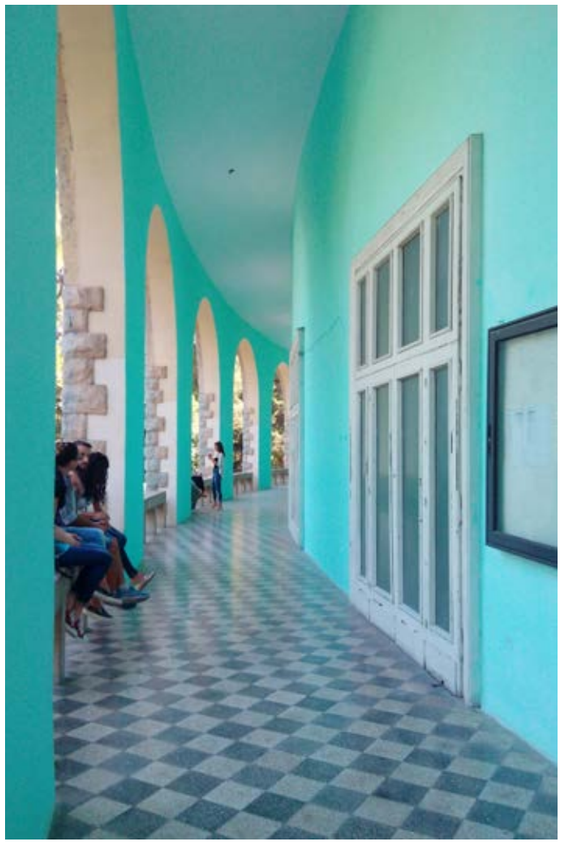
The south elevation is incomplete because the stone coating of the lower portion was never done. The upper portion of the north and east elevations and all the south and west elevations are treated in light colored plaster (there are no indications on the original color but the restoration site might give different directions). The rectangular openings have different window frames which have been obviously modified over time. The interiors that have a different layout from the original project probably present not original finishing (floors, walls, fixtures).



Foundation sketch drawing (Archives of Tirana, Original Archive Valle)



Detail drawing of the arch (Archives of Tirana)



View of the porch

A JUDICIARY SYSTEM FACING TIME CHALLENGES

The competition arises out of an utmost-urge as a response to the presented necessities of the **Supreme Court** for new spaces to host the institution, to **improve the efficiency and the quality of the services in accordance with the European standards**. This happens simultaneously with the need of the **School of Magistrates** - already being hosted from the existing building - which, on the other hand, needs to be extended in the emerge of the ongoing growth in responsibilities regarding trainings of judges and prosecutors in charge. In the framework of the implementation of the "*National Plan of European Integration*" and its participation in the Intersectorial Strategy of the Judiciary System, the school has a number of prerequisites among which **the extension of its premise spaces** is an essential demand for hosting its required activities.

Scope of the Competition

Competition will built on these three tasks:

1. The **site plan and landscape design proposal** for the competition site pertaining to the open area/park- school-court- city interconnection.
2. An **architecture design proposal** for the New Headquarters of the Supreme Court.
3. An **architecture design proposal** for the School of Magistrates.

Building program | Supreme Court

1. **Rehabilitation and Adaption** of the existing building.
2. **Extension volume** of the existing building.

Specifications:

- Status of **culture monument of the 2nd category** - Law 9048, dt.07.04.2003 "*On cultural heritage*", as amended, Section 27, "*Cultural Monuments of IInd Category are objects with distinguished values, mainly on their exterior appearance.*"
- **4 college courts** are needed:
    1. one and the greatest, the **United College Court**, (with a panel of not less than 25 judges);
    2. one **Civil College Court**;
    3. one **Administrative College Court**;
    4. one **Penal College Court**.

  (where the three last ones should consider the judging panel to composed of not less than 5 judges).

- The number of judges required from the Supreme Court is around **20 - 25 judicial bodies** (25 for a future perspective). The number of the judges should always be an odd number, in order to facilitate the decision-making.
- Courtrooms are subject to **european design standards** - as per *Court Functioning Scheme Model_AL*.
- The total surface of the Supreme Court should be **5.604 mq**.

Building program | School of Magistrates

1. **Rehabilitation and Adaption** of the existing building / **Demolition** of the existing building.
2. **Extension volume** of the existing building / **New building** proposal.

Specifications:

- The cultural monument of the 2nd category only consists of the future Supreme Court, and does not include the one story addition, the bridge and neither the 4-storey building behind.
- The total surface of the School of Magistrates should be **3.298 mq**.

Landscape program

1. **Landscape development** of the complex.
2. **Connection** between the two buildings through Programmatic Space and Landscape Design.
3. **Continuation of the landscape of the Lake Park** of Tirana through ways to serve the public realm.

Specifications:

- The trees in the competition site need to be preserved.
- The **green areas are expected to be expanded**.

1 DESIGN CONCEPT

CONCEPT

THE SUPREME COURT AS AN URBAN PLACE FOR THE CITY

Urban context integration bird's-eye view

The goals of the Competition for the Supreme Court of Tirana necessarily lead to address a variety of issues simultaneously posed by the relationship between the **symbolic and ethical aspects** of the high judicial office and its possible architectural configuration.

The conception of a new complex dedicated to the highest form of judicial activity for Albania, together with the important education and training activities, leads to reflect on the relationship between **architectural space and its symbolic fallout in the urban community**. The new judicial complex becomes the place where Justice becomes Training of the ethical collective and individual conscience and leads citizens to have a whole vision of different fields of knowledge in a new approach, as presented by the programmatic document on the basis of the consultation.

The Supreme Court is, therefore, seen as a **place of 'welcome'**, open to the citizens, able to stimulate the knowledge and the sharing of a series of activities that are so important for the stability of the state. The choice is, therefore, to locate the most representative functions in the historic building, maintaining and enhancing the main entrance and the ambulatory of the porch.

1 DESIGN CONCEPT

URBAN ANALYSIS AND VISION

URBAN ANALYSIS AND VISION

The buildings of the Supreme Court and School of Magistrates are located on the edge of the Artificial Lake Park and, at the same time, on the edge of the city.

This condition of **borderscape** is an interesting condition, which make the design solution an exciting occasion for trying to propose a **landscape approach** to the project.

The important institutional functions of the surrounding urban area, as the University at the end of the urban boulevard, and the quality of the Park landscape offer the opportunity to develop a strong connection between these two parts of the city.

The Supreme Court and School of Magistrates will be part of an urban sector where several public functions are already organised: the stadium, playgrounds, restaurants, hotel and open public squares for flexible use. This condition make the edge of the park a kind of “special zone”, a filter between urban and nature where the designed buildings will play a central role.

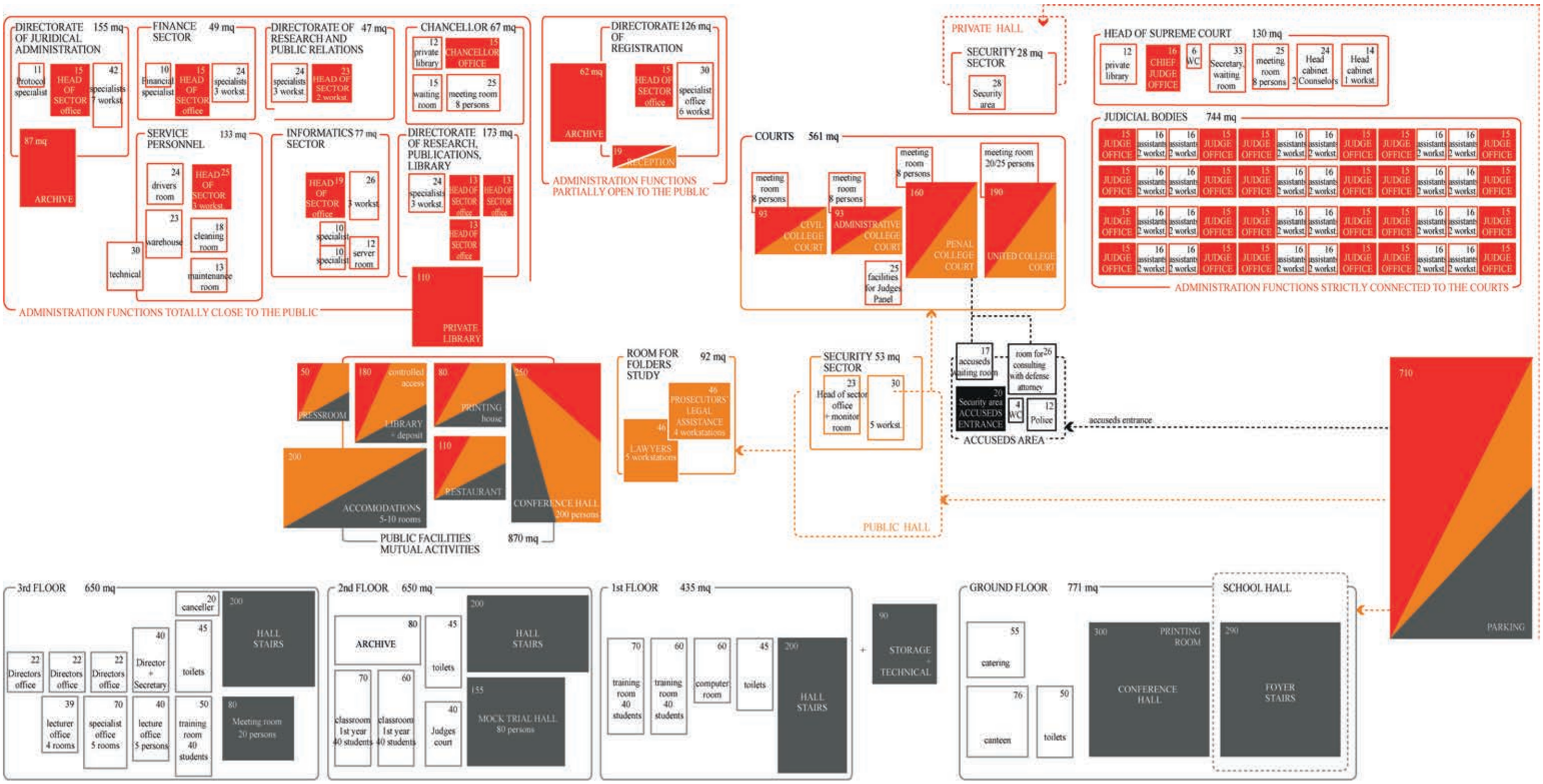
The vision try to secure good **accessibility** of the area, connecting it to the Grand Lake Park with a pedestrian trail, the landscape design also try to **emphasize structural elements** like path systems and vegetation. The need to envision the project as part of a system of green spaces is balanced by the need to **integrate** it with the urban fabric on the upper side of the site.

Context plan

Context section

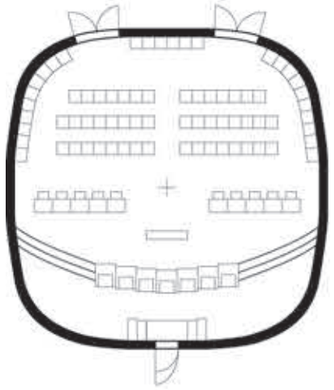
1 DESIGN CONCEPT

AREA SCHEDULE | USER MATRIX

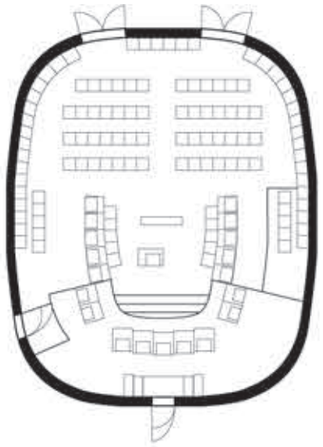


1 DESIGN CONCEPT

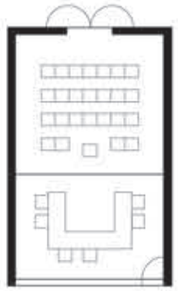
PROJECT PRECEDENTS: MODELS AND PLANS COMPARISON

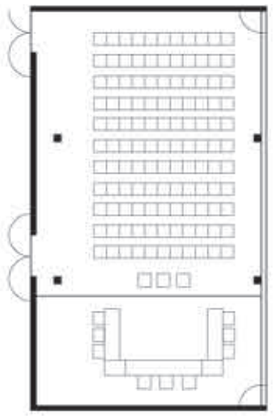


Bordeaux (France), *Tribunal de Grande Instance*
Civil Court - 130 mq

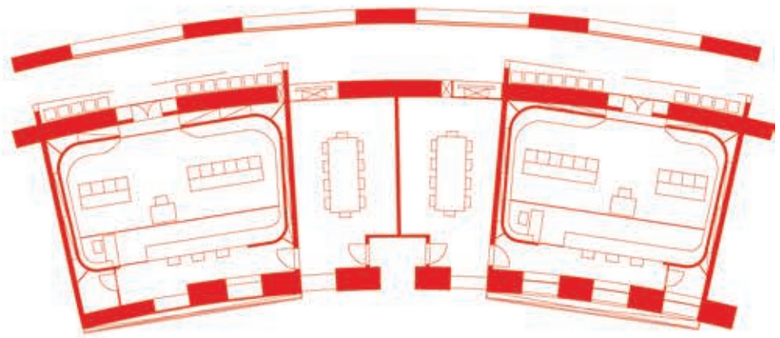


Bordeaux (France), *Tribunal de Grande Instance*
Criminal Court - 155 mq

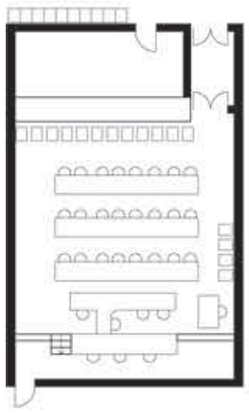


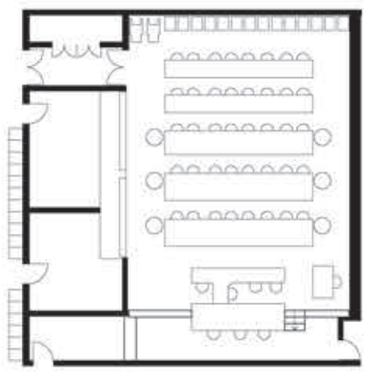


Burgos (Spain), *Tribunal Superior de Justicia de Castilla y León y de la Audiencia Provincial de Burgos*
Type 1 - 65 mq
Type 2 - 105 mq
Type 3 - 190 mq

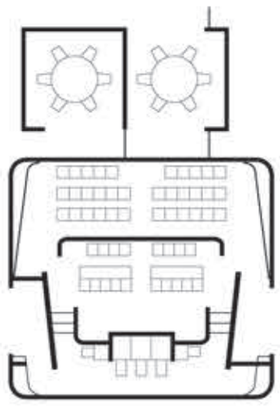


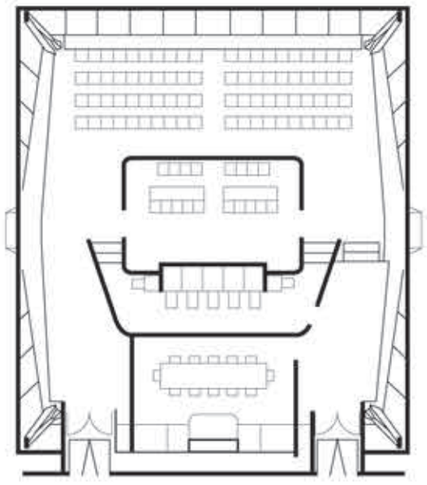
Tirana (Albania), *Supreme Court*
Civil College Court - 93 mq (+ meeting room for 8 persons)
Administrative College Court - 93 mq (+ meeting room for 8 persons)



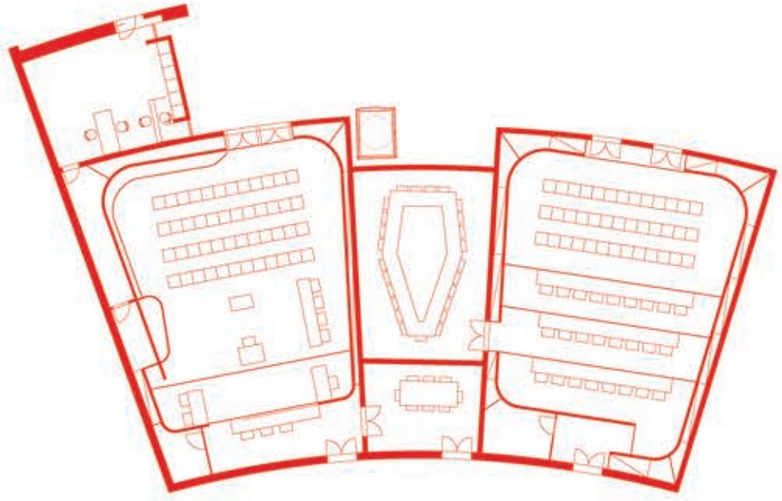


Manchester (United Kingdom), *Civil Justice Centre*
Type 1 - 100 mq
Type 2 - 180 mq





Antwerp (Belgium), *European Law Courts*
Type 1 - 90 mq
Type 2 - 210 mq



Tirana (Albania), *Supreme Court*
Penal College Court - 160 mq (+ meeting room for 8 persons)
United College Court - 190 mq (+ meeting room for 20/25 persons)

1 DESIGN CONCEPT

PROJECT DESCRIPTION

THE NEW SUPREME COURT AND SCHOOL OF MAGISTRATES

The space of hospitality is identified with the expanded body of the **longitudinal porch** and opens up in the space of the atrium and the staircase. The current staircase is enhanced as a central core inside the **large hall** that is configured as a cross spine to the porch. The space of the new atrium extends to reach and connect the **new public gallery**, which presents itself as a vast triple-height fluid space, 'crossed' by suspended walkways, which becomes the terminal element in which all the different sections of the Supreme Court converge and then leave to connect with the School of Magistrates.

The idea of the space of the Gallery of Justice is central to the project, it invites users to explore the void in a creative way and to experience the freedom to configure their own individual path of knowledge, to find oneself in the middle of a sort of osmotic space between the 'historic building and the new addition, from where one has the overall spatial view of the different functional sections and the immediate vision, at a glance, of their physical location at the different floors and in the various buildings of the complex.

The reception counter, the stairwells in the terminal portions of the building, the elevators, the colored walkways, provide clear indication of the circulation system; the opening of full height passages emphasizes the continuity between the reception space with the new Gallery; display systems and media panels on the walls indicate the location of the universes in the architectural complex and constitute the symbolic entrance 'gate'; in this sense, all the functions have a precise entrance and a clear direction starting from the longitudinal welcome space, this was the challenge of our project; at the end the welcome space naturally leads to the entrance of the connection path with the School of Magistrates and then to the new addition, as well as to the activities of the library, the restaurant and the conference room.

The new longitudinal Court

Users will thus experience the immediate and easy control of the whole organization and judicial center. They will be able to choose their own path of knowledge during their stay, without ever loosing the 'red thread' of orientation. It is this feeling of orientation in a **totally connected space**, fluid and hybrid that makes it an ever-changing space, which ensures the user him to best express the activities and the consistency and autonomy of the flows.

In the new gallery the two magnetic focuses are the following: first the **changing luminosity of the glass roof** with its particular cover made with 'blades' of variable density and color, featuring screen prints on the theme of Justice; second the basements volumes that house the collective functions, leaning on the new Gallery like **recognizable volumes**, around which spaces and activities are fluidly and dynamically organized.

Particular attention was given to the proper articulation of public circulation flows and of those reserved to judges and prisoners. The project has followed and interpreted the lines drawn by the extended brief of the competition, sharing and enhancing the fundamental choice of searching for a **strong connection among functions and accesses**.

Our design philosophy envisions a new intervention capable of **interpreting the intrinsic potentials of the historic building** and create a dialogue which makes the new and the old like two **integrated systems**, rather than two separate overlapping units, in order to enhance the programmatic choices and the communication strategies.

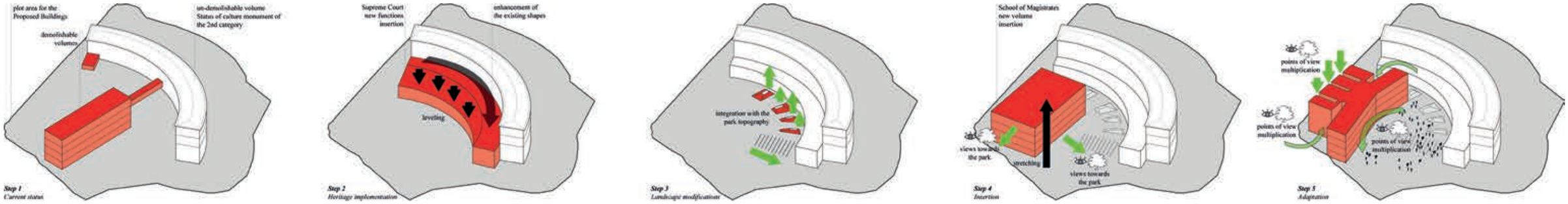
The intervention upon an existing building or complex of buildings, requires an even more significant necessity to find a close correspondence between the innate potentials of the existing spaces and the new intervention which foresees a substantial change of destination. It is thus essential to use contemporary architecture to interpret with basic elements of the existing and understanding them in a consistent evolution.

After a careful analysis of the existing building it seemed appropriate to preserve a historic building, introducing a **glass diaphragm** that marks the transition to the new extension, which consists of the gallery overlooking the park and the new school of magistrates.

Therefore, the extension of the gallery retraces the curvilinear profile of the existing building, whereas the extension of the Supreme Court, which overlooks the gallery, is fragmented in a sequence of clearly distinguishable volumes, both in terms of plan configuration and materials and colors that characterize them. The project is based on this clear recognition of the parties and the interventions that have stratified over time.

The outer wall of the gallery consists of a system of glass panels with different color and level of opacity, marking the different functional portions. The glass panels display serigraphs with

Supreme Court Gallery internal view



Concept schemes

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quotes of important jurists of the Albanian and European history.

On the contrary, the School of the Magistrates is housed in a **new building**, whose location allows to free part of the green space that becomes an open courtyard of connection between the Supreme Court and the new building.

The entrance side privileges the value of the existing building, with its solidity, symbolizing the valuable function of container of documents and knowledge, although punctuated by vertical cuts. The porch is closed with transparent glazing with serigraphy of quotations in order to emphasize the connection with the exterior space.

The new gallery houses the sequence of the new public functional units, including the conference room, the library and the restaurant.

The choices related to the new functional layout derive from a careful analysis of the program and the objectives. A fundamental choice was that of **overlapping the potential of the spaces with the functional requirements of the program**, including the variety of both **users and documents paths**.

Supreme Court building Conservation Strategy
The Supreme Court building, classified as second class by Law 9048, 7.4.2003 For the cultural heritage, has to be restored in order to preserve and enhance its unique and identifying characters that derive not only from design choices but also from the cultural and historical context.

The critical analisys of the design and construction phases, along with the possible investigations to be carried out during construction, indicate the need to preserve the original volume and the possibility of intervening on the elevations.

It is necessary to integrally preserve the north elevation through a **careful cleaning process of the stone cladding** (waiting for stratigraphic tests during the construction phase in order to choose the colors). The project considers the closure of the arches of the loggia with big **glass panels with invisible frames** (located on the inner profile). The same treatment is envisaged for lateral sides.

The southern facade, which is incomplete due to the absence of the coating, has been considered as 'available' for changes in its basement portion. Along this strip the new **distribution gallery** has been inserted, it is fully glazed to preserve the visually continuity of the facade. The openings of the main staircase will be redesigned and expanded.

The **roof** will be restored.

All **exterior window frames** will be redesigned on the basis of a survey of the existing ones.

As for the interiors are concerned, all the vertical connections will be kept, the marble slabs will be cleaned and the missing parts will be integrated or replaced, as well as the original floors in marble chips. **Interior partitions will be demolished** because the floors will be redesigned to include new functions. The internal doors will be restored in case of particular value or replaced.

The School of Magistrates
The new School of Magistrates is located on the southern part of the site, laying on a higher topographical level. The new complex is composed of two separate buildings that coexist within the in the same architectural scheme.

The building on the east side is four storeys high and, thanks to its regular shape and a slight fold, establishes a peaceful and respectful relationship with the historic building designed by Cesare Valle. In this sense the building renounces to a specific architecture style: the external surface is covered with **reflective micro-perforated sheets** that help smoothing its **insertion in the natural environment** and creating a **dialogue with the historical building**.

On the west side the building is fragmented into four 5-storey towers and a sequence of overhanging glass volumes that contains the **panoramic walkways**. This allows to provide the west elevation with a more fragmented aspect in order to facilitate its relationship with the surrounding natural elements of the park and the lake.

Green is the natural element that ties the entire building from the basement floor up to the the **terrace garden**.

The school of magistrates is accessible by two separate entrances: the glass walkway that comes from the Supreme Court and by a side access directly connected with the green system and the paths of the inner courtyard. A wide **triple-height lobby** welcomes visitors and provides access to the vertical distribution systems that lead to the classrooms, offices, panoramic terraces and, finally, to the "sky-park".

The collective functions are located on the ground floor: controlled access of visitors, catering areas, double height conference room. The guest house apartments overlook the park and are directly accessible from the main lobby.

View from South-East


School of Magistrates internal view

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SITE ANALYSIS AND SITE SUSTAINABILITY

The process for preparing the Landscape Master Plan was initiated with an analysis of the site landscape from several perspectives. Part of the team conducted a reconnaissance of the area to observe and record its basic functionality, character-defining features, and the components of the designed landscape such as lighting and furnishings. Another part of the team conducted an evaluation of the landscape from the perspective of its sustainability.

Three elements are responsible for the primary definition of the New Headquarter (NH) landscape: the **shape of the terrain**; the form of the **built environment** (buildings, paths, and streets); and the space defining characteristics of **site vegetation**. The NH landscape is also strongly influenced by its surrounding **urban context** and its place in within the **Grand Lake Park**.

Topography
The mountains Elsaban, to the south-west, and the mountain Dajti on the east, frame a large inward looking bowl that acts to subtly connect the east and west parts of the Park and define it as a single place centered in the Tirana slight valley opening to the Adriatic sea.

The structure of the future NH landscape is shaped by its underlying topography. The defining features include the slope that separates the former Geology Faculty from the School of Magistrates and forms a **podium-like topography** where the School of Magistrates is planned to be, adding an element of spatial drama that makes the landscape more interesting and engaging, opening views on the Park and the Lake.

Landmarks
The Park context is marked by the presence of the artificial lake, the Saint Procopius Church, the Presidential Palace of Tirana, and memorials to well known Albanian personalities. To the southern end of the park the city zoo and the botanical garden are important features for the inhabitants and visitors usage of the area.

The overstory of trees is composed mostly of **native species**; shrubs, groundcovers and lawns are composed of a variety of mediterranean species, mixed with some ornamental ones. Soil conditions are disturbed throughout most areas with the soils often compacted, low in organic material, and subject to erosion. The existing vegetation on the northern edge of the Park acts as a **natural buffer zone**.

Ecological functions
The ecological functions performed by the existing site landscape have been compromised over time by factors such as engineering of stormwater to protect buildings and infrastructure, and aesthetic motives to achieve a certain landscape effect that was not sensitive to the ecology of the region. There is an opportunity to improve the ecological functioning of the site and obtain a higher level of benefit through designs that recognize the importance of a healthy ecology, and the importance of bringing urban environments closer in line with the Park natural systems.

The system of streets, curbs, drain inlets, pipes, and culverts that comprise the **site drainage system** has been designed to protect the buildings and roads by removing rainwater as quickly as possible during a storm event. Consequently, the benefits of rainwater infiltration to restore ground supplies and the ability of the landscape to slow, cleanse, and use runoff are often lost.

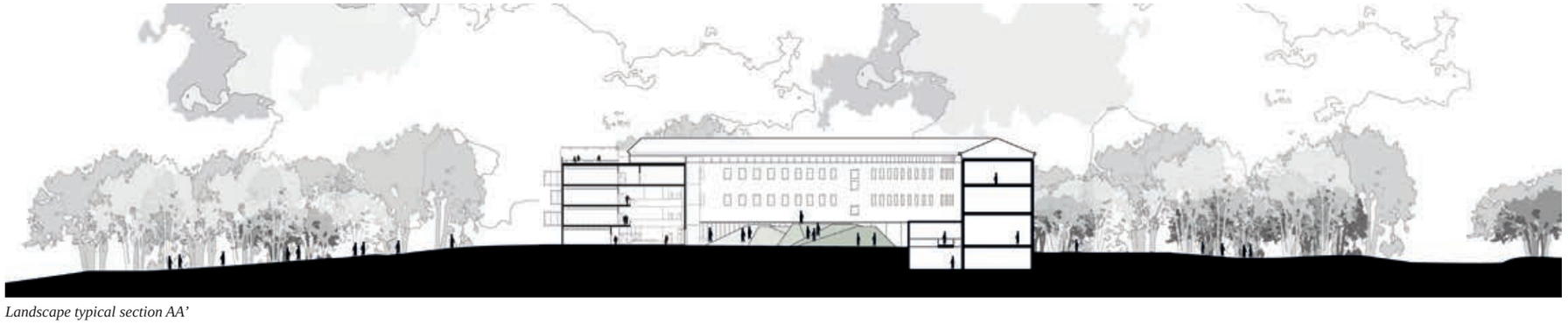
Topography and trees
The area topography, with its curved shape, defines the geometry of the NH's main building, forming at the same time the structure of the landscape.

The existing trees define its character: the elegant architecture of mature Pines are a signature element of the site. The silhouettes of expressive, reaching branches; the spectacular play of light and shadow in the intricate, delicate foliage patterns; and the sound of breezes and birds that inhabit the canopy of the Park are memorable. The **trees** are the essential feature of the future NH landscape. Functionally, they provide shade; cleanse the air; intercept, conserve and store rainwater, secure the soil and moderate the local climate. Visually, they provide naturalistic scenery to complement the dominant geometry of the new and existing buildings. They add an element of wonder and living Nature to the area experience, appealing to what E.O. Wilson has called *biophilia*, our propensity to subconsciously seek connections with the rest of life. When compared to the collective size of the Park, NH trees account for only a fraction of the visual "content" of the whole context; however, the value of trees in defining the quality of the future NH far exceeds their simple quantitative contribution.

The competition area currently includes minimal landscape features, with large spaces sealed up in concrete and asphalt. The vegetation is dense with the predominance on pine trees and other Mediterranean species of trees and shrubs. Palm trees are present with some exemplars in very bad conditions, probably due to the presence of the Red Palm Weevil insect.

Open space's general conditions are poor, due to the insufficient maintenance measures and the actual imagine of the area is that of a **neglected space with a great potential**.

The path and the other infrastructures are deteriorated and weeds overtake the lawn so that the open spaces are not accessible to users.



Landscape typical section AA'

Landscape site plan

Paving diagram

The front space of the Supreme Court is designed by the alternate shifting of several arcs, based upon the facade geometry of the main building. It's an open space car free, made of **porous gravel paving system** and **stabilized soil**, environmentally friendly because allows the rain to drain over the entire surface. The main pedestrian path is made of **bluestone** and is intended for different types of users, like man on a wheelchair and women wearing heeled shoes. Some **flowers beds** are arranged according to the radius on the frontage of the Supreme Court.

Due to the different gravel and soil composition the different colours of the ground surface generate a joyful space, in contrast with the severe architecture of the facade, inspiring a positive feeling with respect to the high Institution.

Several **tree lines paths** will add a new characteristic element to the front area, providing at the same time natural shade; the

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tree's colourful flowers will appear as sequences of different colours lines (the yellow of the Mimosa pseudoacacia, the white of the Prunus Avium, the red of the Punica granatum). Between the path a water canal is designed as the superior part of the underground **rain water reservoir**, that collect the rainwaters from the site and rooftops.

The green space of the New Headquarter is both a **destination** and a **pedestrian route** from the core of the Grand Lake Park to the buildings surrounding it. The site have been adapted for multiple events and activities at a wide range of scales, from secluded areas for eating lunch to staging areas for the graduation ceremonies of the Magistrates School. Through the innovative use of various sustainable strategies and technologies, the New Headquarter has also been optimized to capture and control stormwater from the site and rooftops, providing supplementary water for the gardens irrigation.

The Letter Garden

The main feature of the landscape design is the "**Letter Garden**", conceived as a technological hub for the well being of the New Headquarter users, the garden responds to different purposes and is made of a number of vertical plot which are hybrid systems that integrate nature and technology.

The plot are finalized for different functions:

- illuminated letters spelling out the word justice;
- water nebulizer system for microclimate control;
- sound art diffuser;
- vertical axis mini wind turbine;
- optical fiber lighting system;
- fan misting system;
- clocks displaying current time in the major cities of Europe;
- QR code displays for augmented reality;
- banks for relaxing at the bottom of each plot.

In the Letter Garden the existing trees, brought together with technical elements, are intended to create a **hybrid landscape**, where nature is technically augmented.

Approaching the School of Magistrates, the illuminated letters reflects themselves on the mirror facade, spelling out the word "Justice".

Existing vegetation and Vegetation Palette

Trees and bushy plants (existing and proposed by the project) cover the majority of the open space and are intended to create a Mediterranean landscape full of colours and fragrances.

The **existing vegetation** is intended to be **preserved** as much as possible, and new plants will be inserted according to the existing ones.

The choice for the vegetation species is guided by the consideration of the future requirements of maintenance, including the consumption of water. In the past, the general philosophy has often been to "maintain the design". In the future the guiding principle should be to "**design for maintenance**". Design for ecological resilience, human use, and aesthetic enjoyment should go hand in hand with an awareness of the implications for maintenance. The maintenance practices of the New Headquarter site will also need to adapt to the requirements of native plantings.

The design seeks also to improve the functional ability of the landscape to provide ecosystem services including climate regulation, water management and soil protection.

Vegetation Palette

<u>Trees</u>:

- Pinus Halepensis
- Cupressus sempervirens
- Jacaranda
- Fraxinus
- Populus
- Platanus
- Salix
- Robinia pseudoacacia (acacia)
- Linden tree
- Oak tree
- Wild chesnut
- Wild pear tree
- Poplar tree
- Prunus Avium
- Punica Granatum
- Cherry tree
- Coniferous tree
- Mimosa pseudoacacia
- Corniolo

Some examples of chosen vegetation elements

<u>Under-storey vegetation and ground surface planting:</u>

- Forsythia europea
- Anthemis punctata
- Gypsophila paniculata
- Phleum ambigum;
- Bromus caprinus;
- Festuca paniculata
- Cytisus scoparius
- Spartium junceum
- Rosa canina
- Paeonia mascula
- Crataegus monogyna
- Cistus salvifolius
- Cistus monspeliensis
- Cistus crispus
- Calicotome spinosa
- Cachrys ferulacea
- Arbutus unedu
- Acacia cyanophylla

Letter Garden diagrams

2 OUTLINE SPECIFICATION

MATERIALS AND METHODS OF CONSTRUCTION

MATERIALS AND METHODS OF CONSTRUCTION

Structures

Structural design will approach the complex in two different ways. The new building will be designed according to actual construction method and codes, and it will be **seismic resistant**. On the existing one several **consolidation works** will be set up in order to increase seismic resistances.

In the new building, the underground structures will be realized by concrete frame with walls among perimeter in order to contain soil pressures and bracing the frame structures against horizontal forces such seismic acceleration. Elevation instead will be realized using steel frame structures.

Underground structures will be designed using a mix of **cast in situ concrete and precast elements** in order to obtain the maximum space flexibility especially for the areas of conference halls and auditorium. In these areas, frames will be disposed along the perimeter, while precast elements will be posed to cover the hall, through the direction of the maximum span length, building up frames of 5x15 m. For the rest of the underground structures a most common frames of 5x5 m will be used in order to obtain the most suitable space especially for the parking areas. All the floors will be realized using **light slabs** as predalles one.

For elevation structures, where the school will take place, a **steel frame structure** will be designed, it will be fixed on the underground concrete building. Frame will be realized with common web section and for floors **corrugate sheets filled with concrete** will be used.

To increase building seismic safety factor, concrete and steel structures will be connected through **seismic insulator devices**. These ones will let to avoid using massive bracing system such as concrete elevator core or façade bracing system, leaving the inner space and façade open to any architectural solution.

For the new volumes that will be placed next to the existing one, special **seismic joints** will be used to avoid pounding phenomena.

For the existing building, a consolidation design will be carried out to **restore both horizontal and vertical structures** such as floors, masonry and concrete beams and columns. Especially all the masonry will be restored in order to face seismic force according to actual codes. This will be obtained using a **cam technology**, in order to create a post-tension in the masonry element, increasing the ultimate resistance, without changing the architectural façade. Also the concrete elements will be reinforced by wrapping the sections with steel elements or by carbon fibers in order to increase shear and bending ultimate resistance sections.

Several **elevator concrete cores** will be placed in strategic areas in order to increase building bracing to seismic forces.

Mechanical Plants

Mechanical plants present in the buildings are the following:

- **Air conditioning** for all rooms (except for some technical rooms such as water pump station, fire station, etc.)
- **Ventilation plant**, which ensures fresh air for all rooms.
- **Plumbing plant**, that ensures the production and the distribution of cold and hot potable water for all utilities as the guesthouse, the restaurant, the bars, and the public toilets.
- **Sewage plant** for the collection of waste water (gray and black water) and meteoric water.
- **Hydrant plant** which protects all floors except the roof floor for which only fire extinguishers are provided.

These plants will be designed to suit the local (Albanian) laws and technical regulations.

HVAC plants

Heating and Cooling Boiler room

The production of thermal fluids will occur centrally for all the buildings. The **central heating and cooling room** will be built “ex-novo” in the basement of the building of the School of Magistrates.
The production of hot water for heating will be realized by means of **gas boilers of condensing type**, to maximize the heat efficiency. The chilled water will be produced centrally by **high efficiency air cooled chillers**. They will be installed outside the building at ground level, in a position chosen by the design team.
The sanitary hot water will be supplied by a **solar plant** which will be supported by the condensing boilers to cover the winter periods and in general load picks. The solar panels will be installed on the roof of the new School building. The thermal fluids produced in the Thermal power station will be sent to all the three buildings by pumps placed in the boiler room and by insulated steel piping.

Planned types of plant

Offices, and small meeting rooms, and in general all small rooms and not very crowded, will be conditioned by **fan coil and primary air plant** (or “fresh air plant”).
Large and more crowded rooms, as the courts, the conference rooms, the restaurant, etc. will be provided with variable volume air plant. In other word an **AHU** (or “**Air Handling Unit**”) will supply the conditioned air by mixing together fresh air and ricirculated air. A duct network will distribute the conditioned air to the room in the proper flow rate. These systems (**Variable volume air plants**) are in fact those which ensure both the respect of fresh air flow rates for times outside air and the energy saving as they modulate the air flow rate and therefore the thermal/cooling power employed according to the actual needs.
Other particular rooms are the glazed rooms as the arcade at the ground floor of the existing building, the mall between the existing building and the Courtrooms building and the classrooms of the School of Magistrates. The design of these areas will take into account the high thermal loads and the height of these rooms, and will then involve a careful choice of **air diffusers** in order to avoid the layering of warm and to guarantee an acceptable comfort for the users.

Sanitary water and gas distribution plants

Drinking water and gas will be collected from the public networks through counters and possibly by pressure reducers.
The drinking water will be accumulated in **atmospheric stainless steel tanks** whose capacity will be sufficient to ensure the continuity of service even in the event of a momentary pressure drop in the public aqueduct.
The production of hot water will occur in the **boiler room**. The water heaters will have two heat exchangers, one that uses the primary water produced by the solar system, and the latter, as a reserve, that uses the primary hot water produced by the condensing boiler.

Fire extinguishing plants

The provided extinguishing system is an **hydrants plant**, providing both internal and external hydrants, at the service of all the rooms and parking. There are two parking, one isolated and the other in the basement of the School of Magistrates, both at underground level, and both of surface of approx. 600 mq. Since the two parkings are only one level underground, we do not consider the construction of a sprinkler system, but only hydrant system.
Concerning the archives, no other system will be provided except the fire detection system, fire extinguishers and fire hydrants. In other words no automatic extinguishing systems. Conversely, if requested by the client or by local law, automatic extinguishing fire may be provided, such as sprinkler systems or, much better, the “water mist” plant. This last system will be used if the preservation of paper documents is considered important.
For the data center only **CO2 extinguishers** have been provided. Conversely, if local regulations or customer specifications impose it, automatic gas extinguishing system will be provided.
The hydrant plant and the other possible water supplied extinguishing system, as sprinkler and “water mist” systems, will be supplied by a **water reserve** consisting of a concrete tank of suitable capacity and by pressurization groups, one for each type of facility.

Sewage plant

In the building complex there are two separate collection networks.

- **Rainwater network**
- **Waste water network**.

As a restaurant is present, oily waters from the kitchen will be treating by a degreasing.

Rain water draining plant

Rainwater falling on the roofs is collected from downspouts which send the collected water in a **collection tank**. The collected water is then used for the irrigation of the garden and green areas. The tanks are equipped with an **overflow gauge** and the water that comes out from it is dispersed in the soil by means of perforated pipes.
The water collected in yards and paved areas is first treated by an **oil separator** and then sent to the municipal sewer.

Waste water draining plant

The waste water network is characterized by vertical columns which collect the waste water of the public toilets to the ground floor.

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MATERIALS AND METHODS OF CONSTRUCTION

Drain columns have a **primary ventilation system** realized by extending the drain columns to the roof with the same diameter, and a **secondary ventilation system** consists of ventilation columns, parallel to the drain pipes, joined to it at the base and the apex. The waste water coming from the columns is sent to sub-horizontal manifolds installed below the ground floor where, by gravity, comes to the pits placed immediately outside the building. From these pits, the water is sent by gravity to the public sewer.

Waste and drain water ar collected in the basements in **sump basins**. In each of these basin n.2 **lift pumps** (one spare another) are present. These pumps send the waste or rain water to the pits at ground level and by these to the public sewer.

Electrical and Special Plants

Codes & Regulations

- UNI EN 1838: Lighting Application – emergency Lighting.
- UNI EN 50085: Cable trunking systems and cable ducting systems for electrical installations.
- CEI EN 50086: Conduit systems for electrical installations.
- CEI EN 50525: Electric Cables.
- CEI EN 50171: Central Power Supply Systems.
- CEI EN 50172: Emergency Escape Lighting Systems.
- UNI EN 62305: Protection against Lightning.
- IEC 17-9: Switches and disconnectors for alternating current and voltages above 1000 V.
- CEI 17-11: Switches, disconnectors, switch - disconnectors and fuse-combination units air for alternating current and rated voltage not exceeding 1000 V and direct current and voltage rating not exceeding 1200 V.
- CEI 17-12: Auxiliary switches for voltages not exceeding 1000 V. Part General Provisions.
- CEI 17-14: Auxiliary switches for voltages not exceeding 1000 V. Part II - Particular requirements for certain types of control.
- CEI 23-80: Rigid polyvinyl chloride pipes and accessories.
- IEC 60332: Flammability of cables.
- IEC 60364: Electrical installations of buildings - part 5 - chapter 548: Earthing arrangements and equipotential bonding for information technology systems.
- IEC 60754-1: Halogen Gas Emission.
- IEC 60754-2: Smoke Corrosivity.
- IEC 61034: Smoke density and evolution.
- UNI 12464-1: Lighting of jobs. Part 1: Indoor work places.
- UNI 12665: Light and lighting. Basic terms and criteria for the lighting requirements.

Electrical Plants

General

The materials, equipments and accessories proposed will be in accordance with the local Regulations and will be suitable in all respects for use and operation on the Electrical Service system as the case may be required.

Stand by Generators

Stand-by diesel engine-generators will be utilized for all loads and systems in the event of normal power supply failure. It will have automatic transfer switch(s). The generator will have electronic governor, dual operation system and it will be complete with associated auxiliaries, acoustic treatment and ventilation attenuators to minimize noise level.

Electrical Distribution Low Voltage (LV)

The supply characteristics will be **LV: 380/220V, 50Hz, 3 Phase, 4 wire, solidly earthed**.

In the main distribution board and in the sub-main distribution boards, the capacity of circuit breakers will be fully rated and selected in accordance with the short circuit current. All the boards will provide 25% of spare per section for future expansions.

The LV distribution and sub distribution cables will be rated 600/1000 V, XLPE copper conductor, flame retardant, PVC sheathed.

The outdoor LV cables will be unarmored cables running in conduits. Armored directly buried cables will be allowed for external lighting. The cables will run on horizontal and vertical galvanized steel cable trays or pulled in PVC conduit.

All circuits of lighting and power systems will be loaded not more than 75-80% of the rated capacity of the protection circuit breakers.

Lighting

The lighting system will be characterized by different types of **LED luminaries** depending of the type and destination of use of the rooms. The design will provide the following average illumination levels assuming a maintenance factor of 0.8 in accordance with UNI EN 12464-1 for lighting or other local requirement if greater.

Levels of illumination:

- Offices: 500 lux;
- Corridors - Stairs: 200 lux;
- Services: 200 lux;
- Hall / open space: 300 lux;
- Archives - stores: 500 lux;
- Technical rooms: 200 lux.

LED lighting fixtures have many benefits:

- Considerable **energy savings** due to high efficiency. The luminous efficiency of a lamp is the ratio between luminous flux and power. The luminous efficiency of a latest generation LED lamp is greater than 140 lumen / Watt.
- 4 times **increase of the lamps life**. The average life of LED lamps is exceeding 50.000 h. At the end of this period, the 90% of LED lamps provide about 80% of the initial emission. It means lower costs for maintenance and fewer replacements of the lamps than in the case of fluorescent lamps due to the longevity of the LED.
- **Easy disposal** because of the absence of pollutants at the end of the cycle life of the lamp.

Emergency lighting

The building will be provided with an **emergency lighting system** to meet all requirements of UNI EN 1838 and other local requirement if greater. Emergency lighting will be installed to provide a safe means of escape from the building to all areas in the event of failure of the normal lighting system.

Outdoor lighting shall be designed to provide an adequate lighting levels recommended by the approved codes/standards in an energy efficient manner. Outdoor lighting will be **controlled via photocell/ timer**.

External lighting

External lights will be provided in accordance with CEI 64-19 and local regulations. Their design will be accomplished in order to maintain the occupants safe and secure with a high ingress rating for clearly visible luminaries. Moreover, appropriate equipment in order to achieve low pollution emission and low corrosion will be selected in the design.

LED “full cut off” type will be provided.

A “full cut off” or “fully shielded” lighting fixture does not emit light above an horizontal plane passing through the center of the lamp; so it avoids the part of light pollution produced by scattered light in the sky by road equipments.

Earthing and Lightning System

The Earthing system will be designed to meet all relevant requirements of CEI EN 62308 and local regulations.

All the “masses” will be connected to the **protective conductor**.

All metal parts, not normally live and considered “extraneous”, such as pipes or ducts, entering the building, will be connected to the main and supplementary equipotential bonding conductors.

The minimum cross-section of the copper conductors of the equipotential bonding will not be less than 2.5 sq. mm where connections are mechanically protected (ie pipes laid within or under plaster) and 4 sq. mm if there isn’t mechanical protection.

In particular, the system described above will be composed of:

- **low voltage containment**;
- **connections to ground terminals of plant and electrical equipment**;
- **equipotential nodes**.

The **lightning system** will be formed by a conductor located on the roof and connected to the pits at the ground floor of the building.

The **earthing system** will be characterized by a main conductor located all around the building, and by some electrodes at the corner of the building.

Photovoltaic system

A photovoltaic system will be provided on the roof of the new building. A **photovoltaic (PV) system** transforms directly and instantaneously solar energy into electrical energy without any fuels. The photovoltaic technology exploits the photoelectric effect, through which some semiconductors generate electricity when exposed to solar radiation.

The main advantages of photovoltaic plants can be summarized as follows:

- distributed generation where needed;
- no emission of polluting materials;
- saving of fossil fuels;
- reliability of the plants since they do not have moving parts (useful life usually over 20 years);
- reduced operating and maintenance costs;
- system modularity (to increase the plant power it is sufficient to raise the number of panels) according to the

2 OUTLINE SPECIFICATION

MATERIALS AND METHODS OF CONSTRUCTION

real requirements of users.
A PV plant is essentially constituted by a generator (PV panels), by a supporting frame to mount the panels on any building structure, by a system for power control and conditioning, by a possible energy storage system and by electrical switchboards.
To maximise efficiency, PV modules should be installed in a location where they will receive the maximum amount of sunlight throughout the year.
Modules, electrically connected together in a series/parallel configuration, generate DC electrical energy which may be converted to AC by means of a solar inverter. Modules are fitted with two pre-assembled sunlight resistant cable leads, which are terminated with PV fast connectors. Several modules are connected in series and then in parallel to form a PV array, especially for applications with high operating voltage. When modules are connected in series, the total voltage of the resulting string is the sum of the individual voltages of the modules.

Special Plants

Fire detection

A **fire detection and alarm system** will be provided to enhance the safety of occupants and to protect the facility and the installed equipments.
The system will include the following elements:

- Fire alarm control panel;
- Detectors that will cover all building areas;
- Call point, manual call point / break glass unit activating the fire alarm (to install adjacent to the escape routes and along the circulation routes);
- Fire alarm, optical reports / audible fire alarm to be installed and evenly distributed as to be visible and / or audible.

All the fire detection system devices will be connected to the fire alarm addressable panel. The connection will be provided through a fire resistant cable.
In case of a failure of the electrical power, the fire detection system will be powered by a battery with 24 hours autonomy to ensure the correct functionality of the system.
The fire system will be connected to the public address system through an interface.

Public Address System

The **Public Address System (PA system)** is an electronic sound amplification and distribution system, used to allow a person to address a large public. This system will be used to communicate the procedures to be taken in case of emergency. The warning signals will be broadcast through a system of **loudspeakers** distributed all over the building. The main components will be:

- Public address control panel (to install in an attended room). All components designed to generate alarm messages and monitoring the functionality of the system will be installed within the control panel.
- Microphones, amplifiers and loudspeakers.
- Connection wires. The cables will be fire-resistant type FTG10 (O) M1 CEI 20-45.

The system can be used not only in emergency. It can be also used in ordinary condition for music or advertisements. In case of alarm the highest priority lies with emergency messages.
The system will be connected to the fire alarm control panel through an interface.

Data IT LAN and Infrastructure

The **data network infrastructure** is formed by different components which can be divided into **logical and equipment functional levels**.
This system will include the following elements:

- Distribution cabinet/rack for data and for VOIP telephone system;
- RJ45 outlets for data and VOIP;
- UTP category 6 copper cabling following CEI EN 50173-1;
- multimode optical fiber of category OM3 (OF-300) in accordance with CEI EN 50173-1.

The **wireless coverage** will be implemented through the use of access point connected to the internal data network.

Access control systems (AC)

The **Access Control System** will manage the security operations for the building. The system will be equipped with smart card panels readers that recognized proximity cards and access control keyboard. The card readers and access control keyboards will be capable of providing full access and grant or deny access authorization capabilities without the need for real time communications with the controller.
The Access Control System will be modular in design and flexible for future system expansion.
The Access Control Unit will be able to communicate using the TCP/IP protocol suite to the control room. All internal equipment will be connected to the central unit for controlling access through a BUS line.

CCTV system (TV)

The **CCTV system** guarantees a **constant visual control** inside the building.
The video recording equipment and components is located in an attended local.
The CCTV system will include the following main components:

- Operator's Workstation interface to have the live monitoring, playback and export functionality;
- Management server which shall manage the system database for all assets including cameras, recording servers, workstations, users and access rights;
- Cameras: internal DOME IP type and external IP Camera with IR lamp.

The internal CCTVs system will be located in corridors and entrances. The external CCTV system will monitor the perimeter of the structure.

Metal Detectors

The Metal Detectors will be compliant with the strictest detection and discrimination standards for **EMDs (Enhanced Metal Detectors)**.
They will have the followings main characteristics:

- Capability to detect the full range of metal weapon threats even within body cavities;
- Met-Identity technology for Identification Threat Composition;
- 60 pinpointing zones with high resolution & precision;
- Cutting-edge discrimination technology allows personal effects to be ignored, creating rapid transit flow;
- 4 display bars each programmable as zone indicators and/or pacing lights;
- High precision transit counter.

Smatv system

The smatv system is characterized by a **SAT antenna** and a **FM antenna** located on the roof of the building. The connection between the antennas and the central unit, located inside the building, will be made using RJ11 cables.
The central unit will include an amplifier and a battery. The amplifier will be dimensioned to guarantee the minimum values of db required by the modem. The main unit will be connected to the multiswitch of the zones, and from the multiswitch of zones the data arrives to the **smatv sockets**. The smatv sockets are located in meeting rooms, crew rooms and offices.

Sustainable Program - LEED Credits

Nowadays it is very important that buildings are thought, designed and built in a **sustainable and environmentally respectful** way, for this reason the most important features and strategies used for this project have been analysed according to **LEED certification**.
This project was analysed with two different Rating Systems:

- the whole Complex trough **LEED Building Design and Construction for New Construction 2009, Multiple Buildings and On-Campus Building Program**.
- the historical building as a case study of **GBC Historic Building**.

The pre-assessment suggests that for this project the goal is **LEED Gold**.

Nocturnal view from South-East

3 COSTS ESTIMATION

ROUGH INVESTMENT COSTS ESTIMATION

Description	Total cost [€]
Enabling works	
School of Magistrates building demolition	€ 117.000,00
Waste disposal and transportation charges	€ 39.000,00
Covered bridge demolition	€ 9.900,00
Waste disposal and transportation charges	€ 3.300,00
Annex buildings demolition	€ 17.100,00
Waste disposal and transportation charges	€ 5.700,00
	€ 192.000,00
Supreme Court building refurbishment	
Demolitions and other enabling works	€ 32.200,00
Facades	€ 128.800,00
Masonries and infill walls	€ 64.400,00
False ceilings	€ 80.500,00
Flooring and cladding	€ 193.200,00
Completion works (iron, wood, ...)	€ 32.200,00
Internal and external doors and windows	€ 225.400,00
Roofs and terraces	€ 80.500,00
Structural works	€ 193.200,00
Electrical and Special Plants	€ 322.000,00
Mechanical Plants	€ 257.600,00
	€ 1.610.000,00
Supreme Court Gallery (aboveground and underground volumes) and hanging walkways	
Earthworks (excavations and backfills)	€ 50.000,00
Structural works and retaining walls	€ 280.000,00
Facades and external doors and windows	€ 90.000,00
Internal doors and windows	€ 20.000,00
Insulation and waterproofing	€ 80.000,00
Masonries and infill walls	€ 80.000,00
Plaster and painting	€ 30.000,00
Subgrades, screeds, flooring and cladding	€ 10.000,00
Electrical and Special Plants	€ 200.000,00
Mechanical Plants	€ 160.000,00
	€ 1.000.000,00
School of Magistrates	
Earthworks (excavations and backfills)	€ 80.000,00
Structural works and retaining walls	€ 448.000,00
Facades and external doors and windows	€ 192.000,00
Internal doors and windows	€ 32.000,00
Insulation and waterproofing	€ 128.000,00
Masonries and infill walls	€ 112.000,00
Plaster and painting	€ 48.000,00
Subgrades, screeds, flooring and cladding	€ 16.000,00
Electrical and Special Plants	€ 288.000,00
Mechanical Plants	€ 256.000,00
	€ 1.600.000,00
Underground car parks	
Earthworks (excavations and backfills)	€ 17.040,00
Structural works and retaining walls	€ 85.200,00
Insulation and Finishings	€ 53.250,00
Plants	€ 57.510,00
	€ 213.000,00
Landscape works	
Earthworks (excavations and backfills)	€ 20.900,00
Landscape works and tree planting	€ 78.375,00
Pavings and completion works	€ 130.625,00
Sewage system, disposals, rainwater collection and irrigation	€ 109.725,00
Lighting	€ 52.250,00
Furniture and installations	€ 130.625,00
	€ 522.500,00
	€ 5.137.500,00

Context plan
scale 1:5000

Figure Ground

- Buildings

Landscape

- rivers and lakes
- parks and recreation areas
- agricultural lands

1. Lana river
2. Tirana river
3. Artificial Lake
4. Artificial Lake Park
5. Botanical Garden
6. Lake Farka
7. Lake Paskuqni
8. Paskuqni Park

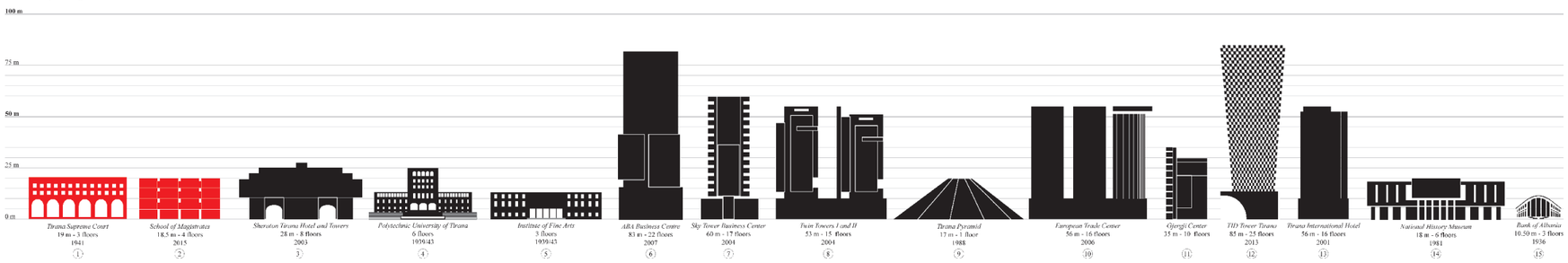
Networks

- Main road network
- Main secondary road network

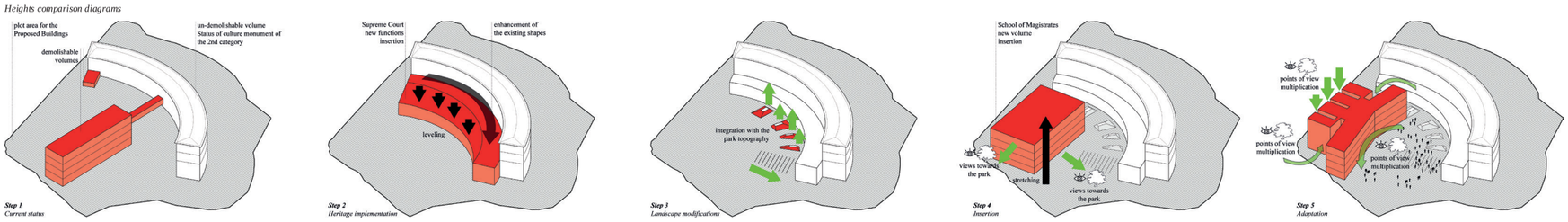
Borders

1. Tirana 1 | Ali Demi
2. Tirana 2 | Qyteti Studenti, Sauku
3. Tirana 3
4. Tirana 4 | Babrruja
5. Tirana 5 | Biloku, Selita, Tirana e Re
6. Tirana 6 | Kombinati, Yzberishti
7. Tirana 7
8. Tirana 8
9. Tirana 9 | Lagja e Trenit, Beraka, Don Bosko
10. Tirana 10 | Center
11. Tirana 11 | Laprraka, Instituti, Don Bosko

Urban analysis diagrams



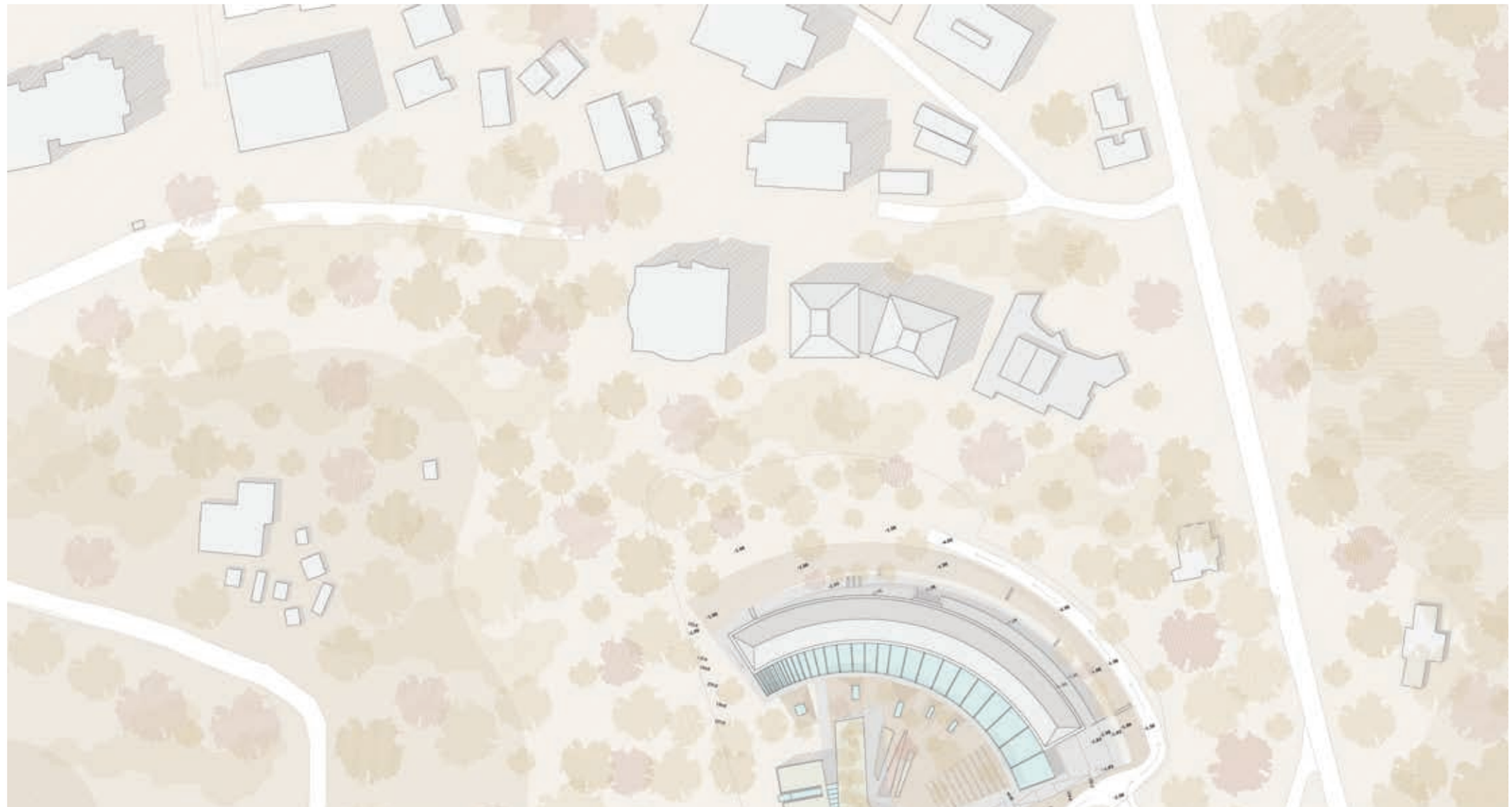
Heights comparison diagrams



Concept schemes

Context section

Site plan
scale 1:500



Urban context integration bird's-eye view

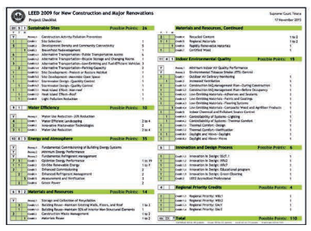
Sustainable Program: LEED Certification

Nowadays is very important that our buildings are thought, designed and built in a sustainable and environmentally respectful way, for this reason here are explained the most important features and strategies used for this project according to LEED certification.

This project was analysed with two different Rating Systems:
- the whole Complex trough LEED Building Design and Construction for New Construction 2009, Multiple Buildings and On-Campus Building Program.
- the historical building as a case study of GBC Historic Building

LEED stands for green building leadership. LEED is transforming the way we think about how buildings and communities are designed, constructed, maintained and operated across the globe.
LEED certified buildings save money and resources and have a positive impact on the health of occupants, while promoting renewable, clean energy. (www.usgbc.org)

The pre-assessment suggests that for this project the goal is LEED Gold.



LEED 2009 for New Construction and Major Renovations
Project Checklist
Supreme Court Tirana
13 November 2015

Y	?	N	Sustainable Sites	Possible Points: 26	Y	?	N	Materials and Resources, Continued	
Y			Prereq 1	Construction Activity Pollution Prevention	Required			Credit 4	Recycled Content	1 to 2
		1	Credit 1	Site Selection	1			Credit 5	Regional Materials	1 to 2
		1	Credit 2	Development Density and Community Connectivity	1			Credit 6	Rapidly Renewable Materials	1
		1	Credit 3	Brownfield Redevelopment	1			Credit 7	Certified Wood	1
		1	Credit 4.1	Alternative Transportation--Public Transportation Access	1					
		1	Credit 4.2	Alternative Transportation--Bicycle Storage and Changing Rooms	1				Indoor Environmental Quality	Possible Points: 15
		1	Credit 4.3	Alternative Transportation--Low-Emitting and Fuel-Efficient Vehicles	1	Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
		1	Credit 4.4	Alternative Transportation--Parking Capacity	1				Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
		1	Credit 5.1	Site Development--Protect or Restore Habitat	1				Credit 1	Outdoor Air Delivery Monitoring	1
		1	Credit 5.2	Site Development--Maximize Open Space	1				Credit 2	Increased Ventilation	1
		1	Credit 6.1	Stormwater Design--Quantity Control	1				Credit 3.1	Construction IAQ Management Plan--During Construction	1
		1	Credit 6.2	Stormwater Design--Quality Control	1				Credit 3.2	Construction IAQ Management Plan--Before Occupancy	1
		1	Credit 7.1	Heat Island Effect--Non-roof	1				Credit 4.1	Low-Emitting Materials--Adhesives and Sealants	1
		1	Credit 7.2	Heat Island Effect--Roof	1				Credit 4.2	Low-Emitting Materials--Paints and Coatings	1
		1	Credit 8	Light Pollution Reduction	1				Credit 4.3	Low-Emitting Materials--Flooring Systems	1
									Credit 4.4	Low-Emitting Materials--Composite Wood and Agrifiber Products	1
			Water Efficiency	Possible Points: 10					Credit 5	Indoor Chemical and Pollutant Source Control	1
Y			Prereq 1	Water Use Reduction--20% Reduction	Required				Credit 6.1	Controllability of Systems--Lighting	1
		2 to 4	Credit 1	Water Efficient Landscaping	2 to 4				Credit 6.2	Controllability of Systems--Thermal Comfort	1
		2 to 4	Credit 2	Innovative Wastewater Technologies	2 to 4				Credit 7.1	Thermal Comfort--Design	1
		2 to 4	Credit 3	Water Use Reduction	2 to 4				Credit 7.2	Thermal Comfort--Verification	1
									Credit 8.1	Daylight and Views--Daylight	1
			Energy and Atmosphere	Possible Points: 35					Credit 8.2	Daylight and Views--Views	1
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required						
Y			Prereq 2	Minimum Energy Performance	Required				Innovation and Design Process	Possible Points: 6
Y			Prereq 3	Fundamental Refrigerant Management	Required			Credit 1.1	Innovation in Design: ISCI 1	1
		1 to 19	Credit 1	Optimize Energy Performance	1 to 19			Credit 1.2	Innovation in Design: ISCI 2	1
		1 to 7	Credit 2	On-Site Renewable Energy	1 to 7			Credit 1.3	Innovation in Design: ISCI 3	1
		2	Credit 3	Enhanced Commissioning	2			Credit 1.4	Innovation in Design: Educational program	1
		2	Credit 4	Enhanced Refrigerant Management	2			Credit 1.5	Innovation in Design: Green Cleaning	1
		3	Credit 5	Measurement and Verification	3			Credit 2	LEED Accredited Professional	1
		1	Credit 6	Green Power	1					
									Regional Priority Credits	Possible Points: 4
			Materials and Resources	Possible Points: 14				Credit 1.1	Regional Priority: RPC1	1
Y			Prereq 1	Storage and Collection of Recyclables	Required			Credit 1.2	Regional Priority: RPC2	1
		1 to 3	Credit 1.1	Building Reuse--Maintain 75% of Existing Walls, Floors, and Roof	1 to 3			Credit 1.3	Regional Priority: RPC3	1
		1 to 3	Credit 1.2	Building Reuse--Maintain 95% of Existing Walls, Floors, and Roof	1 to 3			Credit 1.4	Regional Priority: RPC4	1
		1 to 2	Credit 2	Construction Waste Management	1 to 2						
		1 to 2	Credit 3	Materials Reuse	1 to 2				Total	Possible Points: 110

SS - Sustainable Sites

The Sustainable Sites (SS) category rewards decisions about the environment surrounding the building, with credits that emphasize the vital relationships among buildings, ecosystems, and ecosystem services. It focuses on restoring project site elements, integrating the site with local and regional ecosystems, and preserving the biodiversity that natural systems rely on. (www.usgbc.org)

It's preferable to choose an already developed site, maximize the open space, protecting and restoring the habitat.

The access to services (shops, schools, offices, parks...) is also very important for the workers/users of the building so that they can walk to the nearest service and reduce the pollution instead to drive the car. See the scheme COMMUNITY CONNECTIVITY

Prefer the use of public transportation to reduce the pollution. See the scheme ALTERNATIVE TRANSPORTATION

Community Connectivity
Services within 1/2 mile from the main entrance of the building of at least 10 basic services:

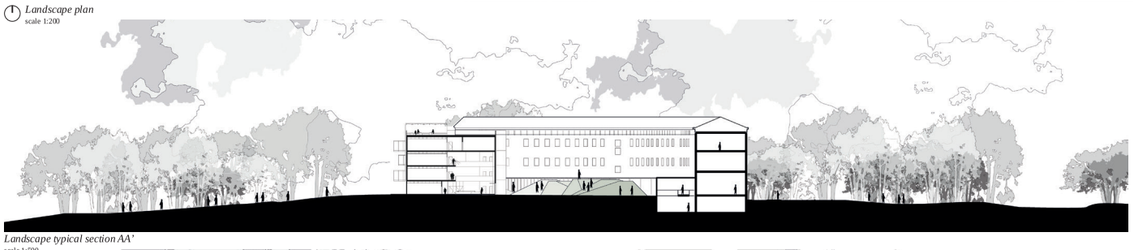
1. RESTAURANT Pizza&Live
2. PHARMACY
3. PRINT SHOP Pegi Publishing House & Typography
4. SCHOOL Fakulteti i Ekonomise
5. STADIUM Qemal Stafa Stadium
6. BANK BKT Kruga e Elbasanit
7. MEDICAL PRACTICE Ortho Lux
8. PARK Parku i Madh Kodrat e Liqenit
9. SUPERMARKET Big Market
10. HOTEL Iliria

Alternative Transportation - Public Transportation Access

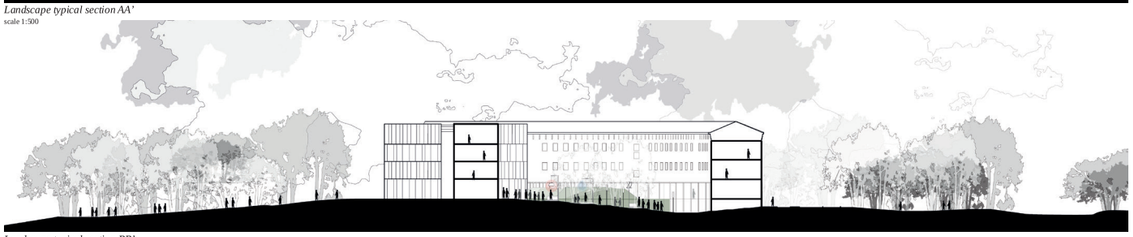
The nearest bus station, with 3 lines is 380 m walk from the main entrance of the building.

Landscape concept scheme

Landscape plan
scale 1:200



Landscape typical section AA'
scale 1:500



Landscape typical section BB'
scale 1:500

Nocturnal view from South-East

Landscape - Plants and Tree Species

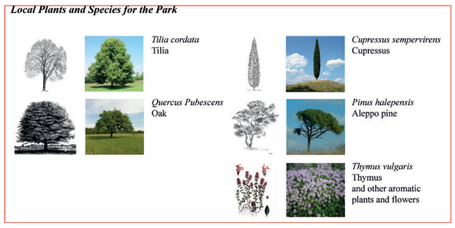
As already said is very important for LEED to maximize the open space and protect and restore the habitat.

For this reason the idea is to protect the already existing plants and to improve the green area with other species. The most important feature is that the plants and the species should be local/regional or adapted for the Tirana region and the climate of the place.

This vegetation doesn't need water if not in the period of taking root (for the first 18 moths). The necessary irrigation will be provided through a rainwater collection system.

The intent is "To limit or eliminate the use of potable water or other natural surface or subsurface water resources available on or near the project site for landscape irrigation." (www.usgbc.org)

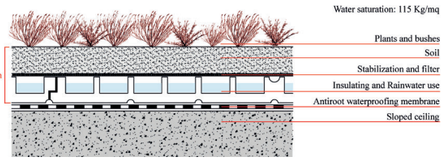
Local Plants and Species for the Park



WE - Water Efficiency - Landscaping

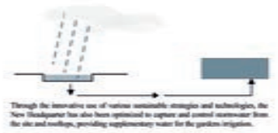
Green Roof

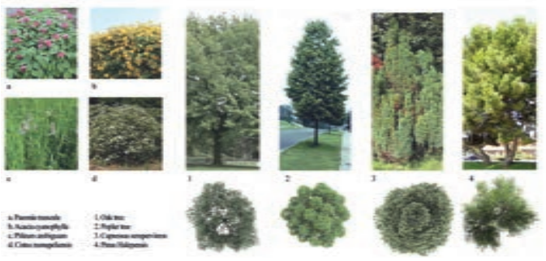
The green roof is a very interesting solution to increase the green area and otherwise to reduce the heat island effect produced by dark roofing materials.



Vegetation Species List
Under-Storey Vegetation and Ground Surface Planting

Trees and bushy plants (existing and proposed by the project) cover the majority of the open space and are intended to create a Mediterranean landscape full of colours and fragrances. The existing vegetation is intended to be preserved as much as possible, and new plants will be inserted according to the existing ones.





Landscape site plan

The front space of the Supreme Court is designed by the alternate shifting of several arcs, based upon the facade geometry of the main building. It's an open space car free, made of pomus gravel paving system and stabilized soil, environmentally friendly because allows the rain to drain over the entire surface. The main pedestrian path is made of bluestone and is intended for different types of users, like man on a wheelchair and women wearing heeled shoes. Some flowers bed are arranged according to the radius on the frontage of the Supreme Court. Several tree lines path will add a new characteristic element to the front area, providing at the same time natural shade; the tree's colourful flowers will appear as sequences of different colours lines (the yellow of the Mimosa pseudoacacia, the white of the Prunus Avium, the red of the Punica granatum). Between the path a water canal is designed as the superior part of the underground rain water reservoir, that collect the rainwaters from the site and rooftops.

Existing vegetation and Vegetation Palette

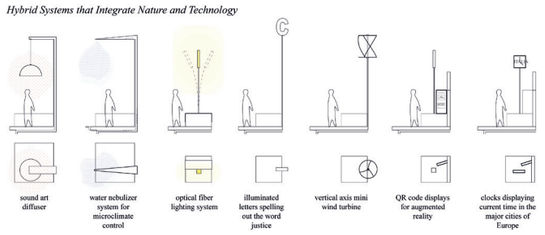
The choice for the vegetation species is guided by the consideration of the future requirements of maintenance, including the consumption of water. In the past, the general philosophy has often been to "maintain the design". In the future the guiding principle should be to "design for maintenance". Design for ecological resilience, human use, and aesthetic enjoyment should go hand in hand with an awareness of the implications for maintenance. The maintenance practices of the New Headquarter site will also need to adapt to the requirements of native plantings.

The Letter Garden

The main feature of the landscape design is the "Letter Garden", conceived as a technological hub for the well being of the New Headquarter users, the garden responds to different purposes and is made of a number of vertical plot which are hybrid systems that integrate nature and technology. In the Letter Garden the existing trees, brought together with technical elements, are intended to create a hybrid landscape, where nature is technically augmented.

Approaching the School of Magistrates, the illuminated letters reflects themselves on the mirror facade, spelling out the word "Justice".

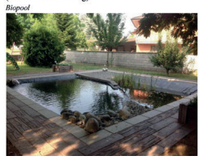
Hybrid Systems that Integrate Nature and Technology



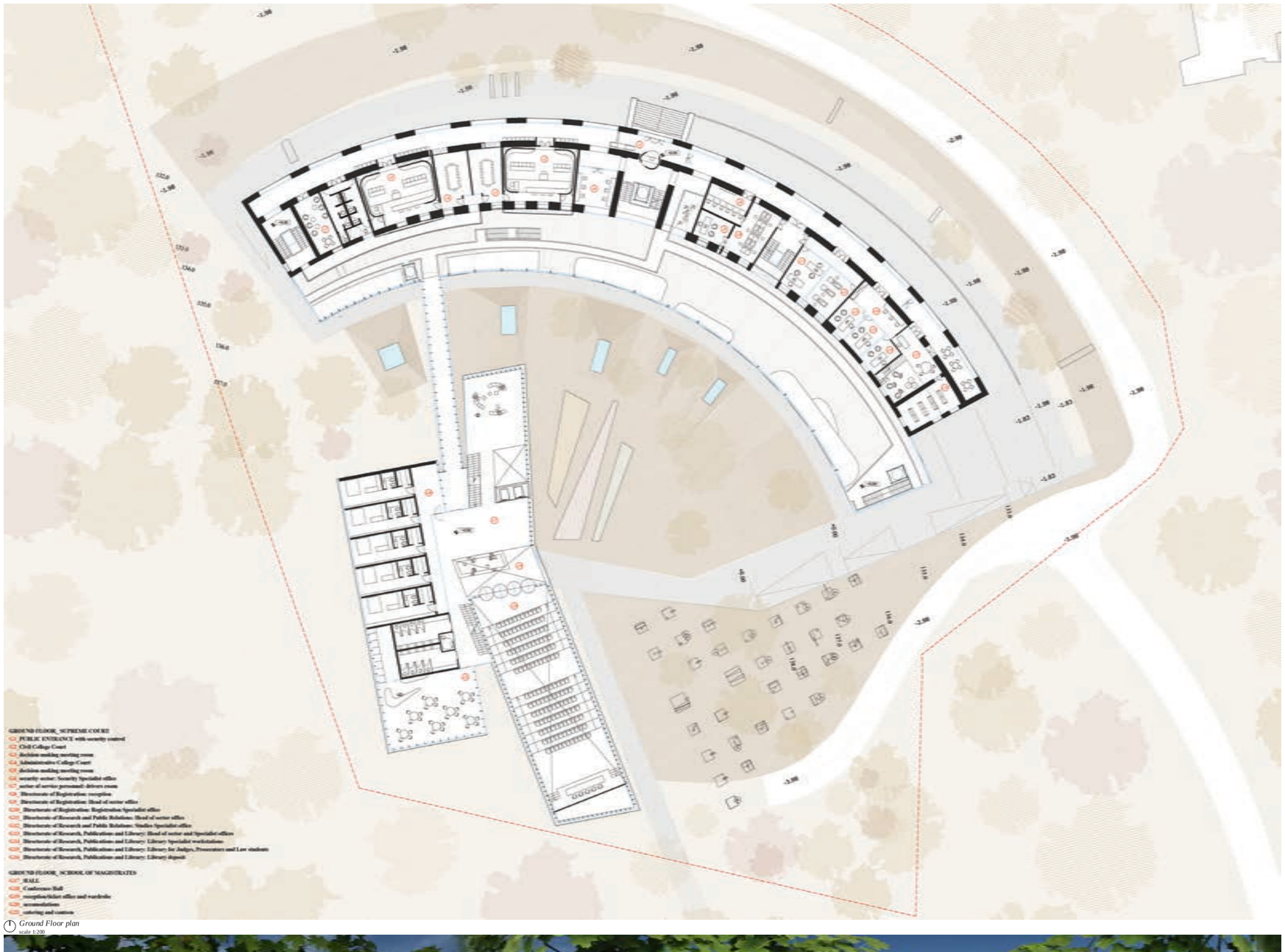
Rainwater Harvesting and Purification of Waste Water

There are some solutions about rainwater harvesting for irrigation use and purification of waste water: two technological examples, which allow the reduction of potable water use and the reuse of waste water. (www.eco-sistemi.org)

Biopod

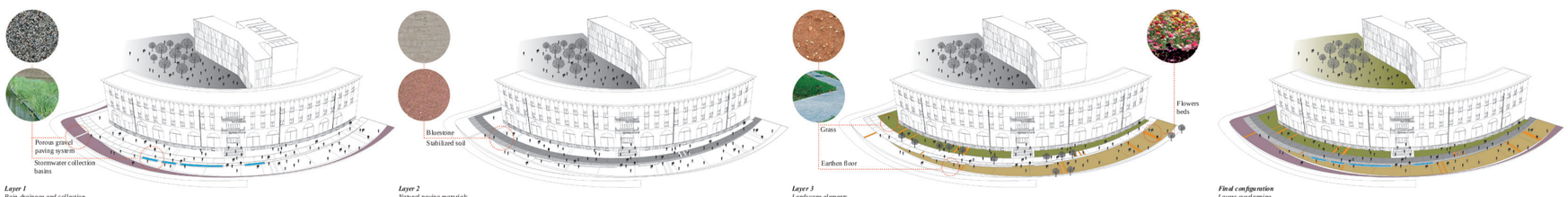


Rotating Cell Biofilm Reactor



Ground Floor plan
scale 1:200

View from North



Layer 1
Rain drainage and collection

Layer 2
Natural paving materials

Layer 3
Landscape elements

Final configuration
Layers overlapping

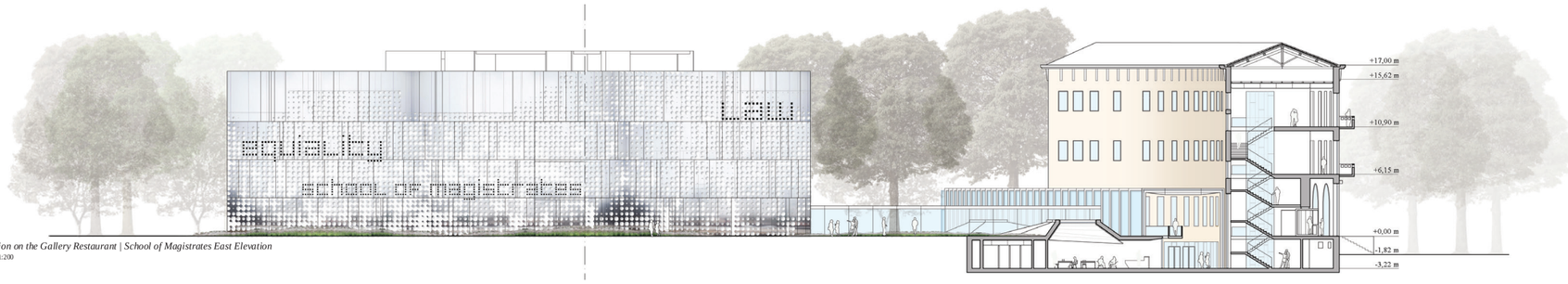
Paving concept diagrams

BASEMENT FLOOR
B1_ **Penal College Court**
B2_ accused's internal area
B3_ decision-making meeting room
B4_ accused's waiting room
B5_ room for consulting with defense attorney
B6_ police control
B7_ accused's entrance with police control
B8_ **Tribal College Court**
B9_ decision-making meeting room
B10_ facilities for the Juridical panel

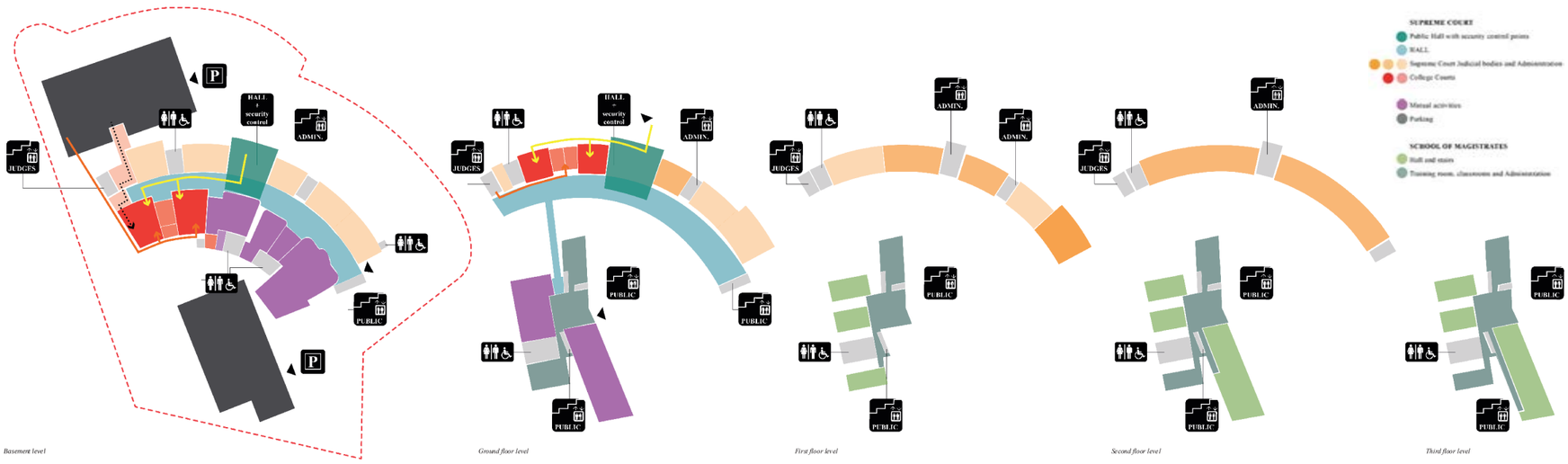
B11_ HALL
B12_ security control
B13_ security sector: Head of sector office
B14_ room for lifders study from the Prosecutor' Legal Assistance
B15_ room for lifders study for lawyers, with lodge specialist desk
B16_ printing house
B17_ public Library
B18_ public Library deposit
B19_ restaurant
B20_ restaurant kitchen and storage
B21_ press conference room
B22_ conference hall
B23_ reception ticket office and wardrobe
B24_ dressign room/speaker's waiting room
B25_ sector of service personnel: warehouse + technical area
B26_ sector of service personnel: maintenance and cleaning room
B27_ *Directorate of Registration: archive*
B28_ *Directorate of Juridical Administration: Protocol Archive*
B29_ *Directorate of Juridical Administration: Protocol Archive Specialist office*
B30_ *Directorate of Juridical Administration: Specialist office*
B31_ *Directorate of Juridical Administration: Head of sector office*

Basement plan
scale 1:200

Parkings plan



Section on the Gallery Restaurant | School of Magistrates East Elevation
scale 1:200



Basement level | *Ground floor level* | *First floor level* | *Second floor level* | *Third floor level*

Functions and fluxes diagrams

WE - Water Efficiency - Use Reduction

Reducing indoor potable water consumption may require using alternative water sources for nonpotable applications and installing building components, such as water-efficient fixtures, flow restrictors on existing fixtures, electronic controls, composting toilet systems, and waterless urinals. (www.usgbc.org)

Aerators

A foucet aerator is to be installed to reduce the flow rate and consequently the use of potable water. Here are some examples of aerators and foucets particularly indicated for this use. The features of the aerators types, recognized by a colour, indicate the different flow rate. The reduction of water in a big public building like the Supreme Court and the School of Magistrates can be very efficient due to this solutions.

Flow Rate	Colour Code
7.5 - 9.0 l/min at 3 bar	light green
13.5 - 15.0 l/min at 3 bar	light blue
18.0 - 19.8 l/min at 3 bar	yellow
22.8 - 25.2 l/min at 3 bar	dark blue
27.0 - 30.0 l/min at 3 bar	dark grey
34.8 - 37.8 l/min at 3 bar	light grey
2.2 gpm max at 60 psi	red

W.C. and Flushing Cisterns

The Water Saving system use can be optimized also with an accurate w.c. and flushing eistern selection. Some w.c., thanks to their form, can be washed with a small flush (3 liters or 2,7).

EA - Energy and Atmosphere

The energy performance of a building depends on its design. Its massing and orientation, materials, construction methods, building envelope, and water efficiency as well as the heating, ventilation, and air-conditioning (HVAC) and lighting systems determine how efficiently the building uses energy. Therefore, the most effective way to optimize energy efficiency is to use an integrated, whole-building approach. Collaboration among all team members, starting from the project inception, is necessary in designing building systems. (www.usgbc.org)

Led Bulbs
The usage of led lamps rather than neon or incandescent bulbs ensures a lower energy consumption as well as a longer life of the bulb itself. In any case, the natural light is preferred.

Commissioning Authority
The Commissioning Authority (CxA) verifies, all (or some) of the subsystems for mechanical (HVAC), plumbing, electrical, fire/life safety, building envelopes, interior systems, co-generation, utility plants, sustainable systems, lighting, wastewater, controls, and building security to achieve the owner's project requirements as intended by the building owner and as designed by the building architects and engineers.

Shading
The orientation of the building is one of the most influencial aspects of a building. For this reason we recommend to shade the south facade (and also the west) with plants or sun protections such as sunscreens and sheds.

On Site Renewable Energy Production
There are multiple solutions about on site energy production, it's important to ensure a percentage (or the whole amount) of building energy demand with an on site energy production system. For example photovoltaic or wind power system.

Energy Metering
"If You Can't Measure It, You Can't Manage It"
To optimize the buildings performances, to minimize the wastefulness and to best calibrate the HVAC System it's important to meter the building activities and the energy consumption.

FIRST FLOOR_SUPREME COURT

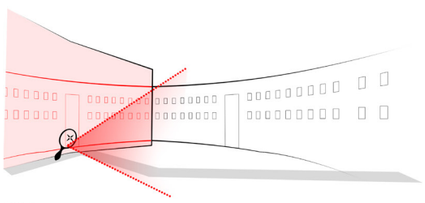
01_Judicial bodies' Judges office and structural assistants' office (324 offices);
02_Head of Supreme Court: Head of Supreme Court office, with private library
03_Head of Supreme Court: antechamber
04_Head of Supreme Court: Counselor office
05_Head of Supreme Court: Cabinet office
06_Head of Supreme Court: meeting room
07_Chancellor: Chancellor office, with private library
08_Chancellor: antechamber
09_Chancellor: meeting room
10_Sector of services personnel: Head of sector, Personnel Specialist, Transport Specialist office
011_Finance sector: Office for 5 workstations.
012_Finance sector: Head of sector office
013_Finance sector: Financial Specialist office
014_Informatics sector: Head of sector office
015_Informatics sector: Specialist offices – 2 connected rooms
016_Informatics sector: Office for 3 workstations
017_Informatics sector: server room.

FIRST FLOOR_SCHOOL OF MAGISTRATES

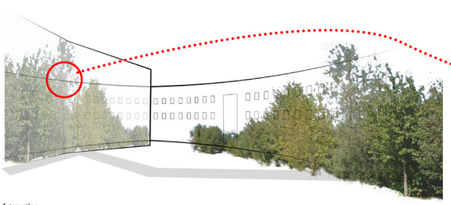
018_HALL
019_training room - 40 students
020_training room - 40 students
021_computer room

First Floor plan
scale 1:200

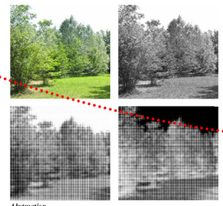
View from South-East



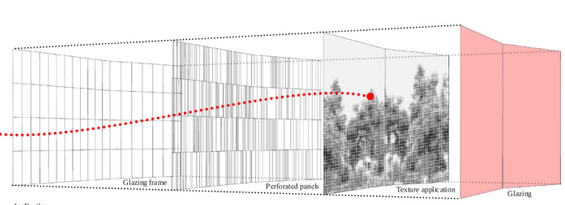
Reflection
Relationship between ancient and new



Integration
Relationship between building and nature

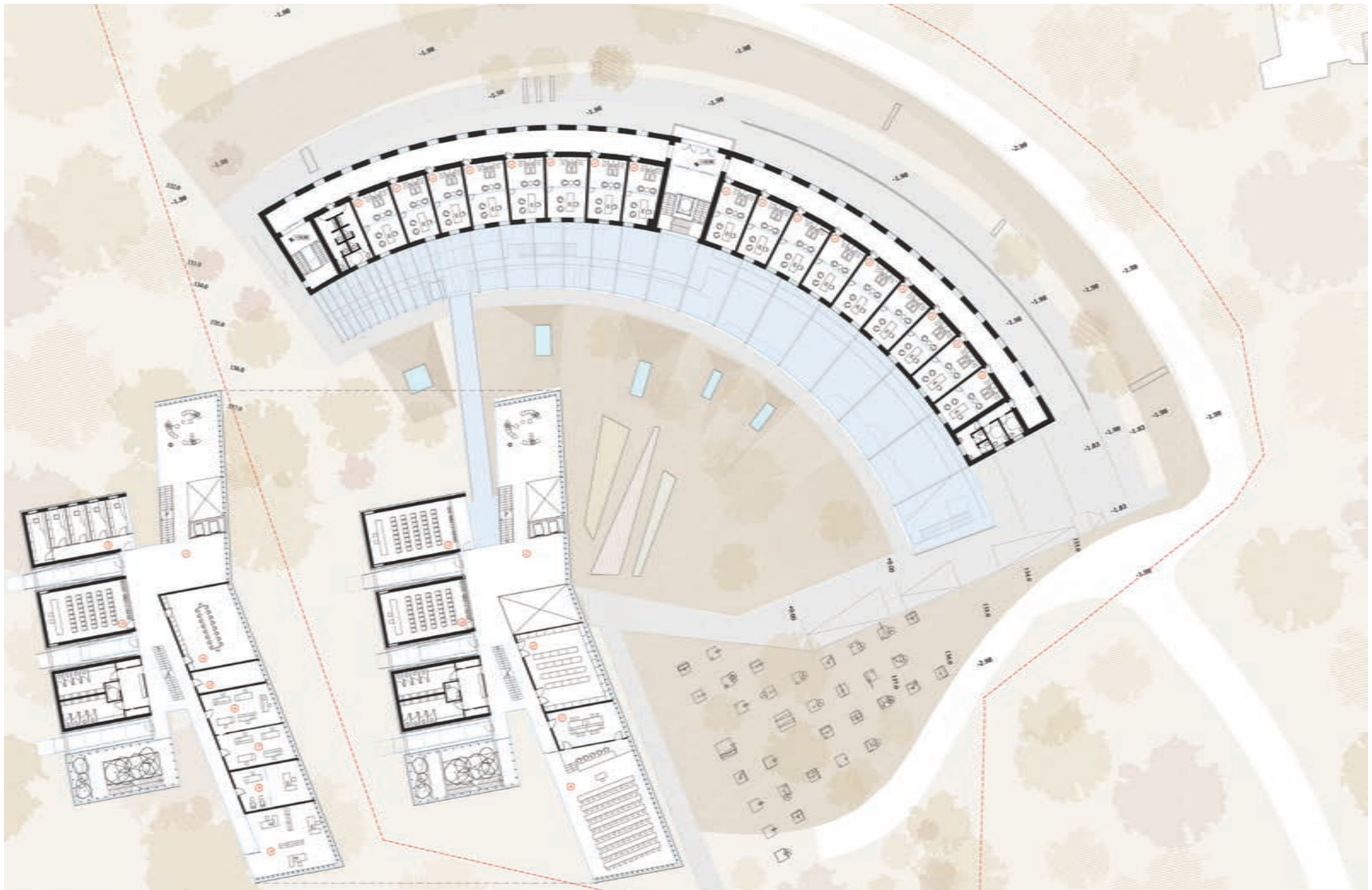


Abstraction
Texture design process



Application
Facade system definition

Facade concept diagrams

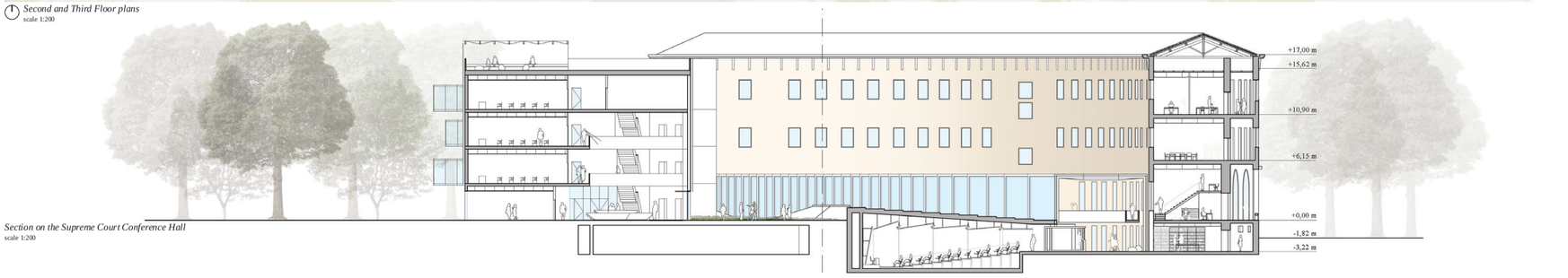


THIRD FLOOR_SCHOOL OF MAGISTRATES
T1_ HALL
T2_ Specialist offices
T3_ training room - 40 students
T4_ Meeting room
T5_ Meeting room
T6_ Lecture office
T7_ Lecturer office
T8_ Directory + Secretary
T9_ Councilor office

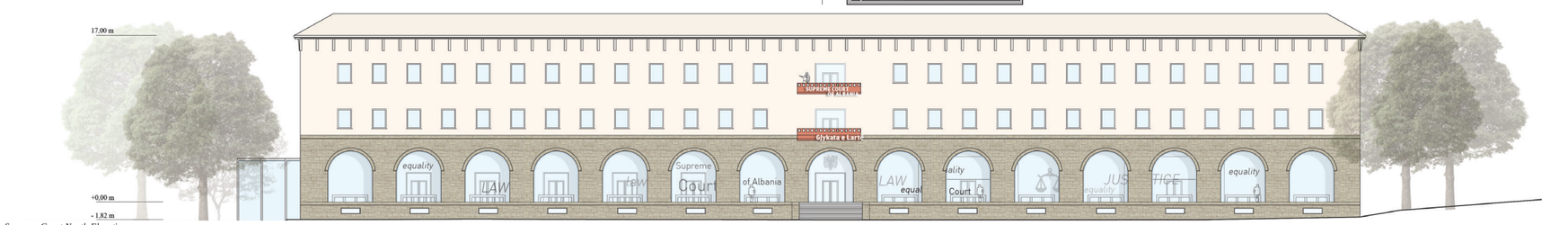
SECOND FLOOR_SUPREME COURT
S1_ Judicial bodies' Judges office and annexed secretaries' office (3724 officers)

SECOND FLOOR_SCHOOL OF MAGISTRATES
S2_ HALL
S3_ student classroom - 1st year
S4_ student classroom - 2nd year
S5_ archive
S6_ Mock Trial Hall
S7_ Judges Court decision-making meeting room

Second and Third Floor plans
scale 1:200



Section on the Supreme Court Conference Hall
scale 1:200



Supreme Court North Elevation
scale 1:200

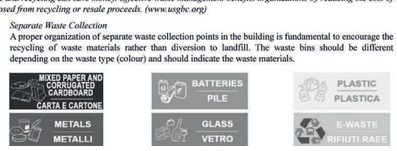
Supreme Court Gallery internal view

School of Magistrates internal view

MR - Material Resources

Materials selection plays a significant role in sustainable building operations. During the life cycle of a material, its extraction, processing, transportation, use, and disposal can have negative health and environmental consequences, polluting water and air, destroying native habitats, and depleting natural resources.
Waste reuse and recycling can save money. Effective waste management benefits organizations by reducing the cost of waste disposed from recycling or resale proceeds. (www.usgbc.org)

Separate Waste Collection
A proper organization of separate waste collection points in the building is fundamental to encourage the recycling of waste materials rather than diversion to landfill. The waste bins should be different depending on the waste type (colour) and should indicate the waste materials.



Regional Materials
The LEED certification encourages the use of regional materials to increase demand for building materials and products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles (800 km) of the project site.

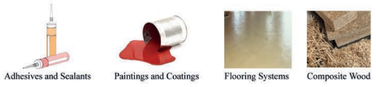
Certified Wood
To encourage environmentally responsible forest management LEED suggests the use of wood or wood-based materials and products that are certified in accordance with the Forest Stewardship Council's principles and criteria, for wood building components.

IEQ - Indoor Environmental Quality

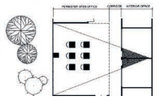
Over the past 20 years, research and experience have improved our understanding of what is involved in attaining high indoor environmental quality and revealed manufacturing and construction practices that can prevent many indoor environmental quality problems.
This credit category addresses environmental concerns relating to indoor environmental quality; occupants' health, safety, and comfort; energy consumption; air change effectiveness; and air contaminant management.
(www.usgbc.org)

Tobacco Smoke Control
To prevent or minimize exposure of building occupants, indoor surfaces and ventilation air distribution systems to environmental tobacco smoke (ETS). Prohibit smoking in the building and on-property smoking within 25 feet of entries, outdoor air intakes and operable windows. Provide signage to allow smoking in designated areas, prohibit smoking in designated areas or prohibit smoking on the entire property.

Low Emitting Materials
Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.



Daylight and Views
To provide for the building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.
(LEED BD+C IEQ8.1-8.2)



AKPT AGJENCIA KOMBETARE E PLANIFIKIMIT TE TERRITORIT
MINISTRIA E ZHVILLIMIT URBAN

RE-DESIGNING THE NEW HEADQUARTERS OF THE SUPREME COURT AND THE SCHOOL OF MAGISTRATES Tirana, Albania

team: A&I Design | 3TI PROGETTI ITALIA S.p.A. | n!studio Susanna Ferrini | Simone Bove | Massimo Angrilli | Rosalia Vittorini | Macro Design Studio Srl

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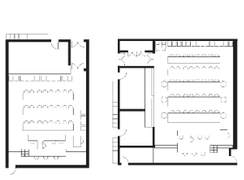
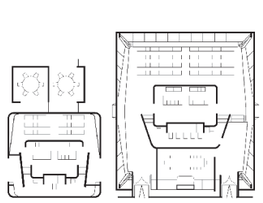
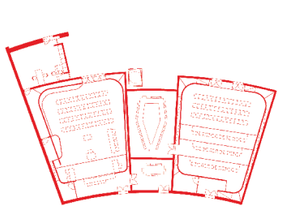
Basement plan details and key features
scale 1:100



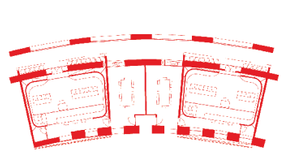
Manchester (United Kingdom), *Civil Justice Centre*
Type 1 - 100 mq
Type 2 - 180 mq



Antwerp (Belgium), *European Law Courts*
Type 1 - 90 mq
Type 2 - 210 mq



Tirana (Albania), *Supreme Court*
Penal College Court - 160 mq (+ meeting room for 8 persons)
Untied College Court - 190 mq (+ meeting room for 20/25 persons)

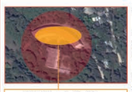


Tirana (Albania), *Supreme Court*
Civil College Court - 93 mq (+ meeting room for 8 persons)
Administrative College Court - 93 mq (+ meeting room for 8 persons)

Project precedents: models and plans comparison

Nocturnal bird's-eye view

Case Study: GBC Historic Building



GBC Historic Building
Case Study

NAME: Mine-Geology Faculty

ADDRESS: Tirana, Gjenerali Nikols Street
OWNERSHIP: State Ownership
MONUMENT CATEGORY: II Category

MONUMENT'S VALUE: The building was built in 1941, conceived by the Italian architect Cesare Valle, as part of a female dormitory campus. It is a Cultural Monument of II Category due to its special architectural and urban values, and the integration of rationalist architecture with the organic one.

CASE STUDY: GBC Italia elaborated in the last year a specific sustainable certification for the Historic Building (built before 1945) to improve the sustainable feature but at the same time to maintain and enhance the historic value of the building.

- HISTORICAL VALUE
- SUSTAINABLE SITES
- WATER EFFICIENCY
- ENERGY & ATMOSPHERE
- MATERIALS & RESOURCES
- INDOOR ENVIRONMENTAL QUALITY
- INNOVATION & DESIGN

Historical Value

"Restoration is sustainable when allows future generations to recognize the same cultural values that we recognize today".

Fact-finding investigations
(building "identity card")

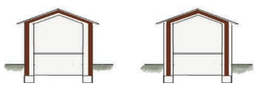
Design phase
choose and design strategies

Construction phase
valorise the building

Energy and Atmosphere

The performance of an historic building envelope cannot be improved very much because it would change the value of the building. The hardest work is to find the better compromise between the HVAC system and the historic envelope to maintain the historic value but also to improve the indoor quality of the building.

Promote an increasing level of autonomous production of energy from renewable sources on site, in order to reduce the environmental and economic impacts associated with the use of energy from fossil fuels.

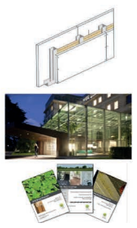


Materials

Dry Systems - Removable Structures
These systems have the advantage of being provisional interventions, versatile and not to go to intervene on the historical part. The intervention is clean and fast.

Use of Historical Materials
Extend the life cycle of existing building stock, conserve resources and, in particular, the "historical materials" as environmental and cultural resources, enhancing the existing historic building within the project in its complexity. Reduce waste and environmental impact of the restoration sites also related to the production and transportation of materials.

Optimizing Environmental Impact of Products
Preferred materials with EPD = a third-party certification according to ISO 14025, 14040, 14044 and EN 15804 or ISO 21930



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