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# THINKING ARCHITECTURE. WORDS IN THE FORM OF PROJECT

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## MYŚLAĆ ARCHITEKTURA. SŁOWA W FORMIE PROJEKTU

### Abstract

Architecture, even when it builds a single building, deals with forms, spaces, places. Its approach is intricately linked to its context history, culture and social practices. From an anthropological perspective, this reflection critically examines architecture's essence, the need to return to places where one can choose where, what and how to create. It explores the inherent design potential of architecture and delves into the themes of architectural and urban composition, highlighting its significance in shaping the built environment.

*Keywords: architecture, form, composition, project, city*

### Streszczenie

Architektura, nawet gdy tworzy pojedynczy budynek, zajmuje się formami, przestrzeniami, miejscami. Jej podejście jest ściśle związane z kontekstem historycznym i kulturowym oraz społecznymi praktykami. Z perspektywy antropologicznej niniejsza refleksja krytycznie bada istotę architektury, potrzebę powrotu do miejsc, by wybrać gdzie, co i jak tworzyć. Rozważa wrodzony potencjał projektowy architektury i zgłębia tematy kompozycji architektonicznej oraz urbanistycznej, podkreślając jej znaczenie w kształtowaniu środowiska zbudowanego.

*Słowa kluczowe: architektura, forma, kompozycja, projekt, miasto*

## 1. ARCHITECTURE AND TECHNOLOGY

Overemphasising technology requires recognizing that architecture has forgotten its essence: the foundational problem that substantially determines its form. Architecture springs from the imagination as a form of knowledge and innovative thinking to transform places. In shaping a place, architecture restores a relationship with the locus, with its measurable physical essence and its collective memory, as extensively argued by Aldo Rossi in *The Architecture of the City*. The craft of architecture is a form of layered knowledge and a revealing of the place through a precise spatial figure, embodying both existence and essence. These initial assumptions are essential for conceiving and constructing a sensitive architectural project capable of expressing a recognisable form and a sense of place within the complexity of the city. In *The Question Concerning Technology* conference, delivered in Monaco in 1953, Heidegger argued that the essence of technology is not at all technical: technology is a means

and an activity of man that does not exhaust itself in its use. In a 1957 lecture on Architecture and Technology in Chicago, Mies van der Rohe stated that technology is something that possesses a sense and an effective form, something self-sufficient. The present moment compels us to reflect on these issues, critically observing what surrounds us. There is no doubt that with the transition from mechanics to electronics and the development of digital tools, technology has progressively become pervasive. Today, we can engage in direct and dynamic interaction with data, represent complex problems in real-time, and process integrated processes, optimising, for instance, the use, management, and operation of air or water within a building. This represents the new frontier of generative design, derived from multifactorial analysis, environmental characteristics of the context, and artificial intelligence, combining art, architecture, computing, and technology. A technology that has become invisible, autonomous from the physical construction, almost overwhelming it. But is this the case? If architecture is the expression of a generative construction of space, an open action for the spirit of the time in which life can unfold, whose duration is unpredictable, can technology be employed to work on the form? Does technology distance us from the atmosphere and emotions that arise from the quality and beauty of the relationship between material and space or from the knowledge of rituals and symbols embedded in places over time? The uncritical use of new technologies certainly carries the risk of homogenisation, producing projects devoid of identity and connection to the context – the “non-places” described by anthropologist Marc Augé. Unfortunately, many cities around the world are witnessing the reproduction of standardised architectures, often conceived without considering the specificities of their contexts. This use of technology creates projects that could exist anywhere, erasing the historical memory and culture of places. Beyond seeking a new balance with technology, we believe that the challenge for architecture should be to work with form but with minimal intervention, respecting cultural and social contexts. Designing and constructing architectures that are not merely technical exercises but expressions of a timeless spirit. Buildings that consider the environment in which they are situated and the living communities – whether people, plants, or animals – as suggested by the current research of Israeli professor Neri Oxman at MIT. Faced with ever-changing technology, Heidegger’s thought helps us, drawing on what the poet Friedrich Hölderlin wrote, to highlight an opportunity. According to the German philosopher, the pervasiveness of technology offers the chance to better understand the mechanism to which we risk becoming subject, enabling us to return to the true essence. Aware of the drama and urgency of current phenomena, we reflect in this light, recognising that architectural experimentation is also innovation in the pursuit of beauty, grounded in the meaning of the word *techne*, which represents the art of knowing how to do and rediscovering the Greek term *poièin*, the practical act of making. Both, in their origins, contained a poetic dimension associated with the invention of forms and the very idea of architecture.

## 2. SPACE AND PROJECT

By definition, architecture is the backdrop of our lives, corresponding to the invention and construction of spaces that meet both material and spiritual needs through unyielding figurative and functional principles. These premises are necessary and primarily define the relationship that an architectural project must establish with the city and, thus, with the

structure of its own architecture and the urban project. Aldo Rossi highlighted a fundamental issue: that architecture, recognised in its parts – unique elements such as monuments and repeated elements like residences, as part of the urban design and the result of layers of coexistence of fragments and permanences at different scales, from road layouts to the topological variations of internal distributive and functional elements – retains an autonomous value not only from its functions but also from its original technical elements. Rossi taught us that an urban architectural project must meet social demands related to the idea of space and dwelling, which feed the imagination and collective memory. Central to his extensive work are the rules, techniques, geometries, and rhetorical and figurative elements reserved for architectural composition as a set of foundational rules for experiencing architecture. It is also evident that the architectural project, in its outcome, is the result of a balance between these spatial intentions and outcomes often determined by non-spatial processes. Therefore, finding beauty and persuasive power in architecture that aligns with expectations is not easy if one seeks architecture to translate into construction and become a meaningful part of the city. The search for architecture finds a referential system and, therefore meaning, in the establishment of rules external to the structure – i.e., in the project of urban transformation – and internal to it, within the structure itself, in the spatial combination of elements, parts of the construction, and the addition of material components. A fundamental element of the urban architectural project is the site, understood as a topological figure, in which the project allows its construction and upon which prefigurative materials, as well as constraints and regulatory formulas, act. Taking for granted that the framework of what is possible and legitimate in architecture is a material of composition and its construction process, this choice is the only one capable of successfully transforming a given area into a place-space. Naturally, the path of the utopian project can also be a legitimate choice, representing impossible places but capable of subverting and invalidating the very rules that legitimise the architectural object. These may be projects with strong innovation in terms of product or process, but in any case, it is the project itself that transforms a place. Avoiding engagement with the site, understood in its meaning as an operational category of the project, makes the construction of the project itself emblematic, and its result becomes utopian. The transformation into a place-space is only possible if certain measures are employed, that is, designing the scale relationships that the topological figure, the site, establishes between elements of the landscape, the relationships between its architectures and, in its immediate surroundings, between physical, morphological, orographic, and urban elements that constitute the materials of the ground project. In design choices and formal outcomes, attention shifts to the positioning of point-like, linear, or surface elements, whether distant, liminal, adjacent, or internal to the site, as well as the dimensions of the void and the presence of permanent objects, the nature of their spatial continuity or separation, and their shape, size, and geometry. Reflecting on the materials of the project, knowledge of the processes of formation and the operational capability of formal and functional architectural types is fundamental through a repertoire of emblematic architectures and the instrumental use of *collage* techniques. Delving into the rules that compose and construct, we can question what the existing settlement model is and innovate it with project actions that can outline different scenarios and combine the relationship between the type of structure and its position relative to identified boundaries. Architecture always works through choices and operations of subtraction and addition to configure the place to inhabit. Therefore, it must understand, compose, and deeply experiment with the settlement models of reference that configure the space within which architecture

is constructed and more precisely, determine a new dimension of meaning for the modifiable site. It is clear that if the configuration of each project is conditioned by the very form of the site and the material and immaterial relationships in place, the transformation operated by the project can also be attributed to non-spatial rules, which are also, in some way, prefigurative, such as the transfer of economic values and land. The ability to design with these complex rules will result in the image and overall definition of a place-space within the city, whether in the suburbs or historical centers. The operational capability of formal and functional architectural types constitutes a personal archive from which to select the most coherent types to configure solutions, following an intention to imagine the construction of the structure. We think not only of the issue of the dimensions of a building, its orientation based on geographical and climatic conditions, the functional distribution of internal space, its frontage, its position below, between, above, or high above the ground line, its shape, its plan, the height of a structure, the size and the forms of its component parts, the distributive and functional arrangement of those parts, but above all, the relationship between form, space, and structure.

### 3. COMPOSITIONS

A technical-functional approach leads to the disappearance of architecture. For example, in residential projects, the design is often reduced to satisfying the functional requirements of the distribution program, fulfilling the number of housing units, their size, floor heights, and relationships with vertical and distributive elements such as stairs, elevators, ramps, and corridors. The combination of these elements – dimensionally and figuratively determined by the surface value of each room, its relationship with adjacent spaces, and the macro-functional division between living and sleeping areas – defines the various types of apartments, maximising the use of space while adhering to the minimum surface standards set by regulations. The exclusion of other potential volumetric configurations has thus been dictated by planning rules where present, typological elements imposed by them, settlement models derived from available land dimensions, and the overall cost to meet social demands. The response to these process elements has led to the construction of most of today's suburbs, which are often judged negatively in terms of aesthetic and social quality, in contrast to the positive judgement of historic and layered parts of the city. However, it's important to note that the construction of suburbs, whether in isolated or serial interventions, seems to have excellently fulfilled all the performance categories described in a standard construction process. Exceptions are the parts that were planned and built based on unified projects, some of the large scale, which, being grounded in modernist utopian models, are now considered outdated. Imagining, designing, and building quality has never been more urgent; we must not give in to technological impasse and invisible forms of control. Even though designing a quality building today has become synonymous with making choices, process control must consider technological decisions related to energy savings, the use of renewable resources, modularity through prefabrication, disassembly and disposal, the use of non-polluting, renewable, and natural raw materials, and the passivity of the architectural envelope. This approach to functionality seemingly adheres to the rules of comfort and the ethical value of construction, but the results often show that the aesthetic and even ethical value of architecture is not guaranteed. We must not, therefore, abandon the compositional path, which involves

controlling three-dimensional outcomes instead of delegating them to non-spatial operators such as regulations and specialised skills. The powerful secret of architecture is always and only the result of a compositional design approach, addressing the categories and methods of constructing architecture's invisible materials: the perception of space, light, volume, atmosphere, the relationship between external and internal space, the threshold, geometry as a lexicon – in other words, all compositional operations as a referential system of meaning.

#### 4. SEPARATIONS AND NOMINATIONS

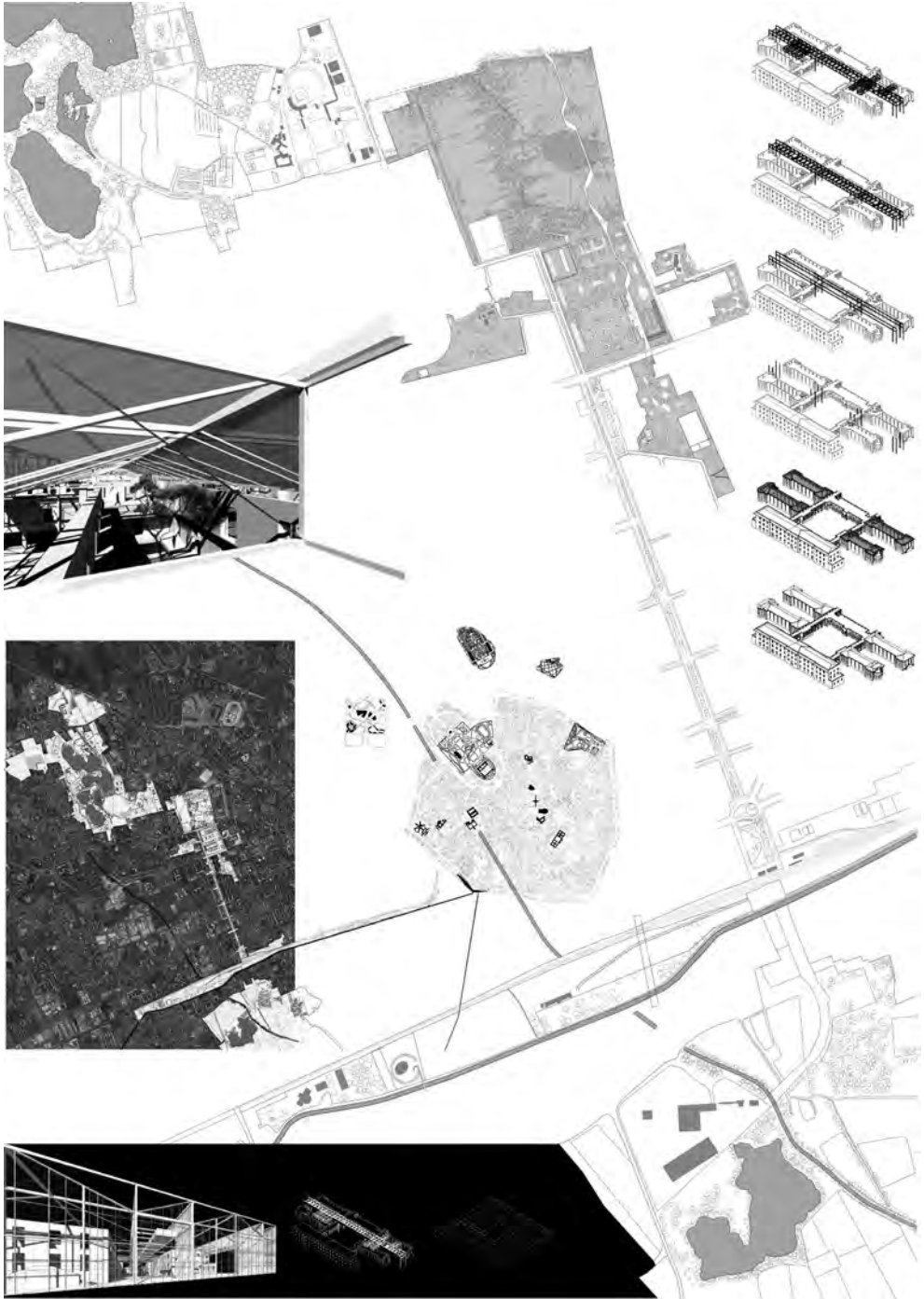
At this point, it is useful to revisit both the method and some project categories that are indissolubly linked to composition. Among them, we consider compositional operations that use the category of separation, facilitating the identification of the elements that make up the complexity of architecture. The modern movement identified and named new distinctions and, consequently, imposed handbook-like models to adhere to a new language. In *Towards a New Architecture* Le Corbusier proposed a paradigm shift. In the Villa Savoye at Poissy, he applied his Five Points of Architecture, which he theorised, and the formal results he achieved would have been unimaginable without the technical and technological innovations adopted. Le Corbusier conceived the architectural design as a synthesis between form and technique, distinguishing architectural components such as load-bearing elements, where the structure is separated from the wall, and supported elements like the free plan, the possibility of point-like ground contact of buildings through pilotis, allowing public access to the natural surface, the distinction between structure and façade, and the assembly of technical rooms and networks. This ontological choice also involves the truth and purity of construction in the relationship between form and structure, with the possibility for the building to have new foundation planes modelled before the natural ground and artificial soils, such as the machine floor and roof garden. This was made possible by reinforced concrete, which has the characteristic of transmitting weights and forces horizontally and transferring them to points other than the verticalisation of columns. The innovative and revolutionary aspect of this approach – using separate and named elements – is the relational value implied by the additive positioning choice. It clarifies the spatial relationship and the measurement of the void established between the elements. The same applies to Mies van der Rohe in both the Illinois Institute of Technology in Chicago and the Farnsworth House, where the use of steel and glass technology creates completely open and free forms. The first compositional operation, therefore, is the choice of position, such as that of the structure and the façade about the exterior. Positioning the structure inside the façade introduces a new syntax to be experimented with regarding the thickness of the façade itself, from which inventions like the ribbon window and double-height loggias arise. The logic of separating elements and their additive recomposition defines a new field in the discipline of composition – the nominal value of the distance between elements. The gap between the wall and the column in the façade, according to its numerical value, implies new architectural spaces and the invention of new names for them. This distance varies from zero, when elements are adjacent, to a progressive numerical value proportional to the façade's thickness, whose meaning reflects the idea of named architectural space – from the infinitesimal variations between elements in Terragni's Casa del Fascio, analogous to the monumental classical decorations of façades (syntax of pilasters, lesenes, half-columns, cornices, etc.), to the few elements in Le

Corbusier's *machine à habiter*, which identified new usable spaces (loggias, double heights, terraces, brise-soleils). These rules have not led to widespread use. Among the reasons for this phenomenon are the high costs of adding the surface area necessary to accommodate new architectural spaces and the lack of social recognition of new rhetorical figures such as ribbon windows, flat roofs, the elementary nature of volumes, and fluid, interacting spaces along with difficulty in accepting the spatial and residential usage conditions implied by typological innovations such as the linear building exceeding the canonical thirteen metres with double-height apartments and cross-ventilation. In the collective imagination, the typological identity of housing coincides with the commonplace, with constructive elements based on rhetorical figures borrowed from the ancient city but paradoxically implemented in contemporary settlement models. There are, of course, also economic reasons related to the value of internal habitable spaces. Moving, removing, and separating the column from the wall results in the occupation of space and a complication of the use of rooms, which is rarely justified by logical necessity. Thus, common construction has pervaded our cities with solutions based on infilling the load-bearing structure with walls.

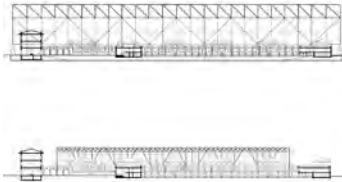
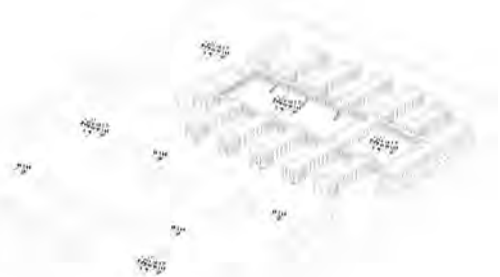
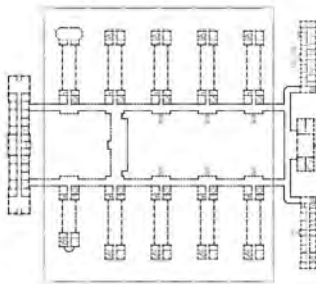
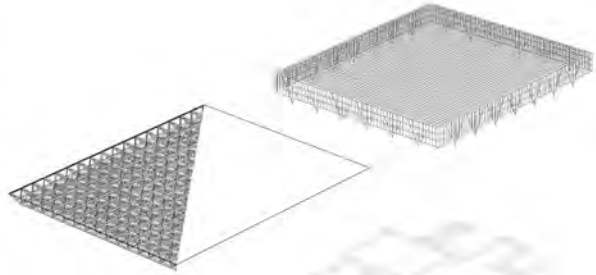
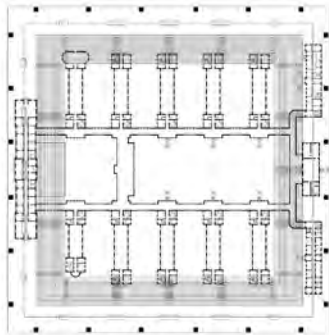
## 5. CONCLUSIONS

The disappearance of structure as an architectural, plastic, and spatial element has become a technical *modus operandi* of design, with structural conception delegated to specialist design and only later integrated into the architectural phase. However, observing countless examples of architecture handed down to us from history, whether intact or as ruins, we must acknowledge that there is a fundamental relationship between architectural and structural conception for architectural innovation in form. We must also recognise that we are witnessing the disappearance of architectural space, increasingly occupied by technical systems. In Franco Albini and Franca Helg's *La Rinascente* department store in Rome, which uses a steel frame and prefabricated façade panels, the technical systems are integrated on the same surface, shaping the horizontal floor markers. In the urban machine of the *Centre Pompidou* by Piano and Rogers in Paris, the technical systems are even expelled to the exterior façade, making the interior space open and flexible while creating a sort of technological narrative interface that transforms into urban decoration. The non-spatial configurative operations that act within the building envelope, attempting to conceal systems to achieve aesthetic quality, paradoxically occupy a significant portion of the built environment. In Le Corbusier's *Unité d'Habitation*, we must acknowledge the question of form about the technical characteristics of construction, where the void takes on the form of a solid pipe in the spatial volume of each individual apartment, fitting and combining with the void of the structural framework of beams and columns. This method oscillates between real and conceptual material as a new design technique. Today, it is possible to create programme forms in different types, combinable through thousands of automated numerical calculations that optimise the volume, making variation and the identity of the user's location an immaterial design element. The separation of elements in the compositional and process ideation responds to the paradigm of assembly, as opposed to traditional constructions that interpenetrate different materials, which must be demolished when decommissioned. The imagination of component-based architecture, on the other hand, forces us to consider all the functional categories of the construction process, corresponding to off-site preparation, rapid assembly, and the immediate

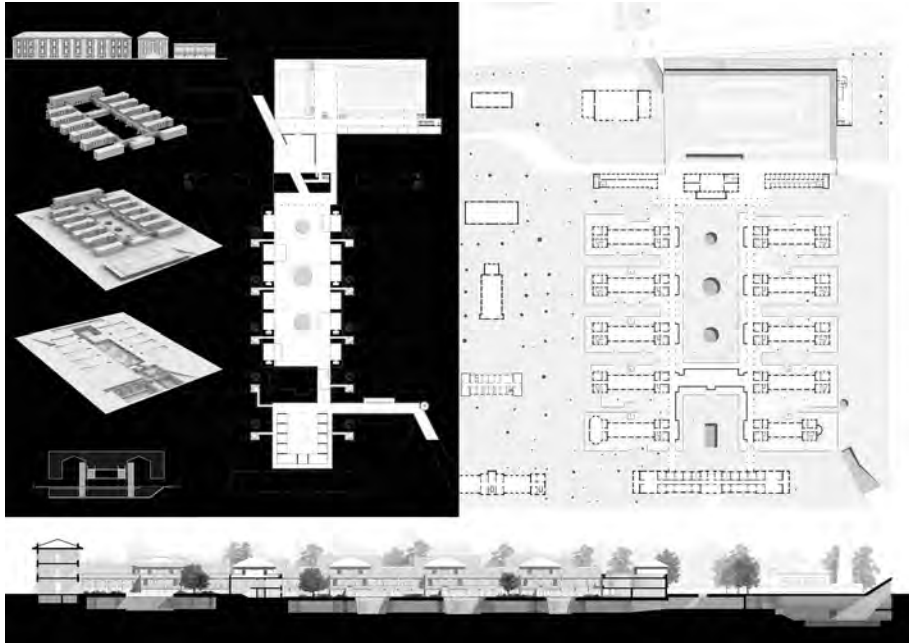
availability of new assets. Louis Kahn links formal and constructive research by exploring the interstitial spaces of structures, using them as cavities for the circulation of light, heat, or air. Today, thanks to dry assembly and prefabrication, it would be possible to respond to processes of urban renewal, even by demolition, without encroaching on land through new expansions. The collection *Elements* by Koolhaas appears as a classification of evolving patterns, making abstract elements (walls, columns, frames, flat roofs, terraces, stairs, etc.) and rhetorical elements (pitched roofs, windows, doors, arches, pediments, etc.) available in design. It highlights the vast range of materials that can undergo shared compositional operations, where the results do not fit a single language but belong to the poetics of space. Knowing which operations to choose and employ requires introducing the discipline of composition. Among the cognitive models in architectural representation, it is legitimate to select the outcomes resulting from associative combinations that coherently respond to the project's requirements, as well as the constructive and typological reasons for the elements themselves. The question of whether to use the separation paradigm and its spatial value between elements can only be resolved by naming and reinventing new architectural spaces. But everything must start from the city: designing through composition means adhering in all aspects to this methodological principle in constructing new urban spaces that fulfil the demands of beauty and sustainability. These cannot be relegated to images or gestures for their own sake but must include, as a compositional operation, an ethics of process and an economy of gesture – an outlook for the future of the places we live in, which is not a technical issue but ultimately a matter of essence and, in the end, of language.



Ill. 1. *Elements, parts and figures of the project.* Study for the regeneration of Baggio Military Hospital in Milano, UniTn 2023 (Claudia Battaino).



III. 2. *Elements, parts and figures of the project.* Study for the regeneration of Baggio Military Hospital in Milano, UniTn 2023 (Claudia Battaino).



III. 3. *Elements, parts and figures of the project.* Study for the regeneration of Baggio Military Hospital in Milano, UniTn 2023 (Claudia Battaino).

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