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Images of the imagined city

The essay investigates one of the projects in the competition for the expansion of the North area of Palermo named ZEN 2 and designed by the architects Pasquale Culotta, Giuseppe Laudicina, Teresa Cannarozzo, Anna Maria Fundarò and Tilde Marra, in 1970.

The essay aims at illustrating the spatial, figurative and urban qualities of it.

The analysis of the project has been guided by a written text and the graphic support, that is the project report and the attached drawings, in Indian Ink, made by the architects themselves, indeed very often fragmented and difficult to be interpreted.

In this regard, the support of digital drawing in two-dimensional and three-dimensional form,

based on the creation of a Revit model, has been fundamental.

That was the moment of the static and spatial structures, and it permitted inedited visual restitutions of the project, that would have never emerged otherwise, together with new interpretative keys.

Moreover, it has been possible to offer the three-dimensional and planimetric overview of the spatial complexity of the project exploiting the photographs and drawings of that time as a starting point (for example the one by Franco Purini of the winning project). They show the existing project in its conceptual moment and in its real architectural artifact.

Key words:

Redrawing; Project; City; History; New Images

ZEN 2. AN OVERVIEW

Scampia, Corviale, Librino, Zen 2, they are some of the housing projects in Italy whose social matters have been more relevant than their architectural facts.

Firstly planned to satisfy some specific housing needs, these areas have soon turned into headquarters of crime and delinquency, which of course was not the aim of the administrators and architects who could not foresee that. And, yet, many districts show no conformity with their original projects. This is the reason why today their demolition have been suggested (a proposal for 'Le Vele' at Scampia, Naples). Headquarters of crime: this is not exactly the case of Zen2, Palermo. It has run the risk to become a mere ghetto and today delinquency still survives. But a frantic activity for the social recover is in act, mainly turned to women and children above all. Today the ZEN quarter is placed in a position with relevant peculiarities, combining the urban transformation of the last forty years and the morphological aspects of the area. This is surrounded by the so called Piana dei Colli [1], a very important area for the northward extension of the city (fig. 1).



Fig. 1 – ZEN 2 seen from Mount Pellegrino.

Fig. 2 – The General Urban Development drawn up by Filippo Giarrusso, 1886.

The territory boasts a geographical and historical context all around that proves to be extraordinary for the nearby presence of the sea, the surrounding mountains, the peculiar vegetation and, on the other hand, the local building types: the “baglio” and the “casena”. Most of them, formerly rural buildings, were changed into summer holiday houses by the XVIII century aristocracy, making a large net which characterized the city outside the historical walls: it anticipated the future and the fast development of Palermo northward, mainly in the second half of the XX century.

In 1885 the General Urban Development Plan was issued by engineer Filippo Giarruso. It is considered one of the most significant and troubled planning tools in the town history that changed the relationship with the suburban area. It is considered the first real attempt to enlarge northwards and move the historic town closer to the Piana dei Colli (fig. 2).

According to F. Giarrusso it was advisable “the development northwards to the Piana dei Colli, where air is healthier, even for the beneficial effects of the

winds from the sea, and where the countryside is flatter” (Pirrone, 1970, p. 33).

The last three decades of the XX century, rich in events referred to the evolution of the urban plan, registered a fast congestion of the territory when it went to join the town centre up with the countryside. Soon after World War II the architectural research focused mainly on the matter of housing and, more generally, public residential housing. The topic about suburban districts which stand out of the city centre, “enjoyed a double meaning, both functional and political-ideological” (Sciascia, 2003, p. 31). It was intended as a social redeeming image for lower and poorer classes who, leaving the city centre, could have had the ideal conditions in a new context to find their identities again. So, the new ideas aimed at planning a heterogeneous and polycentric city rather than homogeneous and continued like the common rules of the existing town imposed. By 1956 there were all cultural premises to create the new Urban Development Plan which was passed later, in 1962 (fig. 3). The New Plan included the expansion to the North, the lengthening of Via Libertà and the



inclusion of an office office building within a large green area. Many hypotheses suggested at that time remained without result, but they maintained the prevision of a satellite district in the lead position in the intervention, that is in the new urban expansion axis: the ZEN district-Zona Espansione Nord (Zone for the Expansion to the North).

The early intervention in the area considered in the Plan was the project by engineers Salvatore Biondo and Salvatore Mario Inzerillo, called Zen 1, which recalls the morphology of Palermo in its major expansion with high buildings inserted with no relationship with all around (fig. 4). The project was not carried out in the whole. What was not made, 'the missing parts', was one of the matters studied by the groups of the architects that joined the competition for the building of Zen 2 in 1969. They were Vittorio Gregotti, Pasquale Culotta, Carlo Melograni, Vittorio Ugo, Umberto Di Cristina, Sergio Lenci, Luigi Pellegrini e Luigi Piscioti.

This completion considered a new nucleus that was in a position that connected the axis of via Libertà and was destined to 15-20,000 inhabitants with the intent to "overcome the troubles of a dormitory neighbourhood according to the requirements of the competition announcement" (Sciascia, 2003, p. 91).

The period of participation foreseen was 15 January to 15 April 1970. The next year, on 8 March, the prize was given to the winner project developed by the group of V. Gregotti, F. Amoroso, S. Bisogni, H. Matsui and F. Purini (fig. 5). The project discussed in this essay shared the second prize with the group represented by Melograni and Ugo. The Competition Board wrote that "each of them represents a precise and diversified interpretations of the subject all with valuable cultural and technical recommendations and contribution" (Sciascia, 2003, p. 151).

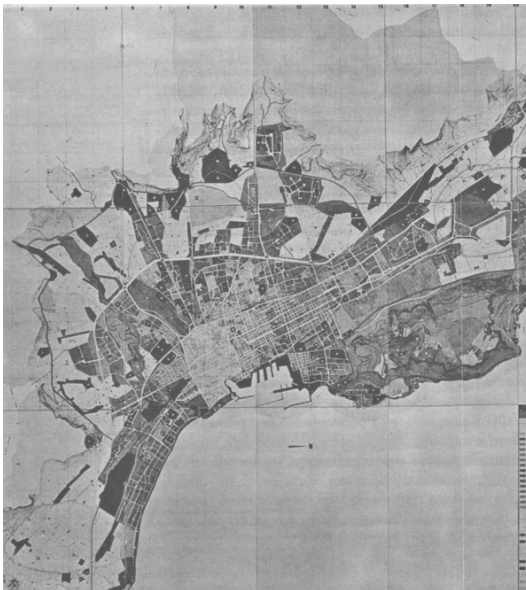
The Urban Development Plan of 1995 included the demolition of some part of the Zen district, but the intervention was never carried out.

Today the district is a satellite, an isolated island with true and real social problems (social deviance, vandalism, diffused micro-crime and macro-crime, partly permeated by the rejection of any external aid). moreover, the plant of Zen 2 has revealed not to be the same as the original conceived by its architects which, on the contrary, had quite different architectural and urban qualities and proved to be really modern if compared to most buildings of the expansion of those last forty years.

It is possible to requalify Zen 2. As long as words about architecture are not just words, but they can interact with facts. That is all! Unfortunately it is difficult for many writers to work in the social field; people who work silently often leave important traces.

Fig. 3 – The General Urban Plan, 1962.

Fig. 4 – ZEN 1.



REDRAWING

It is not possible to read the usual graphic documents for the project in competition for Zen 2 signed by the group of architects Pasquale Culotta, Tilde Marra, Teresa Cannarozzo, Anna Maria Fundarò and Giuseppe Laudicina. There is only a thin pamphlet issued by the authors at that time, which includes some quite illegible sketches and drawings (fig. 6-7). In a case like this, quite common as many archives went lost, the researcher who wants to start an analytic and critical study of a project can only turn to a participatory approach of the project design a-posteriori, that is to re-design it. That has always been the way to give force to all activities necessary to carry out any architectural analysis and criticism. In most cases one of the most important achievements is, with no doubt, the reproduction of the drawings ex-novo. They represent a further source of the critical knowledge of the work and they even highlight the limits that the original drawings hid accurately.

For its subjectivity, in fact, drawing can include or exclude things; it hides errors and the weak points that the architect knows well; on the contrary, it exalts qualities and peculiarities that, in a competition project above all, may determine highly positive personal results. Considering that, an example of a perspective designed by Franco Purini (fig. 8) is masterful and very persuasive. It was designed for the winning project of Zen 2 and carried out by the group formed by Vittorio Gregotti, Salvatore Bisogni, Franco Amoroso e Hiromichi Matsui, together with Purini, of course. The new unedited representations, created from the redesign, appear as a true process of schematization (intended in its etymological meaning from the Greek word, that is a definition of the constitutive principles of the shape and not, of course, a simplification and reduction action). Overcoming the mere cognitive intent, schematization takes an independent role and value aiming at focusing the signic core of the project studied, as if this was the authorial revisiting of the early work. It could not be otherwise as the subjective peculiarity of the redesign comes from the relationship between the three subjects: the subject ego detecting (who is redrawing), the work detected

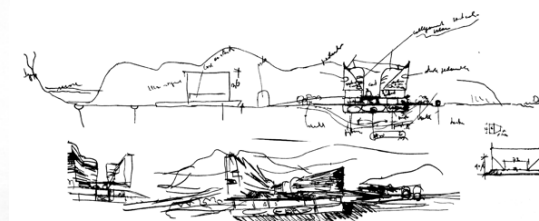
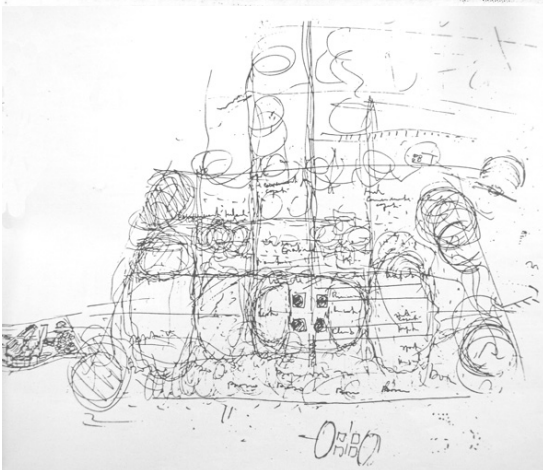
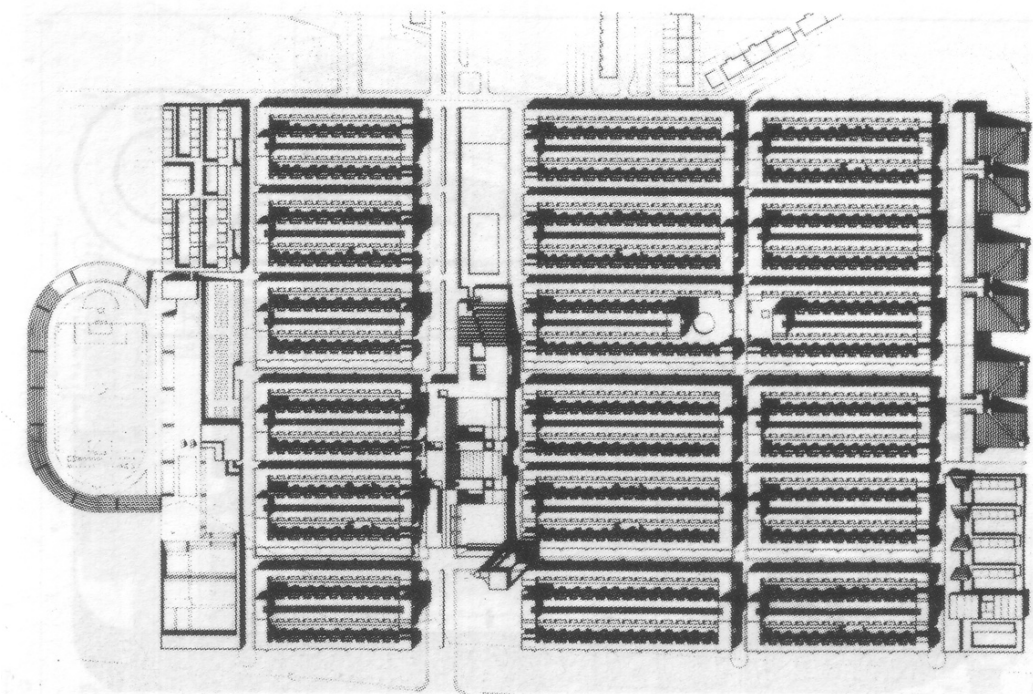


Fig. 5 – Plan of the winning project.

Figs. 6,7 – Project sketch of the Culotta group.

(the project) and the project author. It is then evident that the praxis of the redrawing is not merely executive, but it is mainly speculative and critical-analytical; and within the interaction of the three, it is important not to exclude the cultural awareness, that is the detecting ego's knowledge, of the historical period when the work was created and the architect lived. Taking into account all of that it is clear the close analogy between the redesign and its translation. In an essay which is a masterpiece of his critical acuteness, Walter Benjamin well underlined how extremely complex the work of the translator is. He wrote "no poem is for the reader, no painting is for the watcher, no symphony is for the listener" (Benjamin, 1921, p. 7).

For the German philosopher the translator's task is to maintain alive what in the original, because what is fundamental is the survival of the work essence and the precise meaning. A bad translation represents a real betrayal of the work and the author; but if it is true for any literary work, how much in the signic translation of other signs –that is the redesign- can make the original project survive in its constitutive and poetical aspects?

In this case it is necessary to resort to some aspect of criticism based on thought, observation, experience and reasoning, in order to overcome the partiality of the individual and, on the contrary, to highlight the fundamental values of clarity, accuracy and precision. Ultimately the essence. Observation is one of the peculiarities of people who practise architecture; the famous testament of Le Corbusier "look, watch, see, imagine, invent, create" testifies it and asserts that observation is means to explain the reasons of the differences and reveals their rules. In architecture to watch and observe a project with the instruments of criticism also permit to discover some fragile aspects of the work in question. In fact, if the redesign of a work never done is a mimesis of the development of the ongoing project, on the other hand it appears as a true architecture survey that shows the features, peculiarities and weakness of the architectural body in the essence of its translation. Redrawing may be considered as an architectural survey 'in absentia'. The concept was explored and expressed later by Giuseppe Pagnano in 1975, in a superb essay which is

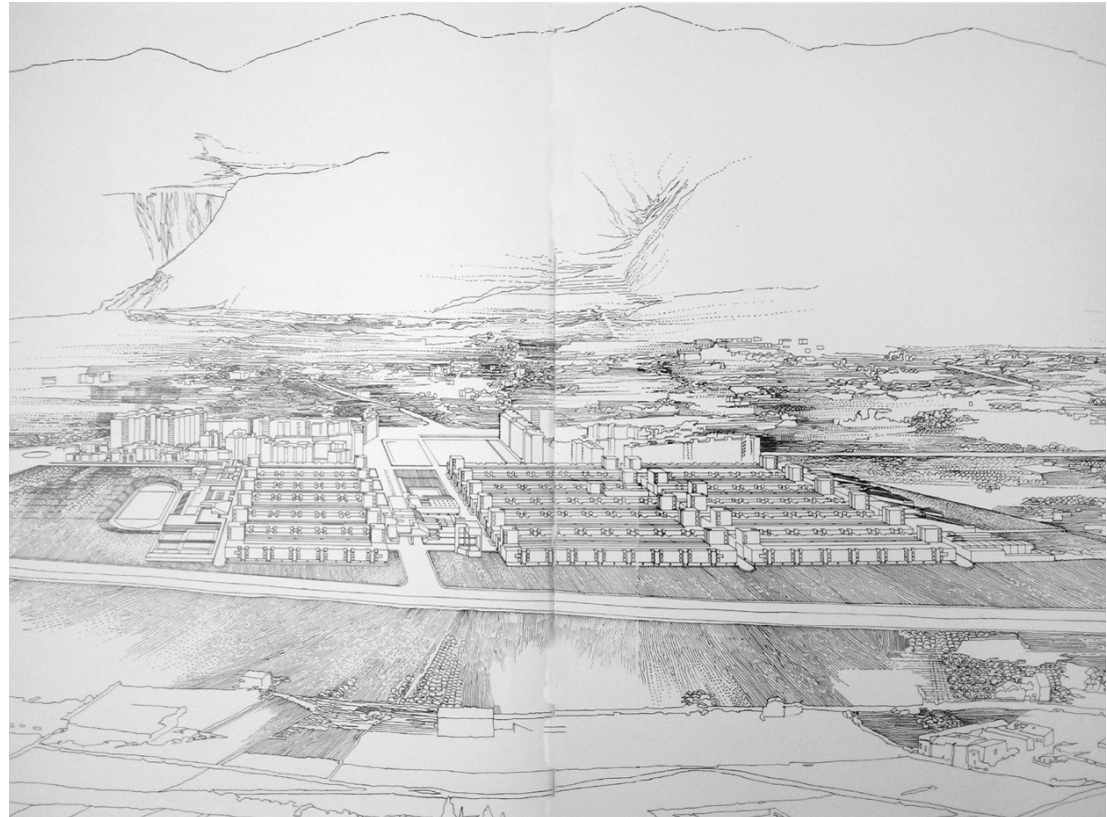


Fig. 8 – Franco Purini. Perspective of the winning project.

still a cornerstone for the that one who deals with the critical reading of architecture through design. The booklet remains a reference point, a sort of precious chest, which represents a solid introduction to all the studies of graphics analysis detecting absent architecture, even if since that issue graphic representation in architecture has had great changes thanks to the introduction of digital design. Giuseppe Pagnano's statements consider design as a sort of analytical- critical and expressive language regardless of the means used to elaborate it. With great acumen

the scholar asserted that "... with this purpose it is necessary to read the architectural surveys, photos, and descriptions at disposal critically and interpret the whole image of the building they are rendering in order to draw all information and features, the ones that the work could have given widely in its phenomenal reality. All that may be obtained thanks to a new graphic transcription that uses all the past ones after evaluating and comparing them. Yet, further information are derived from the graphs of the many architectural surveys, photos, descriptions,

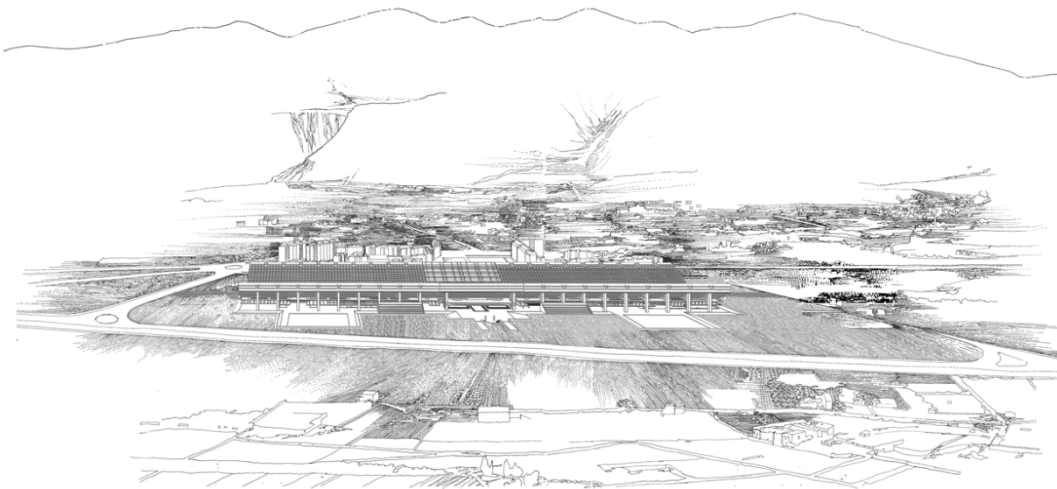


Fig. 9 – The project of the Culotta group included in the perspective of Franco Purini.

and above all the ongoing comparison of drawings, photos and information. This is the basis for a new series of graphic representation (carried out following the various Systems of Representation) that will show back the architectural object in a more complete way. A careful use of the types of axonometry and perspective, sections and cross-sections, for the new graphics deduced from the previous one in orthogonal projection, can give a sufficient view of the shape and features of the building. Even the creation of a plastic representation can solve the formal aspects that are difficult to read using drawings only.

When reading in absentia all these forms of processing substitute the survey made personally through reading in presentia. Certainly they are not equivalent, but they are valid enough for the real knowledge of the quantitative and real data of the architectural work" (Pagnano, 1975, pp. 10-11). Giuseppe Pagnano refers to the critical reading of architectural works existing that cannot be surveyed directly, but they can be redesigned on the basis of other transcriptions and, if possible, of the original drawings that generated the project. But what happen when the only documents at disposal are just

images of the representation of architectural work never built? What can the researcher look at? The starting point is, of course, the fact that the architect has got his/her own figurative repertoire; then the first action is to investigate the project and put it in its historical context; afterwards it is necessary the attempt to search for the probable exempla the project designer took into account and looked at. By doing that, the redesign is taking a shape, firstly creating some sketches with the intent to study the project itself, identify the geometrical principles and the relations between the parts, its space and figurative intuitions together with all the missing and opponent parts that the representation of the project puts in evidence. The scarcity of the material at disposal will be implemented by the new graphic representations to highlight the project value and the new figurative compositions will be developed according to a hermeneutic and, partly imaginative process. The redesign of architectural works never built, feeding new knowledge let the perspective reader to imagine how the aspect of a place or a town would be, and more to express a value judgement when in that place or town another project took life. The true central theme of the graphic analysis (fig. 9).

THE PROJECT DESIGNED BY CULOTTA AND HIS GROUP

The main axis of the big building is almost a mile long and it settles in parallel to Via Libertà prolongation (fig. 10). The internal traffic is also in parallel to this direction and it is connected directly to the external paths that surround the large block through circular road junctions. It was supposed they had to divide the private vehicle traffic from the public vehicle traffic.

The project, as a whole, can be read as a single body perfectly symmetrical in the longitudinal and transverse sections and it can be framed in a large compositional grid composed of 3.84x3.84 meter modules (fig. 11). It is composed of three different big blocks, each related to a precise function: the ground floor, a group of three big concrete slabs for services and the block of houses. Each of them interact with the others in a strictly vertical sense.

In an ascending order, the ground floor area is modulated in heights and it represents, in its shape, the only silver thread with the existing ZEN 1 district (fig. 12). The surface is partially covered and represents the space for exchanges and the human aggregations, for culture and free time, in a "mix of historical forms" (Cannarozzo, Culotta, Fundarò, Laudicina & Marra, 1971, p.34) that defines the project and let us deduce the functions that were supposed to take place. Functions in fact were not explained by the architects, except for the spaces dedicated to sports facilities.

The central area (-5.25 m) is a real 'agorà', a square connected to the outside through a large inclined plane (fig. 13).

The agorà is the place for the rest and the social debate. On the sides there are several spaces hosting stepped theatres, gathering spaces, halls for exhibitions and sports facilities punctuated by large squared pillars or by struts that support the building. Starting from -5.25, the architectural surface is modelled and excavated at different altitudes, up to -13.81 (pools and places used as changing rooms). The stairs that are obtained this way act as stands attached to the facilities area.

The ground floor represents the only exception within the symmetry that distinguishes the project.

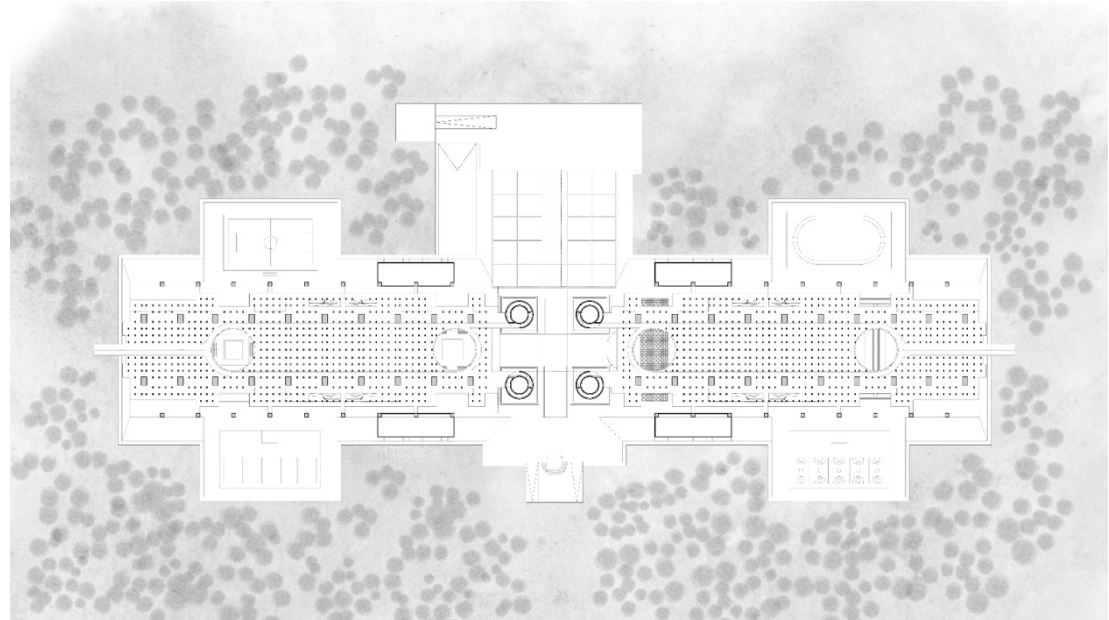
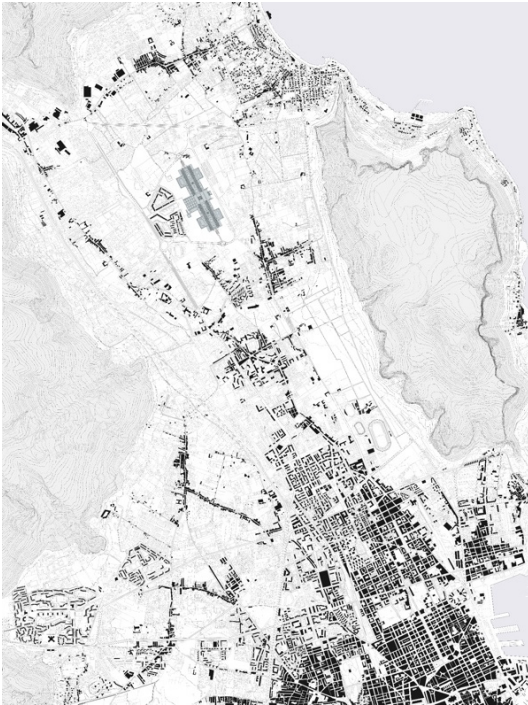


Fig. 10 – The project of the Cullotta group in relation to the city.
Fig. 11 – Plan at +2.56.

In fact, proceeding in a more detailed description, from the centre to the left, there are four stepped theatres, different from one another in shape and size. From the centre to the right there are an exhibition hall (fig. 14) with a reticular spatial structure (which allows the natural light come and penetrate from the large upper eye), a paved space enclosed by two stepped sculptures (modern interpretation of the hemicycles of Roman temples'), a large indoor theatre and two swimming pools with their changing rooms.

At the same level there are four buildings destined to High School and placed in a median position between the centre of the building and its extremes and connected to the block of the services. They are composed by three levels (fig. 15).

In the corner position there are four large outdoor areas destined to other sports (soccer and basketball fields, a velodrome and some tennis courts).

Moreover, the entire floor ground is surrounded by inclined surfaces, adjacent to the vertical retaining walls. This is a strategy to mediate the change in the level of the two different floor surfaces, the natural one and the artificial one.

Out of the whole complex there is a square-shaped church, placed on an artificial base and reached by a slanting ramp. Unfortunately, the architects did not give any further details about its sections and layouts. All that we can see in the model is a big white cube.

The big empty pillars are about 4x4 meter large. Inside there are, alternately, the staircases and the elevators that connect the ground floor with the

services block, up to the flats.

The second block of the megastructure consists of three large pedestrian and vehicular floors, respectively at +2.56 m, +6.40 m and +11.52 m elevations. They are symmetrical and similar and they host work and business functions and some compulsory schools.

On the first floor (+2.56) there are large spaces for private car parking. The space is structured by a multitude of pillars and dividing walls.

The paths are designed for private traffic. They consist of different one-way paths directly connected to the external roads. They all lead to large cylindrical structures placed next to the agorà below. Four large circular ramps are placed inside and they give a solution to distribute the traffic to the other floors.

These cylindrical bodies have their bases at the level of the agorà (the ground floor) and just like in a stage, they define a real background for the square.

Starting from the first floor and in the same position on the other two, there are four big 'oculi' with a diameter of 45 m.

They allow natural light to illuminate the floor below directly and the other floors indirectly, depending on the inclination of sunlight.

Moreover, the three floors are connected by pedestrian ramps conjuring up Le Corbusier's famous idea of "promenade architecturale" (they are in a perimeter position between the first and second floor, in a central position between the second and third).

On the second floor (+ 6.40) the grid of pillars of the lower level is repeated, but with a more articulated space. In fact, there are several big rooms for shops or public services rigidly organized in the structural framework (even the latter were not object of any study during the project phase). Thirteen rooms are on the left side and thirteen, symmetrically, on the right side.

From the infrastructural point of view the system is almost unchanged compared to the previous one. There is an addition of two roads which start from the big square next to the ZEN 1, and go through the building crosswise.

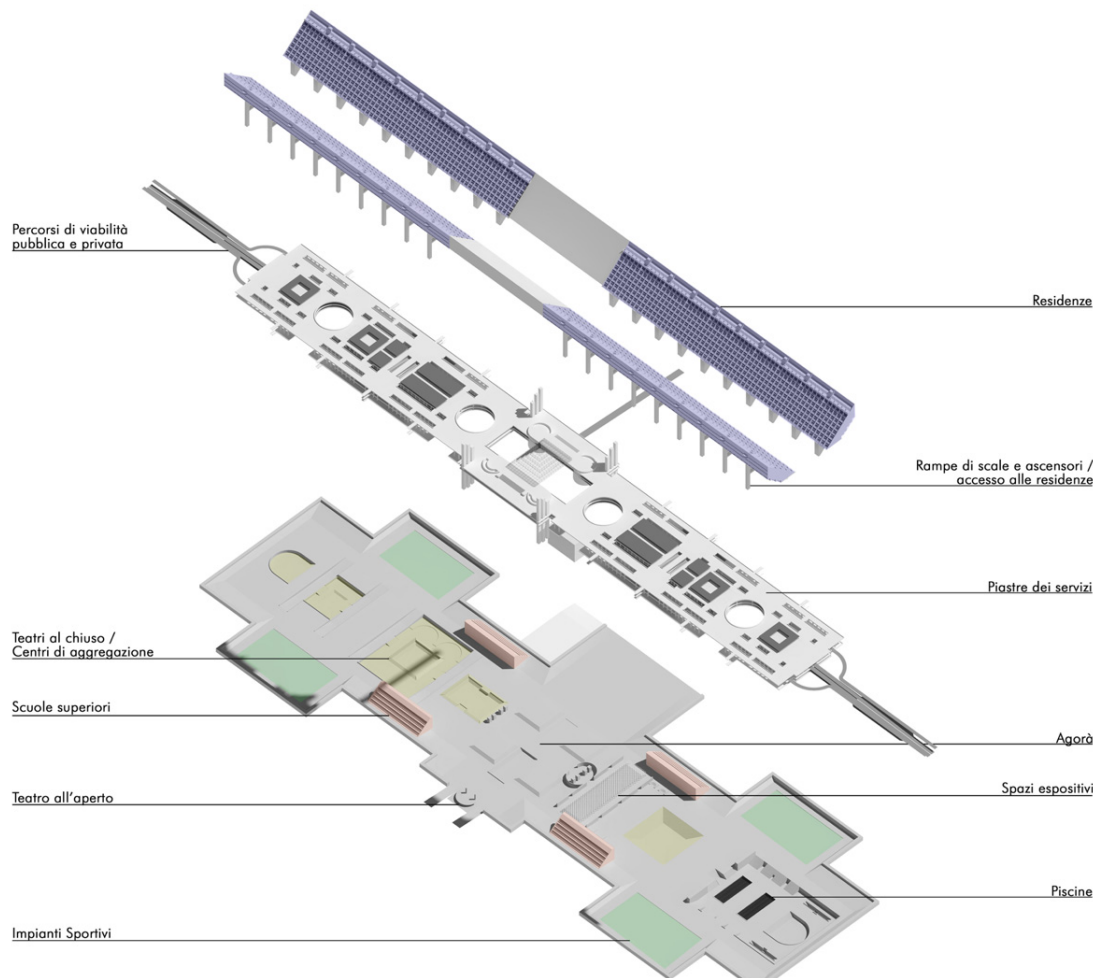
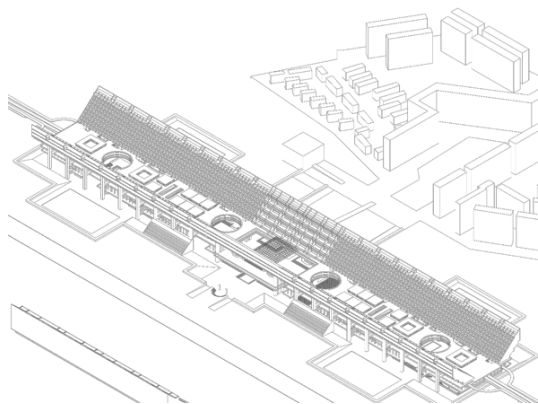


Fig. 12 – Axonometric view.

Fig. 13 – Project functional scheme.

The system of the paths is intended for private and public use, with some additional one-way paths dedicated to public transport (buses, taxis). On the second level there are also pedestrian bridges that connect the floor to the stairways inside the big pillars, in order to take the inhabitants up to their apartments.

The last floor (+11.52) covers the three-slabs system and is entirely walkable. Here are other services and shops, nursery and primary schools. All these have been assumed as pavilions with a flat roof and vertical glazed surfaces.

Each school has a courtyard, a place for leisure and amusement. The above mentioned "oculi" act as views at their highest elevation, so they can offer a privileged point of view for the observation of what is underneath.

In the central part, the three floors are separated by a large open space that spreads light directly into the agorà. On the top, a big structure shaped like a 'ziggurat' made of iron and glass is placed at the centre of the intersection of the two axes of symmetry. It represents a characterizing element of the project, always visible and recognizable (fig. 16).

The series of struts and empty pillars mentioned above support the blocks of apartments. They consist of four triangular section bodies and they contribute to define the idea of a big structure raised from the ground more than other elements. The struts, in the section, have an atypical shape tapered downwards, with a base 2.80x5 meter long.

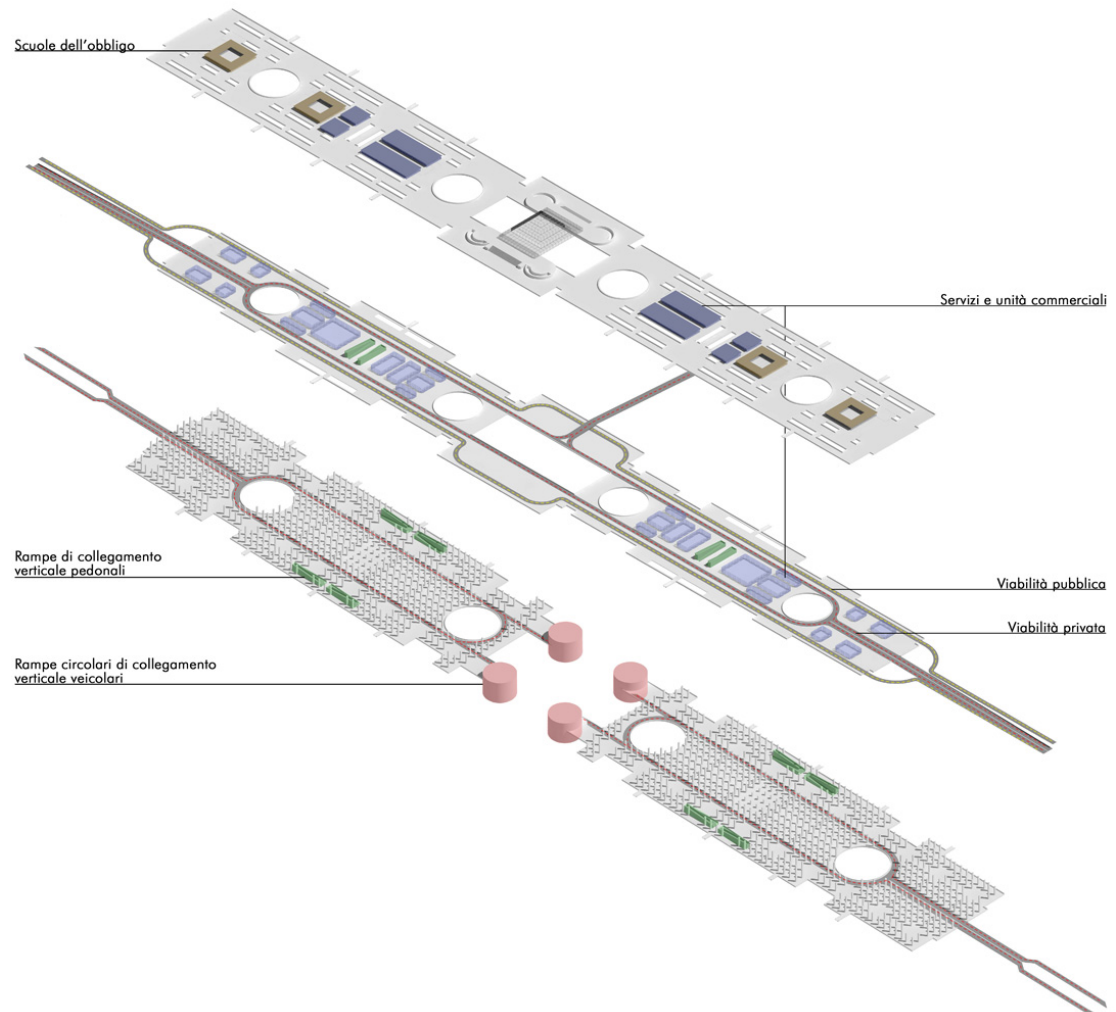
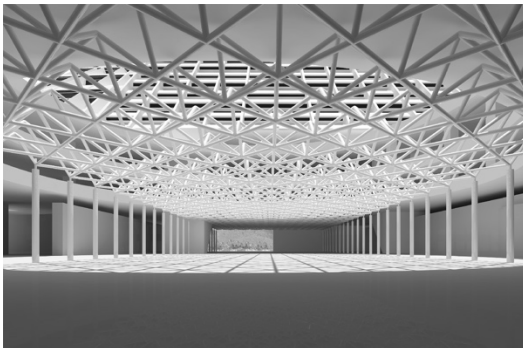
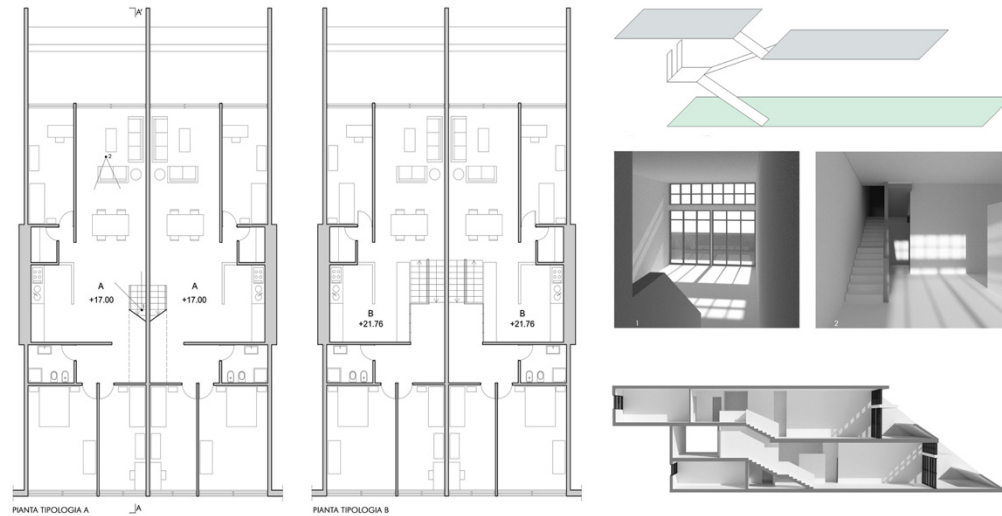
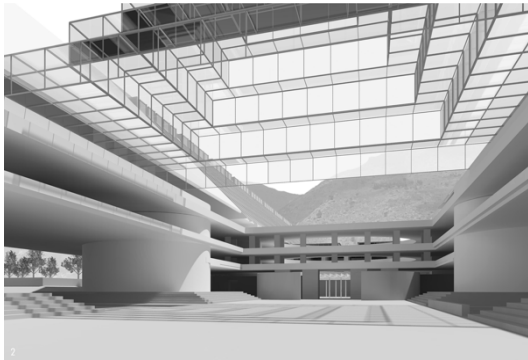


Fig. 14 – The space for exhibitions.

Fig. 15 – Functional diagram of the central floors.

Fig. 16 – The iron and glass cover.

Fig. 17 – Redrawing of type “A” and type “B”.



The housing types change as you go up, with gradually smaller dimensions. The units are composed of simplex and duplex groups which can be accessed via corridors connected with the staircases inside the big pillars.

The flats can generally be divided into three types. The first two are similar, but different in the surface measures. They are composed of a simplex and duplex system. The third type, on the top floor, is a simplex designed just for a couple of people.

Each apartment has a useful floor area ranging from a maximum of about 130 square meters (the types placed below), gradually decreasing to an area of 80 square meters (placed higher).

The corridors system leads directly to the front door of the apartments, which are distributed linearly one next to the other. The distribution is organized according to a modular system.

Each module corresponds to a couple of apartments (the simplex and the duplex) that are mirrored in the layout. Two stairs, one belonging to type A (simplex), the other to type B (duplex), leads to different elevations. The type A is positioned at the bottom,

the B at the top. In the latter, a further and smaller flight of stairs inside the apartment leads to the bedrooms, placed at a level higher than the main living space (fig. 17).

The typical distribution in the houses has the living area facing on the pedestrian block of three concrete slabs mentioned above. Bedrooms face on the garden surrounding the megastructure. The first housing type has three bedrooms both in apartments A and B. Sanitation and kitchens are placed in a central position in the layout. The living area for all the types has a terrace bounded by an inclined railing, according to the shape of the building section. Many considerations made for the first type can also be applied to the flats C-D, which are smaller and have two bedrooms (fig. 18).

The last type (E), is the upper simplex for a couple of people. The functional scheme of accesses is the same as the previous simplex, with a double flight of stairs leading down to the apartment. In correspondence with the big pillars there is a system of descending stairs that leads from the corridors to some terraces for collective use.

They are as large as the module of a flat (fig. 19).

The logic of the distribution of the sleeping and the living areas is the same as in the previous cases.

As in the original drawings there are no indications that refer to windows in the bedrooms, the study of the redesign has included the use of glazed surfaces whose size is the same as the ones in the living rooms.

The main reference used for the block of apartments was undoubtedly Le Corbusier's 'Unité d'Habitation' in Marseilles, which embodied and synthesized a new way to plan a collective living space thanks to the geometrical mixture of common spaces, commercial and residential areas. Furthermore, the housing types, which can be assembled in series, are no longer indicative of the social context of the inhabitants who live inside.

Finally, even the central upper blocks were not developed by the architects. It has been decided to propose a simple delineation of the fronts in order not to disperse the organic volume of the megastructure and to conjure up the horizontal and vertical rhythmic mesh (fig. 20).

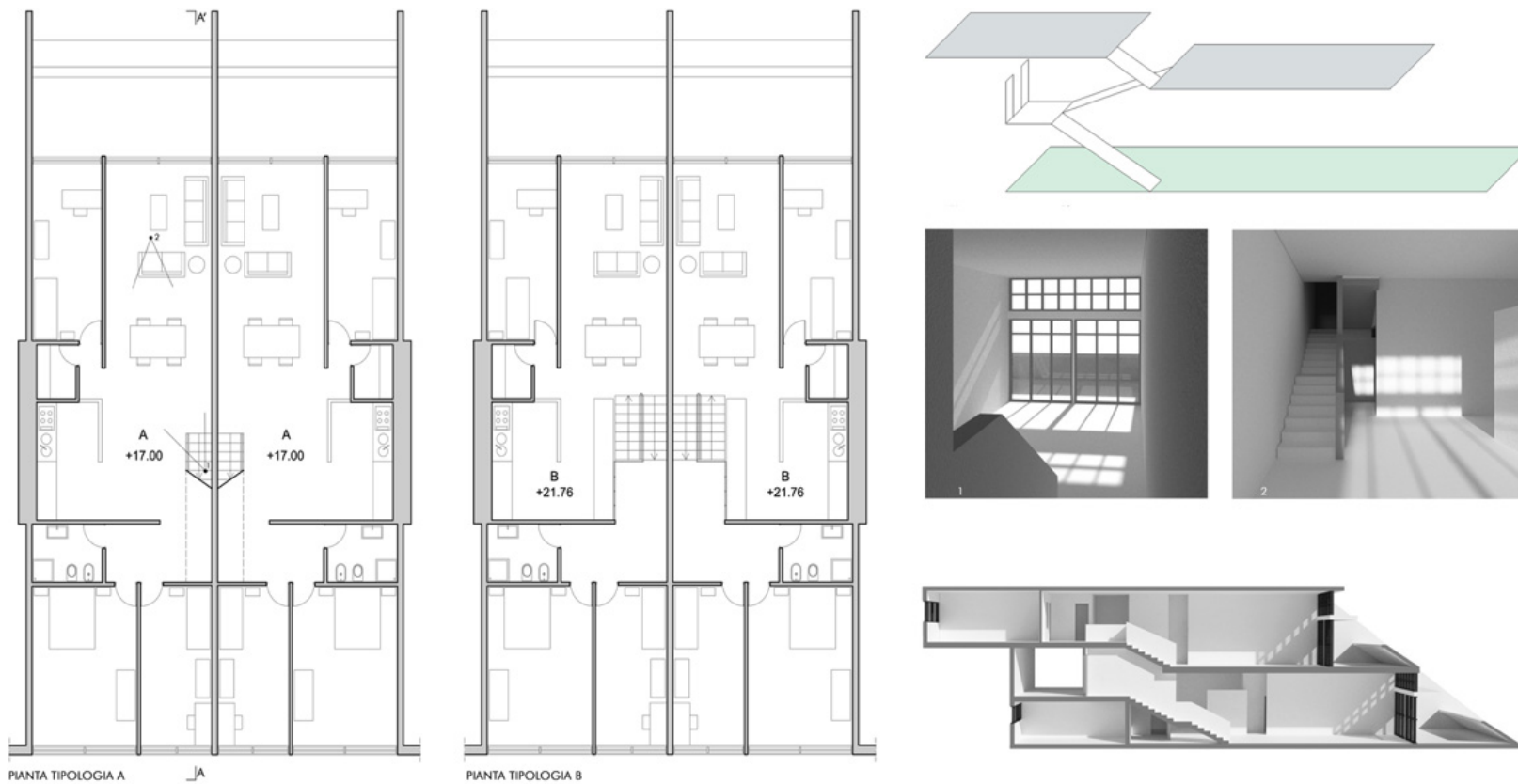


Fig. 18 – Redrawing of type “C” and type “D”.

CONCLUSIONS

This essay aims at giving back a tile to the mosaic of the architecture history that represents one of the most troubled, even if fruitful, moments in the Italian landscape because of the social aspects that arose after their construction. It is worth saying that were not often built exactly according to the directions in the project. Only the reading carried out through the redesign process can highlight all the linguistic, typological, constructive and spatial aspects of architecture, which the written words cannot often investigate deeply.

The production of new images supports the architectural research as it can reveal a lot of its meaning, when it is subjected to the analytical techniques in line with the formal codes of representation.

"Critical reading is not to rediscover the laws, the rules, the principles of the architecture theory. It is to recognize empirically that every project has got a logical principle, a series of laws and rules that the architect had imposed to himself, including their exceptions.

Critical reading does not give back the rules of architecture but, like any critical operation, it shows what rules the architect has followed. Furthermore he will demonstrate why he took some decisions rather than others, using the same signs that he had used in the design phase. You will gain the knowledge of the methodology. This is a useful way to approach the 'project' problem during the teaching process" (Pagnano, 1975, pp. 12).

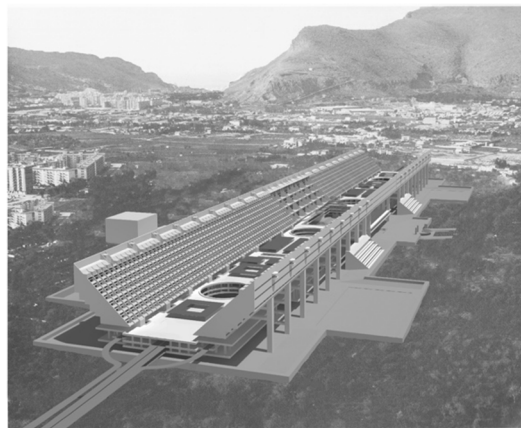
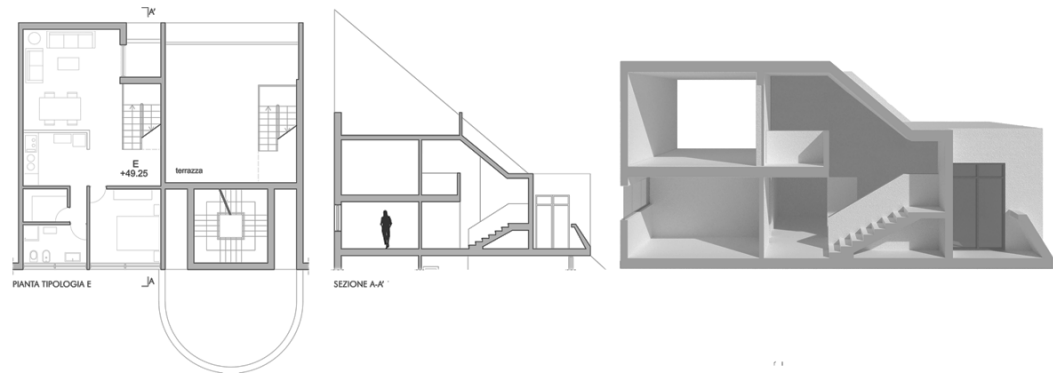


Fig. 19 – Redrawing of type “E”.

Fig. 20 – Photo insertion of the project in the territory.

CREDITS

While sharing the positions expressed in the article, result of common elaborations, the preparation of paragraphs 1, 2, 4 is attributed to Francesco Maggio, while that paragraph 3 is to be attributed to Giuseppe Genzardi.

NOTES

[1] The name come after the height of the reliefs surrounding the flat area (Mt Pellegrino, Gallo and Billiemi), which are not too high and then considered hills (Colli).

BIBLIOGRAPHY

Amoroso, F., Bisogni, S., Gregotti, V., Matsui, H., Purini, F. (1975). *Quartiere ZEN a Palermo*. Lotus international, 9.

Benjamin, W. (1921). *Il compito del traduttore*. Aut Aut, 334/2007.

Cannarozzo, T., Culotta P., Fundarò, A.M., Laudicina, G., Marra T. (1971). *Un progetto per la città: concorso nazionale per il quartiere ZEN a Palermo Cardillo*. Palermo: Lo Monaco.

Lovero, P., (1982). *La generazione dello Z.E.N. Lotus*, 36.

De Rubertis, R. (1994). *// disegno dell'architettura*. Roma: NIS.

Pagnano, G. (1975). *La lettura critica. Analisi di cinque opere di Adolf Loos*. Catania-Caltanissetta: Vito Cavalotto Editore.

Pirrone, G. (1970). *Palermo*. Genova: Vitali e Ghianda.

Sciascia, A. (2003). *Tra le modernità dell'architettura. La questione del quartiere ZEN 2 di Palermo*. Palermo: Edizioni L'Epos.

Secchi, B. (1984). *Il racconto urbanistico. La politica della casa e del territorio in Italia*. Torino: Einaudi.