Fall 2024

Arch 495: Glassworks at Misericordia, Venice, Italy, all sections

Stephen Zdepski

Glassworks at Misericordia, Venice, Italy

Syllabus: Advanced Studio I Arch 495 and Arch 505G

New Jersey School of Architecture / HCAD / NJIT **9 / 4 / 2024** **Fall 2024**

Marc Rosenbaum, Vera Parlac, Duncan Reid, Peter Dumbadze, Dincer Savaskan, Sampath Pedirdla, Victoria Diskina, Masha Drozdov, Sunny Li, Stephen Zdepski (Coordinator)

Venice is architecture of joy.
It is a place as a whole where each building contributes to the other.
An architect building in Venice must think in terms of sympathy.
I was constantly asking each building I love so much in Venice whether they would accept me in their company.
Louis I. Kahn, 1974

To build a city where it is impossible to build a city is madness in itself, but to build there one of the most elegant and grandest of cities is the madness of genius.
Alexander Herzen

Architecture is about exploring culturally, historically, psychologically, anthropologically, and topographically; every commission is different.
So the real risk is that, as an architect, you end up imposing your stamp before you understand what the reality of a place is.
It is not necessarily to integrate with the context.
Sometimes architecture should not integrate, but should make a contribution to the context.
When dealing with cities, you must employ a homeopathic process instead of surgery, because cities are vulnerable and you can easily destroy their subtle dynamics.
Renzo Piano

Design Philosophy: The central question is what Architecture might become; what is its potential as each new building is inserted into its unique context and specific place in time? How can architecture simultaneously evolve from its historical continuum, be derived from contemporary culture, appropriately respond to season, weather and time of day, be of its time and place, and also be built for posterity?

Architecture is compelling in its continuous evolution, expression of its embedded ideas, processes of creation, and the instincts of its designer. Architecture is advanced through the purity of its logic, and utility. Architecture is advanced through poetics, image, and artistry. If Architecture has always been, and is also derived from its particular contemporary circumstance, what strategies and design characteristics can advance the realm of Architecture?

The first question of the semester is: What is Architecture?

The last question of the semester is: "How and why is your design Architecture?

A great building must begin with the unmeasurable, must go through measurable means when it is being designed and, in the end, must be unmeasurable.
Louis Kahn

Architecture is an art; the technology merely supports it.
Louis Kahn

A proper building grows naturally, logically, and poetically out of all its conditions.
Louis Sullivan

Realization is the merging of Thought and Feeling at the closest rapport of the mind with the Psyche, the source of 'what a thing wants to be. 'It is the beginning of Form. Form encompasses a harmony of systems, a sense of Order and that which characterizes one existence from another. Form has no shape or dimension. For example, in the differentiation of a spoon from spoon, spoon characterizes a form having two inseparable parts, the handle and the bowl. A spoon implies a specific design made of silver or wood, big or little, shallow or deep.
Form is "what." Design is "how." Form is impersonal.
Design belongs to the designer. Design is a circumstantial act, how much money there is available, the site, the client, the extent of knowledge. Form has nothing to do with circumstantial conditions.
Louis Kahn, Form and Design, 1960

Architecture is about exploring culturally, historically, psychologically, anthropologically, and topographically; every commission is different. So, the real risk is that, as an architect, you end up imposing your stamp before you understand what the reality of a place is. Architecture should not simplistically integrate, but should make a contribution to the context.
When dealing with cities, you must employ a homeopathic process instead of surgery, because cities are vulnerable and you can easily destroy their subtle dynamics.
Renzo Piano

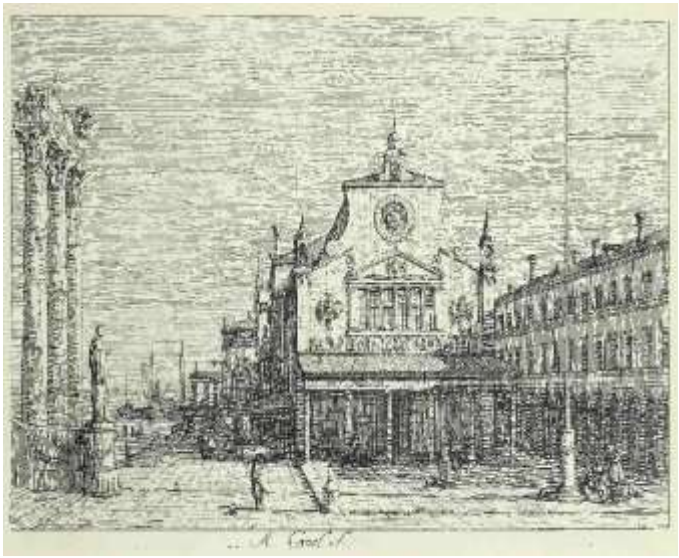
Every building is built for a specific use in a specific place for a specific society. Buildings try to answer questions that emerge from these simple facts as precisely and critically as they can.
Peter Zumthor

We are trying to extend the notion of place to materials as well. We are trying to expand the role assigned to materials in traditional usage by changing their form and making them available to a new manner of perception, thus gaining a new sense of tension at the place.
Herzog de Meuron

Premise: The Dale Chihuly Foundation is returning the art of contemporary glassmaking to the islands of Venice. The new Glassworks is part artist studios, glass factory, art glass shop and theater. It is to be located at a site along the northern fundamenta of the city, which is currently a marina for small boats. As the last remaining piece of the city yet to be completed, and located at a major entry to the city from both the airport and islands to the north, the new Glassworks will also create a new public campo for the city, its adjoining neighborhoods, connecting to adjacent restaurants, hotels, and cultural spaces. The new Misericordia campo will be the first and only public square along the northern boundary of Venice, and as such will be an important point of arrival, visual destination and have symbolic importance for the historical city.

Delimited by the beauty of the lagoon, which surrounds it, and thus spared from the problems of the relationship between city and periphery, Venice is the epitome of the boundary city.
In a physical sense, the peripheral edge of Venice is formed by the trachyte paving slabs and Istrian stone of the fondamenta, or pavements lining the canals, which distance the house fronts from the water: they are both a point of departure as well as a mooring place, separating life on dry land from the constantly undulating and shifting motions of the tides.

Buildings are not idiosyncratically private institutions: they are public performances both to the user and the passerby. Thus, the architect's responsibility must go beyond the client's program and into the broader public realm.
Though the client's program offers the architect a point of departure, it must be questioned, as the architectural solution lies in the complex and often-contradictory interpretation of the needs of the individual, the institution, the place and history.
Richard Rogers



We are much more interested in the principle of addition than in simply replacing what is there with something new. It isn't a question of "one or the other" but a question of "one and the other." That's why what already exists, and what we find in place, no matter what its components may be, is always an enrichment. That is much more important to us than simply building a form.
Lacaton & Vassal

Excerpts from the course readings and references:

V*enice*: *By the end of the thirteenth century, the city of Venice was a true metropolis. The seventy or so principal islands of the archipelago, each one a separate parish, had been enlarged by drainage and reclamation until they coalesced to form a coherent urban organism, separated only by canals.*

The population in 1300 had grown to nearly 120,000 inhabitants, about the same figure as that recorded in 1969. Venice was then one of the largest cities in Western Europe. It seems that only Florence, Milan, Naples, Palermo and, outside Italy, Paris were of comparable size.

Like other major European cities, such as London, Florence, Paris and Rome, the city of Venice is traversed by a principal waterway, the Grand Canal, which winds in an inverted S-shape through the city. One could safely say that all-important cities in mediaeval Europe had water access, since water transport was the cheapest method for conveying supplies and merchandise. However, in most cases there was a clear demarcation between land and water, whereas in Venice, as in some towns in the Low Countries such as Amsterdam, the whole city was obviously crisscrossed by canals.

In Venice pedestrians and goods traffic are conveyed on completely separate, overlapping systems. The two superimposed communication patterns did not, however, evolve completely independently. Every market had to have both land and water access. Similarly, every important palace had to have water access as well as a street entrance. A canal mooring was needed to bring in supplies of food and fuel, and for loading and unloading merchandise when the owner was involved in trade.

There is no noise there save distinctly human noise; no rumbling, no vague uproar, nor rattle of wheels and hoofs. It is all articulate and vocal and personal. One may say indeed that Venice is emphatically the city of conversation; people talk all over the place because there is nothing to interfere •with its being caught by the ear. . . .the still water carries the voice, and good Venetians exchange confidences at a distance of half a mile.'

The layout of the canals was determined by the natural position of the lagoon channels. Although these were altered slightly in the process of drainage and land reclamation, it was essential not to impede the natural flow of the tides, which was vital for the removal of sewage and debris from the canals. For the earlier settler's water was the only important means of transport, since the individual islands were too small for streets to have much significance. In contrast to the canals, the layout of the pedestrian walkways seems incoherent. Venice is one of the few important mediaeval cities that had no previous Roman settlement on the site. Most Italian cities still preserve traces of the regular Roman grid pattern in their street plans, but Venice has few straight streets of any length. As every lost tourist becomes only too well aware, many of the streets come to a dead end on the bank of a canal or in a small courtyard. Each parish was built up street by street around its own church and campo (literally a field, though by the time of Barbari's map most campi were paved) in the center of each island.

According to Muratori's scheme the large communal campi which are now such a prominent feature of the townscape first became widespread in the tenth century. The typical parish campo is rectangular in shape, with the church on one side, and with residential developments taking place along transverse streets.

The streets of one parish met those of another almost accidentally when, in the process of land reclamation, the islands joined up. In consequence, though the principal thoroughfares were linked by bridges over the canals, the other streets did not fit together easily. Even the bridges often crossed the canals at an angle because the streets were out of alignment. Other mediaeval cities had their share of higgledy-piggledy, narrow, winding streets, but few such labyrinths have survived because of the danger of fire and the problems of traffic congestion and overcrowding.

All these difficulties struck Venice, too, but it was harder to eliminate them because of the cost of pre-existing foundations, which determined the location of load bearing walls. Fires were an ever-present hazard in the city, and because of the closely spaced buildings, they spread rapidly, especially in windy conditions. Venice was to some extent fortunate, in that most parts of the city had nearby canals to supply water for firefighting, but this did not prevent numerous, terrible conflagrations.

Despite the serious shortage of land, there are open spaces in Venice. There have always been plenty of private gardens, even in the more central parts of Venice. The visitor on foot is hardly aware of the gardens, which are concealed behind high walls. However, seen from the top of the Campanile of San Marco, the city does not in fact lack greenery. Just as any walled city in the later Middle Ages had cultivated areas, chiefly market gardens, inside the fortifications, so Venice had semi-rural areas within the boundaries of the city, to provide fresh fruit, vegetables and dairy produce.

Excerpts from the course readings and references:

Building materials and techniques: *Venice is founded on sand, silt and clay, topped by gravel in the higher spots such as Piazza San Marco and the Rialto. Most visitors think of Venice as flat, but anyone who lives in the city for some length of time soon learns that there are minor variations in elevation, for the lower parts are more likely to be flooded in the high tides. In reality, Piazza San Marco is no longer one of the highest points; its level has sunk, not only because of the subsidence resulting from the removal of Artesian water from the bedrock of the lagoon, which has affected the whole city, but also on account of the great weight of buildings around the Piazza, which has compressed the subsoil over the centuries. Every building had to be supported on wood piles, driven deep into the alluvial clay by teams of laborers with heavy wooden hammers. These piles were at least four or five meters long. Most of the piles were sunk underneath the outside walls of a building, those which had to carry the greatest load. Interior dividing walls had less substantial foundations, a fact which has led to subsidence in many cases. Clay was excavated from within the solid line of piles marking the perimeter walls. Along the edge of a canal a stockade of piles lined with wooden planks served to keep water out of the foundations, and a moat was dug around the building before the site was drained. More piles were sunk in the central space, and the ground was built up with layers of crushed brick and stone, and larch rafts set in cement. The tops of the piles were smoothed off about three meters below the high tide level, to serve as a base for the brick foundation walls. Layers of larch planks, each layer arranged at right angles to the one below, helped to spread the load on the soft ground. The walls were very wide at their base to distribute the load to the fragile foundation and to provide lateral stability to the high walls. Brick was the most common building material in Venetian architecture, for it was the only one produced locally.*

The bricks made of clay from the nearby mainland have a rich red-brown color, which gives a characteristic element of warmth to the townscape. Roof tiles came from the same source. The simplest finish for brick walls is pointing, that is, sealing the mortar joints with a lime solution and a light stucco. However, many of the brick walls which are now exposed were once completely covered with stucco. The stucco finish provided a measure of protection to the relatively soft clay bricks, provided a seal from the saline elements and permitted lightening the color of the walls for daylighting internal spaces. The typical Venetian stucco was made of powdered brick and grains of marble in a lime base, producing a warm red color and a glistening finish. Examples are still visible, though modern stucco work is colored artificially. Some of the stucco walls were covered with a light grey plaster and then frescoed, but the wall paintings soon perished in the saline atmosphere.

There is no local stone in the immediate vicinity of the lagoon. The soft yellowish limestone quarried near Padua weathers so easily that it could not be used in Venice. The building stone most widely used in the city is the brilliant white, marble-like limestone from Istria, which could be cheaply transported from the quarries by sea. Istrian stone is very easy to carve, yet it is remarkably resistant to weathering, even in the humid, saline, and now badly polluted atmosphere of Venice. Details such as window frames, capitals and bases, cornices, balustrades and doorways, are usually of Istrian stone. A layer of the same stone at the high-water mark of a building helped to impede rising damp in the walls, although now that the land is sinking these damp courses are no longer effective.

From the Renaissance, onwards the grander buildings were faced entirely in white Istrian stone. These facades have a dazzling brightness in sunlight, especially where they are exposed to the rain that washes away accumulations of grime and soot. Red marble from Verona was also used for carved details such as portals and fireplaces in the more expensive buildings. This stone has a glowing rust-red color when polished, although it weathers to a rougher whitish surface. A checked pattern of red marble from Cattraro and white Istrian stone was popular for the paving of ground floor rooms such as androni, as the colors were only intensified when the floor was wet.

Wood was the indispensable raw material for the Venetian building industry. It was needed not only for piles but also for ceiling timbers and roof beams. Dalmatian oak, imported by sea, was the most resilient wood for piles, though it was restricted in length. Oak was also floated by river to Venice from Friuh and from the area around Trcviso. By the early thirteenth century coniferous wood, chiefly larch or spruce, was already being floated down to Venice along the rivers from the forests of Cadorc and the Dolomites. This softer type of wood was especially useful for ceiling beams, not only because of the length of the timbers but also on account of their light weight and their elasticity. On the unstable Venetian soil the greatest possible flexibility was needed in a building to absorb minor shifts in the foundations. For this reason, vaulted ceilings are rarely found in Venice, except in churches where they are usually supported by wooden cross beams. Ceiling beams were closely spaced to provide the maximum support, and topped by one or two layers of wooden planks. Resin in the fir wood gave a degree of natural protection against dampness. The visible timbers were often richly decorated with painted or carved designs. The wooden foundations alone might cost as much as a third of the total cost of a building.

The need for flexibility also fostered the development in Venice of special types of flooring. In the simplest houses, the floors were merely bare wooden boards or sometimes brick tiles, with beaten earth in the ground-floor rooms. A more elegant surface, known as paston, was composed of ground tiles and bricks set in cement and polished to bring out the red terracotta color, which was intensified by the addition of the pigment cinnabar in the top layer. From the fifteenth century, onwards, paston was largely superseded by a more decorative version called terrazzo. In apartments, this surface, like paston, was laid on top of the boards covering the ceiling of the floor below. It was made up of two layers of crushed brick and stone set in cement, each layer well beaten down with battering rams for several days. About a year had to elapse between the laying of the two layers. The top layer also contained chips of colored marble, so that when it was smoothed off with mill stones and oiled with linseed oil. the effect was like a random mosaic. As in the case of paston, the cement base and tiny stones gave an elasticity to the floor surface, so that it could resist minor stresses and strains without cracking. If cracks did appear, it was a fairly simple matter to lay another thin layer of terrazzo on top.

The other Venetian building practice which greatly impressed foreigners was the extensive use of glass in the windows. The glass industry on the island of Murano, and even Venice itself, was flourishing by the end of the twelfth century. Sansovino, writing in 1580, claimed that even the humblest buildings in Venice at that time had glass windows, whereas in other cities they had to make do with oiled canvas or parchment. The round discs of clear bottle glass were held in place by lead and iron, in wooden window frames. Some bottle glass windows

still exist in Venice, though most have been replaced by plate glass. Venetian buildings needed the largest possible windows to admit light in the cramped surroundings, but without the local supply of glass large windows would have been unthinkable in the Venetian climate.

Iron was not used very extensively in Venice, for it tends to corrode in the damp climate, but small quantities of iron were needed in every building for door locks, window fittings, hinges, railings and other such details. From the nineteenth century onwards it became common practice to secure leaning structures with iron tie beams. Earlier, iron chains were used for the same purpose. Neither method proved very satisfactory in the long run, since iron is too rigid to accommodate minor movements in the structure.

Excerpts from the course readings and references:

Historical Construction Processes: *Each building technique was carried out by specialist craftsmen belonging to separate artisans' guilds. There were bricklayers, stonemasons, terrazzeri, carpenters, glaziers and iron workers. These craftsmen had to serve an apprenticeship of five to seven years, usually starting at between 12 and 15 years of age, followed by a period of two or three years as assistant to a guild member. At the end of the training, they had to take a test to prove their competence, before they were admitted as capomaestri or master craftsmen. The successful candidates in the terrazzeri makers' test, which involved making a floor of 50 Venetian square passi (paces), not only had to pay a fee but also had to invite the examiners to dinner. The laborers who assisted the maestri were not guild members, except in the stonemasons' yards, but were casual employees paid by the day. Each workshop had one capomaestro, who employed two or three assistants in addition to his own sons and his apprentices. The patrons, or groups of individuals, wishing to erect a building usually did their own subcontracting.*

Excerpts from the course readings and references:

Lagoon Environment: *The peculiar physical environment of Venice, the building techniques adopted, and the functions of the buildings have all contributed to the special character of Venetian architecture. The provision of essential commodities such as heat, light, water supply and sewage disposal also led to solutions which have left their imprint on the urban landscape. Certain distinguishing features are immediately obvious to the visitor, others are less easily recognized, but all show a high degree of adaptation to the surroundings. Every dwelling in the city needed efficient heating. Venetian winters can be bitterly cold, especially when the piercing wind called the bora blows from the north-east. Snow is not uncommon, though it rarely lies for long because of the proximity of the Adriatic Sea. Nevertheless, in spite of the fact that the temperature rarely falls below freezing point, the constant dampness gives a raw chill to the winter air. As late as 1849, in a letter of 3 December, Ruskin complained of the cold in Venetian palaces:*

'. . . We went today and looked over several Palaces but although the outsides are splendid Venetian Gothic I cannot fancy how the Italians live, for the insides although perfectly clean have such a want of comfort about them . . . and no fire places, even in this cold weather. Each member of the family carries about on their arm an earthen basket or pot with hot charcoal in it ... The tessellated floors, although very smooth and glittering, are extremely cold and all their arrangements seem made for heat and not cold.'

The great central halls, or porteghi, of Venetian palaces were usually unheated, and with their huge expanses of window at either end they must have been extremely draughty. Fireplaces were normally on the outside walls, arranged one above the other and connected to the same chimney

The small enclosed courtyards, which punctuate the dense urban fabric of Venice, were important for the provision of both natural light and fresh water. Some were private courts inside palaces, usually placed at the back or on one side, others gave access to a number of more humble houses, generally the property of a single landlord. Until the sixteenth century, staircases were generally located in the courtyards, to save space inside the buildings. The poorer dwellings had simple wooden ramps, while palaces were provided with elaborate stone staircases with carved balustrades, some originally roofed with wooden canopies.

The provision of an adequate supply of fresh water has always raised problems in Venice, for the canal water is strongly saline, and was polluted by the discharge from the city's sewers. Some wells supplied saline lagoon water for ordinary domestic use, but rain water normally provided all the water for drinking. Public wells in the parish campi yielded enough water except in times of drought, when profiteers sold fresh water brought from the mainland in barges at exorbitant prices. The occupants of private palaces relied on rain water collected from their rooftops, funneled through Istrian-stone gutters and drainpipes to the well in the courtyard. There it was collected underground, filtered through sand, and stored beneath the well. It is typical of Venetian visual sensibilities that such a basic functional necessity should have become the excuse for decorative expression.

There is a profusion of balconies on Venetian buildings, and the curious sun terraces, called altane, on many of the rooftops. In Venice, because of the shortage of space for gardens and the poor light inside the buildings in congested areas, balconies are far more numerous than elsewhere in Italy, especially where the windows offer expansive views of the city. The rooftop altane were in the form of wooden platforms supported on brick piers and reached by way of a staircase from a dormer window. The altana was used for drying washing, beating carpets, and for taking the sun.

The re-use of building fragments, architraves, cornices, capitals, columns, and window casements that were often mass-produced, and were therefore used in different constructions at different times with the re-appropriation of the foundations of older buildings. This has given Venice its remarkable mixture of architectural languages and styles, succeeding each other over time, resulting in extraordinary juxtapositions. It is precisely why Venice's architectural style is unique to the city and does not appear elsewhere. The palazzo of the Grand Canal express nearly every style, ranging from Gothic and Renaissance to Baroque, all translated into the distinctive Venetian architectural idiom.

After dinner, I went out by myself, into the heart of the enchanted city where I found myself wandering in strange regions like a character in the Arabian Nights.... I had plunged into a network of little alleys, calli, dissecting in all directions by their ramifications the quarter of Venice isolated between a canal and the lagoon, as if it had crystallized along these

innumerable, slender, capillary lines. All of a sudden, at the end of one of those little streets, it seemed as though a bubble had occurred in the crystallized matter. A vast and splendid campo of which I could certainly never, in this network of little streets, have guessed the importance, or even found room for it, spread out before me flanked with charming palaces silvery in the moonlight. It was one of those architectural wholes towards which, in any other town, the streets converge, lead you and point the way. Here it seemed to be deliberately concealed in a labyrinth of alleys, like those palaces in oriental tales to which mysterious agents convey by night a person who, taken home again before daybreak, can never again find his way back to the magic dwelling which he ends by supposing that he visited only in a dream.
Marcel Proust

Excerpts from: **Venice, Pure City: The Body and the Building** by Peter Ackroyd

The Austrian writer Hugo von Hofmannsthal once described the archetypal city as "a landscape built of pure life." Can this pure life therefore be seen as a living force? Can Venice be shaped and governed by an instinctive existence, which is greater than the sum of its people? Is it more than just a collective?

Yet all these references affirm a belief, or instinct, that Venice itself is a living organism with its own laws of growth and change. Does it exist, and survive, by the agency of some inner or intrinsic force that cannot as yet be explained or described? It absorbed the islands that constituted its existence; it had an alimentary system laid out among its canals and waterways. Everything wishes to give form and expression to its own nature; the leaves of the tree aspire to their own shape. So by obscure presentiment, and by the steady aggregate of communal wishes, Venice grew. That is why every part of Venice—its topography, its constitution, its domestic institutions—reflects the whole. Its nervous functions are interdependent. Those who travel to the city for the first time seem to be made aware of a definite personality. Henry James, always susceptible to the subtleties and obliquities of personal sensibility, said that Venice "seems to personify itself, to become human and sentient and conscious of your affection." It was for him mild and interesting and sad.

Does it subdue the lives and affections of the people who inhabit it? The city is so old, and so encrusted with habit and tradition, that the people can be said to fit within its existing rhythms. The Venetians were often described as actors playing out their various roles. In paintings of Venetian life, the city dwarfs its inhabitants so that it becomes the pre-eminent subject. It has often been said that Venice cannot be modernized. More pertinently, it will not be modernized. It resists any such attempt with every fiber of its being. It was originally a city of wood. There were so many carpenters, marangoni, that the great bell of the campanile in Saint Mark's Square was named after them as the marangona. It was a city of wooden tenements, occasional squares, wooden churches, water-lanes, landing stairs and pontoons between islands. Yet the process that formed the modern city was already in evidence; a network of parishes, each with its own church, was slowly forming with their centers accruing together. Wooden bridges were built to connect contiguous islands, and footways were laid over marshy areas. In the eleventh century this process was intensified; under private rather than public initiative the ponds and marshes were filled or covered, reclaiming all the available land. The burgeoning government systematized the various parishes, creating a core of population from which the city was gradually extended. In the early years of the twelfth century there were proposals for a large market in the Rialto, a great civic square beside the ducal palace, and an arsenal for the maintenance of the Venetian fleet. These public works changed the face of the city, and determined the shape that it would eventually assume. Flood, fire and earthquake shook it from time to time; in 1106 a great fire destroyed almost the whole of wooden Venice. But the process was now too powerful to be reversed. There were many other fires, but the city always rose from them renewed. The great urban project had begun, and it could not be diverted. Venice grew and grew as if it were indeed some natural force.

By the thirteenth century the Venetian state had taken charge of land reclamation. The city was defined as a public space rather than an aggregation of individual communities. The state became the master of the land and of the water. Overseers of embankments, streets and canals were appointed. They were eventually formed into a commission with officers in every parish. Only certain canals were to be used for the transport of wood. Dyers were only allowed to use the water of the lagoon, not of the canals. Thus begins the flood of Venetian urban legislation, dealing with every aspect of life in the city. A system for the management of waste was created. The streets of the city were paved for the first time with flagstones or cobbles. The first permanent bridge over the Grand Canal, at the Rialto, was erected in 1264.

This continual enlargement of the urban fabric continued well into the fourteenth century, at a time when the population had reached one hundred thousand. It was already one of the most inhabited cities of Europe. The major streets of the city were laid out; new quays and bridges were built. Work on a new hall for the great council was approved in 1340; by that date several great churches were beginning to rise, among them S. Maria dei Frari, the basilica of SS. Giovanni e Paolo, S. Maria della Carità, S. Alvise and Madonna dell'Orto. New streets were built. A public granary was instituted. There was a diminution of activity in the middle years of that century, under the weight of fatalities caused by the Black Death, but the beginning of the fifteenth century saw a wave of new works, private and public. That is how Venice developed in waves of activity, sudden increases in the temperature of the city, an access of fresh vitality. The temptation to speak in organic terms is strong. Some two hundred palaces, many of them still standing along the Grand Canal, were built in this period. The medieval town of wood had finally given way to a Renaissance city.
The process was finalized, was set in stone, in the sixteenth century. The appointment of Jacopo Sansovino as public architect, in 1527, was the first stage of a deliberate program of public works to create a second Rome both magisterial and gorgeous. The first general planning act is dated from 1557; it envisaged, among other things, an embankment of Istrian stone encircling the city. Venice became what Lewis Mumford called, in The City in History, an "absolute city." It had become the setting for the sedulous dissemination of "the myth of Venice" as an enduring and impregnable polity. The work of Palladio, in the middle of the sixteenth century, added further adornment to a city that would never willingly change again. He reinvented the shape of its sacred architecture with the conception of the churches of S. Giorgio Maggiore and Il Redentore. The city needed only one more thing—the first stone of the great bridge across the Grand Canal at the Rialto was laid on 31 May 1585. The creation of Venice was complete. Yet despite its manifest grandeur Venice was still an intensely local city. There were divisions, and divisions within divisions.

The largest was that which separated "the Saint Mark's side" and "the Rialto side" of the Grand Canal. Then there were the six sestieri or divisions of the city that were established in twelfth century; in the late nineteenth century they were still described in popular speech as nations; there was the nation of Castello, for example, and the nation of Cannaregio. Horatio Brown, in Life on the Lagoons (1909), noted that the people of the various quarters "are different in build and type of features" one from another; their speech was different. Even the dialects might vary. Within each district the parishes were congregated. The parish, the contrada or contrata, was the essential and fundamental unit of Venetian society; in official documents the members of the popolani identified themselves in terms of their parish. The parish had its own festivals and rituals, and the parish priest was elected by the freeholders of the neighborhood. There were small parish markets, and the church was a refuge in times of trouble; many parishes had their own specialized trade. It was an administrative, as well as a sacred, entity. Neighborhood rivalries between the parishes on either side were common. The identity of each separate parish was also fully formed. So in spirit, if not in structure, the city still reflected its origins in one hundred or so islands.

The square or campo was at the heart of the neighborhood. It spread before the church and was once its burial ground. In each square—or in the calle just around the corner—was a fruitier, a greengrocer, a general goods store, a retailer of pasta, a café, a barber's shop, and various other tradesmen from the mercer to the carpenter. It was a self-contained entity, marked out by its well and its carved well- head where the women of the parish came to gossip. It was a Venice in miniature. If there is indeed a spirit of place within the city, it is still to be found here. The houses were tightly packed together. The parishioners knew each other's business. Strangers were quickly noted. The city, in other words, was crisscrossed by individual boundaries. Going from one district, or from one parish, to another was like walking into a different town. The people of one district might not know the topography of another. There were parts of the city to which many, if not most, Venetians had never been. It was not unknown for a Venetian to live his or her own life without venturing beyond the bounds of the sestiere. There were Venetians who had never entered Saint Mark's Square. The author was told of an old lady of Cannaregio, recently deceased at the age of one hundred, who had only been to the square twice in her life.

The canals are the signs and tokens of division. They are essentially the old streams and rivers that once crossed the territory; the stretch of water dividing the island of Giudecca from the rest of the city was once the mouth of the River Brenta. There are 170 canals threading through the city, ebbing and flowing with the tide for more than sixty-two miles (99.7 km). The Grand Canal itself has a length of two miles (3.2 km). Some allow only one-way traffic, and others accommodate two-way movement; some are dead-ends or blind canals. They have influenced the nature of the people as strongly as the nature of the city. It has been said that the presence of flowing water induces tranquility. These boundaries of water also inhibited the rapid assembly of people in riot or rebellion. The peace of Venice may derive from its canals.

If the canals are the sign of division, then the bridges are the token of unity. There are more than 450 of them in the city, linking parish with parish. Many of them have honorifics or nicknames, such as the Bridge of Fists or the Bridge of Assassins or the Bridge of the Honest Woman. They were used as battlefields and as places of assignation. The earliest bridges were simply wooden planks laid across pilings or the hulls of boats, and the first one built of stone was not constructed until the latter half of the twelfth century. In that period, too, the first great wooden bridge or pontoon was erected across the Grand Canal at the Rialto. The sixteenth century was the great age of the stone bridge, when the wooden structures were replaced by their more durable substitutes. They rose on either side to a hump in the middle, and there were no parapets or balustrades. The pedestrian, or horseman, had to be nimble and fearless. The bridge-building has not finished yet. A new bridge has just been put into place across the Grand Canal, linking the two transport centers of Piazzale Roma and Ferrovia in the west of the city. So out of this medley of disparate parishes and districts emerges the miracle of a sovereign and recognizable city. Out of difference springs identity; out of the parts, related or unrelated, emerges the whole. It is the secret of the city's entire life. One of the first sights that greets the traveler arriving at the bacino or pool of Venice are the two columns of Oriental granite standing guard over the piazzetta. On the column closest to the ducal palace stands the lion of Saint Mark. From a distance it looks like a splendid composition. In fact it is made up of separate parts, created in different periods and held together by iron cramps. The age of some of the pieces is not known, but the majority of them can be dated to the late twelfth century. The wings of the lion are the work of restorers, and were originally divided into feathers. So by some instinct or by some compulsion the builders of the column, joining the separate parts of the lion together, represented the creation of the city.

On the other column is poised the statue of Saint Theodore, the original patron saint of Venice. If you were to come closer to this image, you would notice that it is not in any sense the work of one hand. The head is of Parian marble, and is believed to represent Mithridates, king of Pontus; the torso is a Roman piece from the time of Hadrian the Great; the dragon, or crocodile, is in the Lombardic style from the first half of the fifteenth century. It is a glorious, and apparently haphazard, exercise in historical assembly. It deserves to be on its column. Once again it is an image of Venice itself.

The architecture of the city is heterogeneous and apparently random, combining Gothic, Greek, Tuscan, Roman and Renaissance elements; the sum of their combination can be defined as Venetian architecture. Various styles, and stylistic modes, exist simultaneously; the art of Venice lay in amalgamation. It is a reminder of how oddly sorted the appearance of Venice has always been; it is based upon random accumulation of objects and materials. It reflects thoroughly eclectic tastes. There is no consistency, and no uniformity. That is why, for the traveler, Venice can be so fatiguing. It resists interpretation. It denies the single vision. Minarets can become crosses. Byzantine columns can rise towards Corinthian capitals. Parts of one statue can be attached to another. Théophile Gautier, writing of the basilica of Saint Mark, observed that "the singular thing, which upsets any idea of proportion, is that this jumble of columns, of capitals, of bas reliefs, of enamels, of mosaics—this mingling of Greek, Roman, Byzantine, Arab and Gothic styles—produces the most harmonious possible whole." There are endless fragments that, paradoxically, only make sense as part of a perceived unity.

"In this most noble city of Venice," the architect Sebastiano Serlio wrote in 1537, "it is the custom to build in a way which is very different from all the other cities of Italy." It is an insular architecture. It is architecture built on water. Of course it will be different. The buildings of Venice reflect the spirit and the

nature of the city. They are the emanations or exhalations of the territory. Ruskin entitled his magnificent appraisal the Stones of Venice. The stones are its soul.

So the architecture of Venice is noticeable for its lightness, for its balance, and for its harmony. It represents all the aspirations of its citizens. That is why the architecture is unique and identifiable—the deep central windows, the pattern of recess and shadow, the surface ornamentation, the intricate variety of styles, the preference for curved shapes, the screens of arcades, the general emphasis upon light and space. The thrust is towards the horizontal rather than the vertical, hugging the surface of the lagoon. The façades of Venetian buildings are not load-bearing. The effect is one of magnificence without monumentality. Volume is denied, being always broken up by the effects of glittering light. The façades seem to float freely, as if the architecture itself were a magnificent illusion.

The buildings often seem to be the sum of small parts rather than being dominated by one central conception. It is in that sense a very practical architecture. Venetian builders did not seem to mind asymmetry; they placed together styles that were a century or more apart; they shortened and lengthened buildings according to the exigencies of the site. The emphasis is upon contrast, and variety, rather than uniformity. Different systems of decoration could be employed in the same space; the proportions of the various architectural "orders" were breached. This architecture is one of natural exuberance. There is nothing solemn, nothing portentous, nothing menacing.

One of the essential forms is that of the three-storied front decorated with pilasters; it is the basic shape of the houses along the Grand Canal. The focus of the house is towards the exterior rather than the interior. And no one seems to care about the back of the building as long as the front is sumptuous. This is the city of masks. Hence the reliance upon external pattern. It is an ornamental and pictorial architecture. It has elements of the picturesque. The surfaces were encrusted with carvings and colored marbles, with decorative patterns spreading in all directions. It is as if lace embroidery had been turned to stone.

The first architectural style in the city can be loosely called Byzantine. It is a style of arcades and of domes, of round or inflected arches upon pillars, and of mosaics clothing the walls with beauty. The domed basilicas of Venice were based on an eastern pattern, with the dome hovering over a cube of space in perfect alignment. It was an image of infinity. The Byzantine style in Venice can be dated from the seventh to the twelfth centuries; for five hundred years the city took Constantinople as its inspiration. Then the style renewed itself in the late fifteenth and early sixteenth centuries. In the thirteen and fourteenth centuries the eyes of Venice turned towards the West rather than the East, and that attention led in turn to the rise of Venetian Gothic. It is significant that at the close of this period Venice was poised to gain a land empire on the mainland of Italy. The churches were now given vaulted naves, although they could not be built very high; the watery foundations of Venice could not sustain any great weight. There was a new interest in interplay of shapes and of materials, in the exfoliation of pillars and pilasters, in great portals, in trefoil arches, in quatrefoil tracery, and in double lancet windows. It was a style of pattern and ornamentation, again deeply congenial to the Venetian genius. Yet it was also a question of self-image, by co-opting a western imperial style, and of a new form of magnificence.

The style was dominant in the fourteenth and fifteenth centuries, surviving even into the sixteenth century and giving a Gothic aspect to the city that still survives. Many Gothic churches replaced their Byzantine predecessors on the same site. They were built in homage to a different God, or to a different conception of God. But it was a secular, as well as a sacred, architecture. Most of the well-known palaces or great houses are created in the Gothic mode. The basilica of Saint Mark is an example of Byzantine; the ducal palace is the embodiment of Gothic. Ruskin despised the Renaissance architecture of Venice that followed Gothic. He considered it to be a symptom of the city's decline and fall. The classical columns and pediments, the sheer symmetries, were alien to the life and spirit of the place. What had Venice to do with classical antiquity? What had Venice to do with the purity, the austerity, and massive uniformity, that are at the heart of the Renaissance style? The great exponents of the Renaissance style—Codussi, Sansovino and Palladio—were not themselves Venetian. They cast a foreign eye over the city. Palladio did not even like traditional Venetian architecture, believing it to lack grazia and bellezza. It has been said that the edifices of Palladio do not suit Venice. They do not fit Venice. Yet in Venice everything "fits."

Certain features of Venetian architecture have had a continuous history. The domestic dwellings of the people, for example, have always conformed to a simple pattern. They are not the most inviting aspects of Venetian life. The ordinary Venetian house is a mysterious place. It is the very opposite of the public spaces that seem to be at the heart of the city's life. The house is generally small, narrow and dark. It does not willingly receive guests or welcome strangers. The original timber houses of the city were of one story, built around a central courtyard, and that sense of inwardness never left the Venetian domain. The innate conservatism of the city was such that by the thirteenth century the essential structure of all subsequent houses had been laid out. They were simple affairs, of two or three stories, with one or two rooms on each floor. A wooden balcony ran around the front, and on the roof was the flat enclosed space known as the altana. From here the Venetians could take the air, or observe their fellows in the streets below. There were few windows, heavily shuttered or protected by iron bars; the larger windows faced inward, towards the central courtyard. There was very little furniture, but the pieces were richly decorated and ornamented. Flat roofs were preferred. Chimneys were popular. The shutters were painted dark green. There were no Venetian blinds in Venice. And of course there were no cellars. There were small houses with shops opening onto the street. There were rows of small terraced houses, each room or floor accommodating a family. In parts of the city two identical rows face each other across a narrow street; the effect, surprisingly, is rather like that of industrial housing in the north-east of England— except for the well in the middle of the street. In areas of working-class housing there were also often tunnel-like passageways, with arches, known as sottoportici.

If the various styles of architecture represented the spirit of the place, as a distinctive and recognizable genius loci, that may be because all of them rose directly from the same foundations. The building of Venice was an act of communal perseverance against nature. Beneath the waters of the city lie strata of mud and clay and sand. The foundations of the buildings, piles of tough oak, were driven into that ground with heavy drop-hammers. They reached a depth of between ten and sixteen feet (3 to 5 m) below water. Cross-beams were then laid down, and the interstices between the wooden piles were loaded with cement and broken stone. Then a thick

surface decking of wooden planks, bedded in cement, was placed on top of the wooden structure. It became the true ground of the city. A second foundation was erected on top of what was essentially a great wooden raft, two to four feet (0.6 to 1.2 m) below the level of the tide.

From these foundations Venice rose, resting upon a petrified forest. Somehow it manages both to defy, and to make use of, nature. These great trunks of oak and larch and elm had always to be submerged; if they were exposed to the air, they would begin to rot. In their waterlogged condition they were sturdy, however, and almost imperishable. The weight they bore was immense. The campanile in Saint Mark's Square, for example, weighs 14,400 tons (14,170 tons); yet the piles of wood carry it. The Rialto bridge is supported by twelve thousand piles of elm. The church of the Salute is borne up by 1,156,657 piles of oak and larch. The weight of the building itself helps to stabilize them. There is no complete rigidity. That is impossible in the lagunar waters. Yet even though the piles may shift a little, they do not collapse. Many of them have lasted for a thousand years. The primary materials of construction are brick and timber, with stone used as a decorative rather than a structural necessity. At the waterline is placed a foundation of Istrian stone that is impermeable to water. Ruskin described that stone, quarried on the mainland (there is of course no natural stone in Venice itself), as "smooth sheets of rock, glistering like sea waves, that ring under the hammer like a brazen bell." Above the stone is brick faced with stucco so that the church, or dwelling, also glisters. The absence of stone walls also gives an incomparable feeling of lightness to the material fabric.

In the drawings and paintings of Venetian life, from those of Jacopo Bellini in the middle of the fifteenth century to those of Francesco Guardi in the latter part of the eighteenth century, the setting and architecture of the city take precedence over the activities of its inhabitants. The physical space, and the stone face, are preeminent. Who can remember any of the human figures in Canaletto? In the many images of the public processions of Venice, the spectators and the participants become part of the architecture; the buildings themselves seem to embody the harmony and joy of the people.

Buildings are artificial constructions. They consist of single parts which must he joined together. To a large degree, the quality of the finished object is determined by the quality of the joins. In sculpture, there is a tradition which minimizes the expression of the joints and joins between the single parts in favor of the overall form. The direct, seemingly self-evident way in which objects are put together is interesting. When I design buildings, I try to give them this kind of presence. However, unlike the sculptor, I have to start with functional and technical requirements that represent the fundamental task I have to fulfill.
Architecture is always faced with the challenge of developing a whole out of innumerable details, out of various functions and forms, materials and dimensions. The details establish the formal rhythm, the building's finely fractionated scale. Details express what the basic idea of the design requires at the relevant point in the object: belonging or separation, tension or lightness, friction, solidity, fragility. Details, when they are successful, arc not mere decoration.
They do not distract or entertain. They lead to an understanding of the whole of which they are an inherent part. There is a magical power in every completed, self-contained creation. It is as if we succumb to the magic of the fully developed architectural body. Something moves us.
Peter Zumthor

To me, buildings can have a beautiful silence that I associate with attributes such as composure, self-evidence, durability, presence, and integrity, and with warmth and sensuousness as well; a building that is being itself, being a building, not representing anything, just being.
The sense that I try to instill into materials is beyond all rules of composition, and their tangibility, smell, and acoustic qualities are merely elements of the language we are obliged to use.
Sense emerges when I succeed in bringing out the specific meanings of certain materials in my buildings, meanings that can only be perceived in just this way in this one building. When I concentrate on a specific site or place for which I am going to design a building, when I try to plumb its depths, its form, its history, and its sensuous qualities, images of other places start to invade this process of precise observation: images of places I know and that once impressed me, images of ordinary or special places, places that I carry with me as inner visions of specific moods and qualities; images of architectural situations, which emanate from the world of art, or films, theater or literature.
Peter Zumthor

If a work of architecture speaks only of contemporary trends and sophisticated visions without triggering vibrations in its place, this work is not anchored in its site, and it misses the specific gravity of the ground it stands on.
Peter Zumthor

Creativity doesn't need freedom, it needs rules, then you can enjoy occasionally breaking those rules.
Renzo Piano

Architecture is a complex matter, but one continuously present dimension is the craftsmanship and the way you do things and, in some way,, if you go around the building you can feel it. Everything is well crafted.
Every piece is crafted.
The building is actually made piece by piece.
Everything is designed, tested, made, and re-made.
I think this is one of the most essential and inevitable things in architecture.
Renzo Piano

Architecture is a continuing dialogue between generations which creates an environment across time.
Vincent Scully

Design is not style. It's not about giving shape to the shell and not giving a damn about the guts. Good design is a renaissance attitude that combines technology, cognitive science, human need and beauty to produce something that the world didn't know it was missing.
Paola Antonelli

One part of architecture wants to advance along with scientific thought and technological development, while the other desires to focus on the eternal enigma of human existence. The discipline of architecture is impure in the sense that it fuses utility and poetics, function and image, rationality and metaphysics, technology and art, economy and symbolism.
Juhaqni Pallasmaa

Architecture is basically a container of something. I hope they will enjoy not so much the teacup, but the tea.
Taniguchi

Architecture is the 'materialization' of a concept.
It is always very much about a logic, as well as the simplicity and the clarity of the expression.
Bernard Tschumi

Architecture is the reaching out for the truth.
Louis Kahn

A great building must begin with the unmeasurable, must go through measurable means when it is being designed and, in the end, must be unmeasurable.
Louis Kahn

Architecture is an art, the technology merely supports it.
Louis Kahn

A proper building grows naturally, logically, and poetically out of all it conditions.
Louis Sullivan

Architecture is a small piece of this human equation, but for those of us who practice it, we believe in its potential to make a difference, to enlighten and to enrich the human experience, to penetrate the barriers of misunderstanding and provide a beautiful context for life's drama.
Frank Gehry

Public spaces are not a frivolity.
They are just as important as hospitals and schools.
They create a sense of belonging.
This creates a different type of society - a society where people of all income levels meet in public space is a more integrated, socially healthier one.
Enrique Penalosa, former Mayor of Bogota

What I consider to be beautiful would be a sense of compelling-ness; what is it that compels you about a particular type of work and where does it take you?
It's about a very particular type of intelligence that takes you some place and allows you to see the world and experience it in an alternative way.
Beauty is a by-product of an idea that is under continual evolution.
Thom Mayne


CAMPARI
TALIANI
VENEZIA - PONTE DI RIALTO

Misericordia Marina, Cannaregio: Waterways are found in many cities, as they have been the basis for their location in the landscape, providing an economic and transportation advantage. However, waterways in Venice are different. More than in Amsterdam, Bruges, or St. Petersburg, the water in Venice is found everywhere, and is the basis for its survival and its architectural character. It runs through the wide Grand Canal or into its narrow, shadowy "rii." It extends into the plains of the Venetian lagoon.

The buildings of the city appear to sit on this water plain, with its constantly changing reflection and color. All of this is the fundamental and unique aspect of Venice's existence. There are countless myths and literary references to the city based on water: “a city that, like Venus,” was “born of the foam of the sea waves” or “flagship of a mighty fleet of islands, riding at anchor in the lagoon” or “a city built by beavers, through the gathering of bits of wood into piles to withstand the waves.” In 1240, Venice is described as "a city that has the sea for its floor, the sky for its roof, and the flow of the waters for walls."

Currently a marina, the project site, is located at one of the major canals that connect the lagoon, the northern islands and Marco Polo International Airport to the Grand Canal. Throughout history, the site has been a major point of entry into the city. The marina remains as the last piece of the city’s perimeter to be partially reclaimed from the lagoon. It is also the transition from the density of the urban fabric to the expanse of the open lagoon.

The surrounding context to the West and East are residential enclave, rarely visited by tourist.

The design is intended maintain the connection between the Dell ‘Orio Canale to the West, Canale Della Misericoria to the south and the lagoon. The design must also link three existing pedestrian paths; to the south the Fondamenta D. Abbazia, to the West the Fondamenta Gasparo Contarni and Corte Vecchia, and to the East the Fondamente Nuove, the primary pedestrian access to the site, along the Northern shoreline.

Permission to develop the Glassworks was predicated on the design also providing two new exterior public spaces (campo/piazza and garden) for the surrounding neighborhoods, the Glassworks and tourists of the city.

As you enter the heart of that city, you cannot tell what you will see next, or indeed who will see you the very next moment.
Scarcely has someone made an appearance than he has quit the stage by another exit.
These brief exhibitions are of an almost theatrical obscenity, and at the same time they have an air of conspiracy about them, into which one is drawn against one’s will.
W. G. Sebald

A realist, in Venice, would become a romantic by mere faithfulness to what he saw before him.
Arthur Symons

The things of this world reveal their essential absurdity when they are put in the Venetian context.
In the unreal realm of the canals, as in a Swiftian Lilliput, the real world, with its contrivances, appears as a vast folly.
Mary McCarthy

Do you see a bridge as an obstacle – as just another set of steps to climb to get from one side of a canal to another?
We Venetians do not see bridges as obstacles.
To us bridges are transitions.
We go over them very slowly.
They are part of the rhythm of the city.
There are the links between two parts of a theater, like changes in scenery, or like the progression from Act One of a play to Act Two.
Our role changes as we go over bridges.

After dinner, I went out by myself, into the heart of the enchanted city where I found myself wandering in strange regions like a character in the Arabian Nights.... I had plunged into a network of little alleys, calli, dissecting in all directions by their ramifications the quarter of Venice isolated between a canal and the lagoon, as if it had crystallized along these innumerable, slender, capillary lines.
All of a sudden, at the end of one of those little streets, it seemed as though a bubble had occurred in the crystallized matter.
A vast and splendid campo of which I could certainly never, in this network of little streets, have guessed the importance, or even found room for it, spread out before me flanked with charming palaces silvery in the moonlight.
It was one of those architectural wholes towards which, in any other town, the streets converge, lead you and point the way. Here it seemed to be deliberately concealed in a labyrinth of alleys, like those palaces in oriental tales to which mysterious agents convey by night a person who, taken home again before daybreak, can never again find his way back to the magic dwelling which he ends by supposing that he visited only in a dream.
Marcel Proust

Venice appeared to me as in a recurring dream, a place once visited and now fixed in memory like images on a photographer’s plates so that my return was akin to turning the leaves of a portfolio: a scene of the gondolas moored by the railway station; the Grand Canal in twilight; the Rialto bridge; the Piazza San Marco; the shimmering, rippling wonderland; the bustling water traffic; the fish market; the Lido beach and boardwalk;
Gary Inbinder

By day it is filled with boat traffic - water buses, delivery boats, gondolas - if something floats and it's in Venice, it moves along the Grand Canal. And by daylight it is one of the glories of the Earth. But at night, especially when the moon is full and the soft illumination reflects off the water and onto the palaces - I don't know how to describe it so I won't, but if you died and in your will you asked for your ashes to be spread gently on the Grand Canal at midnight with a full moon, everyone would know this about you - you loved and understood beauty.
William Goldman

Venice will linger in your mind and wherever you go in life you will feel somewhere over your shoulder, a pink, castellated, shimmering presence, the domes and riggings and crooked pinnacles of the Serenissima. There's romance for you!
Jan Morris

There is something so different in Venice from any other place in the world, that you leave at once all accustomed habits and everyday sights to enter an enchanted garden.
Mary Shelley

It is the city of mirrors, the city of mirages, at once solid and liquid, at once air and stone.
Erica Jong

In the winter, Venice is like an abandoned theatre. The play is finished, but the echoes remain.
Arbit Blatas

Autumn in Venice is one of air and light. Filigree mists begin to finger their way through every available space. Thick blindfolds of fog tease and decoy.
Lisa St Aubin de Teran

The winter light in this city!
It has the extraordinary property of enhancing your eye's power of resolution to the point of microscopic precision—the pupil humbles any Hasselblad lens and develops your subsequent memories to National Geographic sharpness. The sky is brisk blue, the sun, escaping its golden likeness beneath the foot of San Giorgio, sashays over the countless fish scales of the lagoon's lapping ripples; behind you, under the colonnades of the Palazzo Ducale, a bunch of stocky fellows in fur coats are revving up Eine Kleine Nachtmusik, just for you, slumped in your white chair and squinting at the pigeons' maddening gambits on the chessboard of a vast piazza.
The espresso at your cup's bottom is the only small black dot in, you feel, a miles-long radius.
Joseph Brodsky

Architecture is the art which so disposes and adorns the edifices raised by man, that the sight of them may contribute to his mental health, power, and pleasure.
John Ruskin

You cannot have good architecture merely by asking people's advice on occasion. All good architecture is the expression of national life and character; and it is produced by a prevalent and eager national taste, or desire for beauty.
John Ruskin

Venice is a city built on water. It is preposterous. If you couldn't see it with your own eyes and touch it with your fingers, you would think it was some poetic fancy. It really shouldn't be there at all. But it is. And it is beautiful beyond words.
Russell Norman

In the winter, Venice is like an abandoned theatre. The play is finished, but the echoes remain.
Arbit Blatas

Local fog in Venice has a name: Nebbia. It obliterates all reflections and Everything that has a shape: buildings, people, colonnades, bridges, statues. Boat services are cancelled, aeroplanes neither arrive nor take off for weeks, stores are closed, and mail ceases to litter one's threshold.
Joseph Brodsky

The way a thing looks is the real domain of the architect because it's about visual sensibility and culture. It's been around through the centuries, and it's still here although it's treated differently – we have different technology and ways of communicating and developing that culture – but there is intelligence in the way things look. Whether it's the way a plant or flower or the sky looks, there is something we need to analyze about it and understand rationally. It's not just emotion, the way things look is actually deeply intellectual.
Lebbeus Woods

Life is not just a series of calculations and a sum total of statistics. It's about experience, it's about participation, it is something more complex and more interesting than what is obvious.
Daniel Libeskind

VENEZIA
Murano
I. Campalto
S. Michele
Canale dei Marani
Canale Grande
Ponte di Rialto
S. Giovanni e Paolo
S. Maria Formosa
S. Lorenzo
S. Marco
S. Stefano
S. Sebastiano
La Salute
Punta della Salute
Canale della Giudecca
La Giudecca
S. Giorgio Maggiore
Canale di San Marco
S. Giuseppe
S. Elena
Canale delle Navi
Le Vignole
La Certosa
Canale di S. Erasmo
Torre Massimiliano
Canale di San Nicolò
San Nicolò di Lido
Canale di Fusina
Canale Nuovo
Canale Orfano
La Grazia
S. Servolo
Canale di S. Servolo
S. Maria Elisabetta
S. Lazzaro
LIDO
Hotel
Canale Rezzo
S. Clemente
Canale Fasiol
A G U N A
Lazzaretto Vecchio
S. Spirito

Glasswork's site beyond a private gardern.

17

Historical view of western site boundary.

18

Fundamenta Nove with site in the far distance.

Site: Misericordia Marina: The Misericordia Marina area is the only major “missing piece” of the urban fabric of Venice. It is uniquely located at the end of the Fundamenta Nuove that is the primary pedestrian street along the northern edge of the city. Historically and currently, it is also the primary boat point of entry from the northern lagoon islands and airport.

It is one of the major points of arrival and departing the city, one of a very few direct routes from the lagoon to the Grand Canal, is recognizable and can be seen from across the lagoon, and is also an integral part of the canal system of Venice and its surrounding neighborhoods.

The Marina area is bordered by four differing contexts: 1) the open lagoon to the north, 2) the continuous series of palazzi to the east, 3) light industrial buildings to the south, and 4) walled in private gardens to the west.

There are also three existing pedestrian paths that are currently deadened, not uncommon in Venice, and require interconnection.

The northern (north and slightly east) end of the site is oriented to the open lagoon with views to the San Michele cemetery and island of Murano.

The southern end is at the intersection of a primary and secondary canal that is also at the intersection of three distinct residential neighborhoods. The southern site boundary includes a hotel, a series of low light industrial activities and leads to a historic and less isolated residential neighborhood toward the Grand Canal.

The eastern side of the site is adjacent to the historical line of tall palazzi facades which form one edge of the canal beyond of which is a relatively series of quiet residential neighborhoods which connect to the Fundamenta Nuove..

The western side of the site is adjacent to a former casino at the laggon, residential area and series of private gardens. It is oriented towards the winter setting sun, and view of mountains to the west.

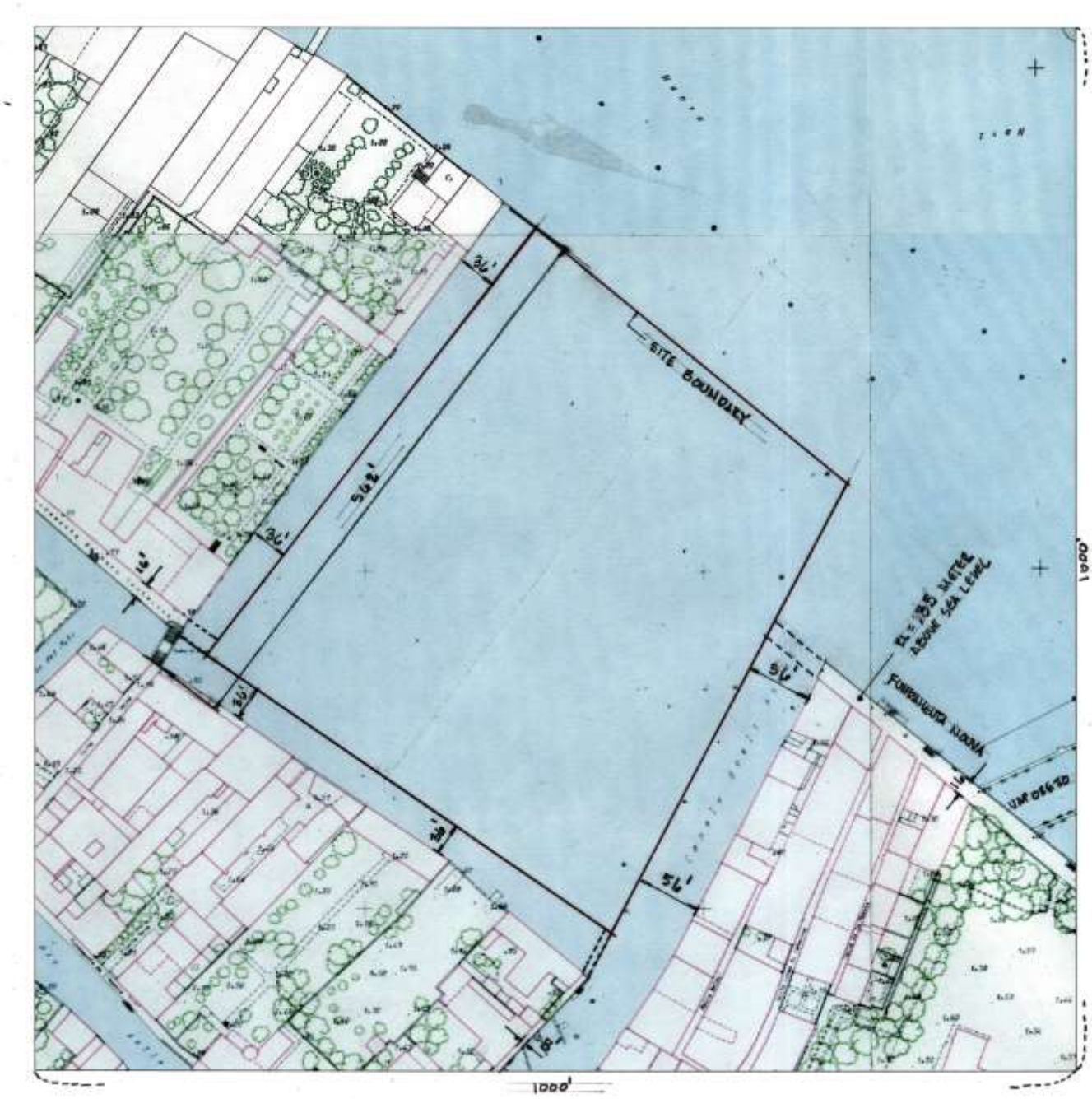
The Glassworks and its amenities will be both the missing piece of Venice and a new piece of the city and lagoon.

19

20

Google Earth Areal View of site with marima removed. (See Site Plan for true North)

See Studio's Drive: "*Marina Removed Folder"*



21

Site Plan and Project Site Area: True North is “Y” axis.

This drawing is the location and area of the 1:600 (1” = 50’) and 1:300 (1” = 25’) physical Site Models.
The drawing is 1000 ft by 1000 ft on a side.

The 562’-0” Dimension along the western boundary of the marina is the only known accurate dimension.

The project site area is very approximately 500 ft. x 500 ft.

As part of the Studio Project's design, 1) the Fondamenta Gasparo Contarini to the west is to be extended and 2) connected to the new bridge at the Fondamenta de l'Abazia to the south-east. Both of these pedestrian paths are also to connect to the new bridge at the Fondamenta Nuove, which is a major pedestrian route that runs along the Northern edge of the city, with its access many vaporetto stops, which travel to the islands to the north, take many routes around Venice and also travel directly to the Grand Canal.

The pedestrian network and paths must be public and always accessible.

The pedestrian network and paths can move around and/or through the exterior areas of the Glassworks areas but must be always open to the public throughout the day and year.

The MOSE flood gate system is designed to protect Venice from tidal flooding of 3 meters or 9.8 ft. above Sea Level. (Thus far, the maximum recorded height of flooding in Venice occurred on 22 November 2022, measuring 2.04 meters or 6.67 ft. above Sea Level). https://www.mosevenezia.eu/ https://www.comune.venezia.it/

All construction meeting any waterway, whether interior or exterior must be continuously supported on compacted fill and retaining walls on a continuous footing supported by piers into lagoon sub-soil, or appropriately designed landscape to water transitions.

Bridges, marina construction, mooring areas and their walking paths can be pier and beam construction, thereby permitting the continuous movement of water throughout the marinas, canals or the lagoon.

All buildings must be supported on structural slabs, beams, load bearing walls and columns, etc. that are supported by pier, mat or raft foundations in response to the lagoon's "subsoil" conditions.

Other non-building construction must be rest on "earth or other fill," *not* on decks, floating platforms, or with lagoon / canal water closely underneath, *unless it is raised sufficiently above water level to permit 1) pedestrian and boat traffic, 2) provide sufficient daylight and natural ventilation, and 3) otherwise be an exterior architectural space of great quality, which enhances the adjacent urban / lagoon setting.*

22

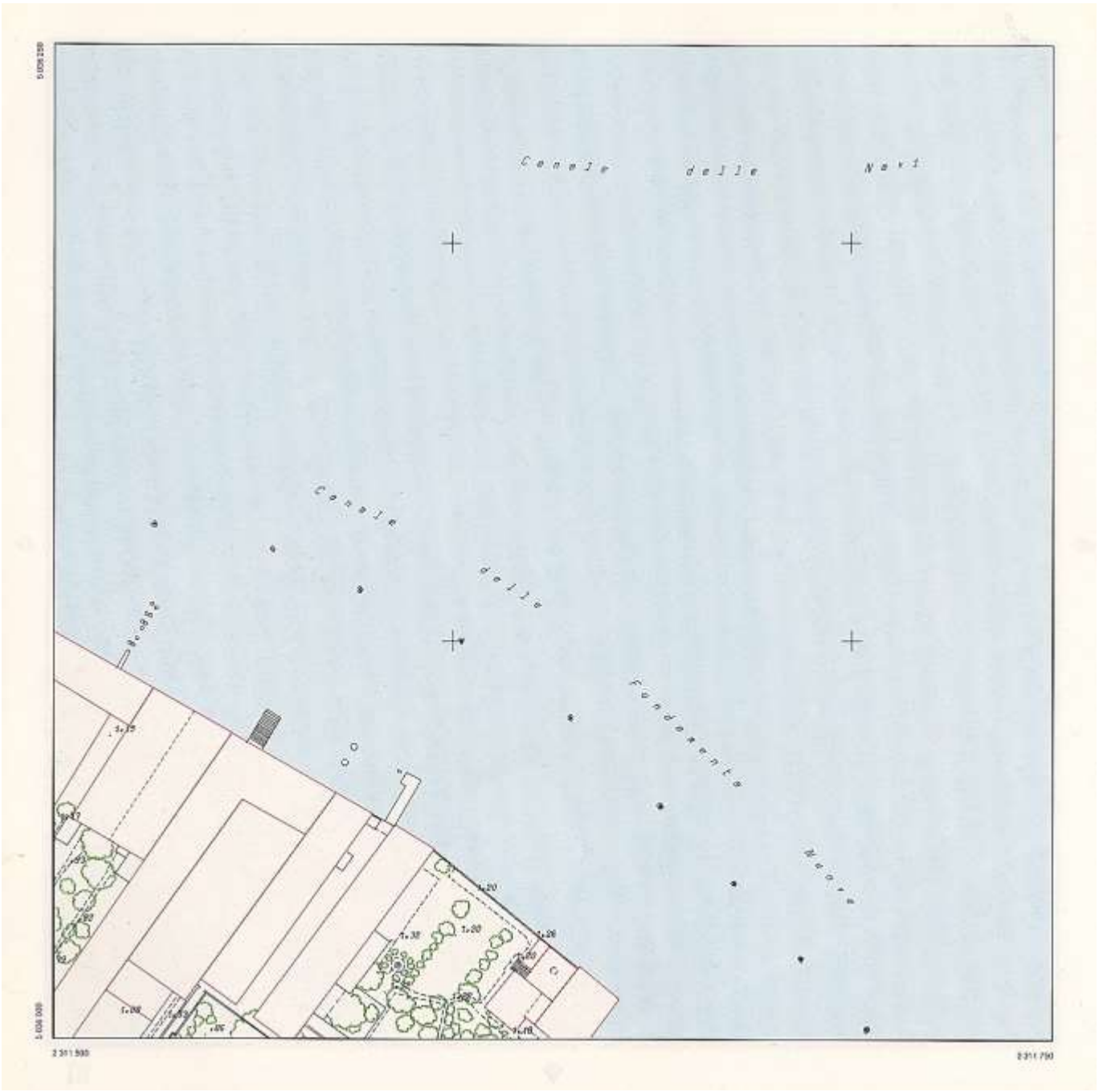
Neighborhood Site Plan

23

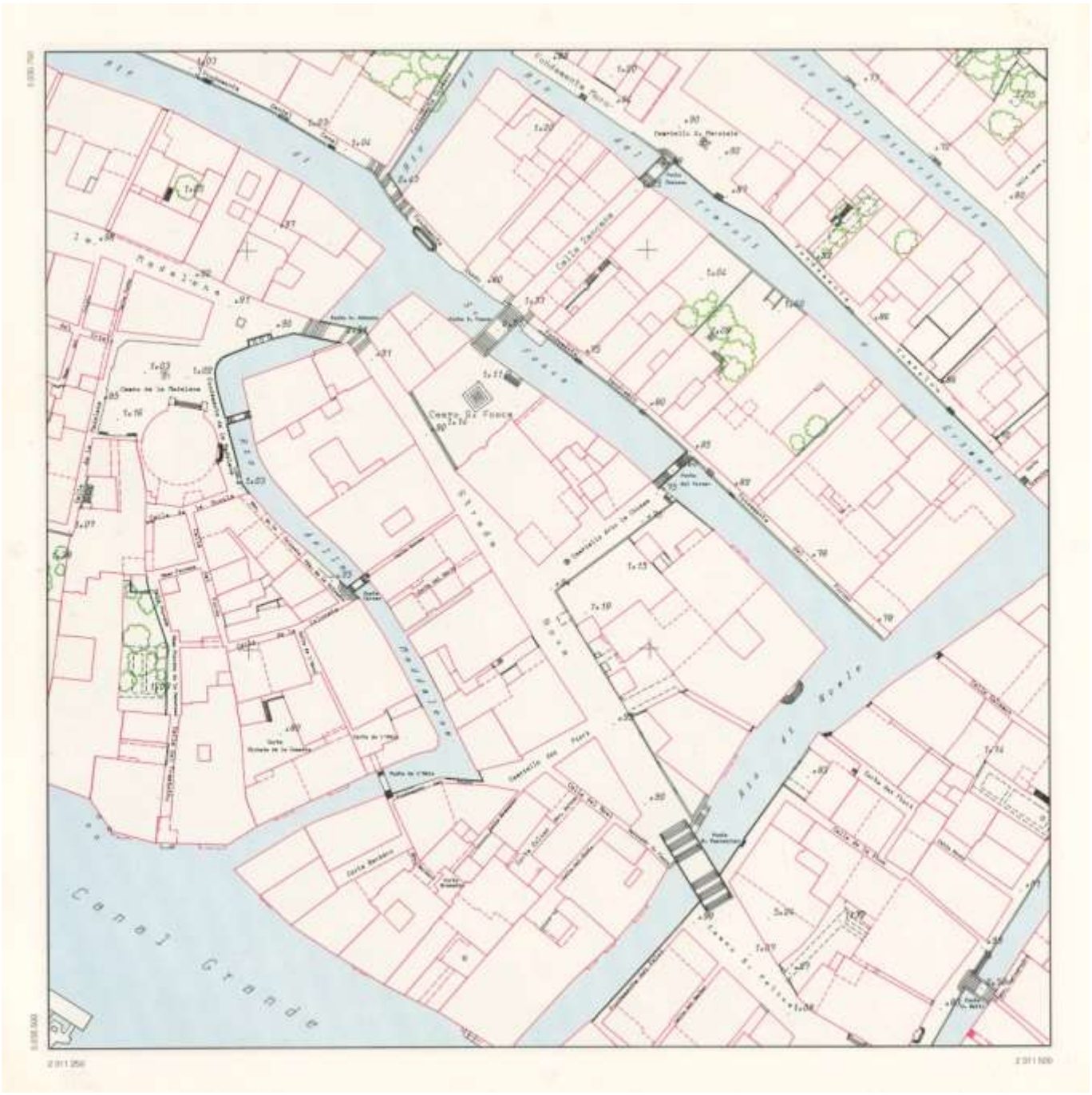
24

25

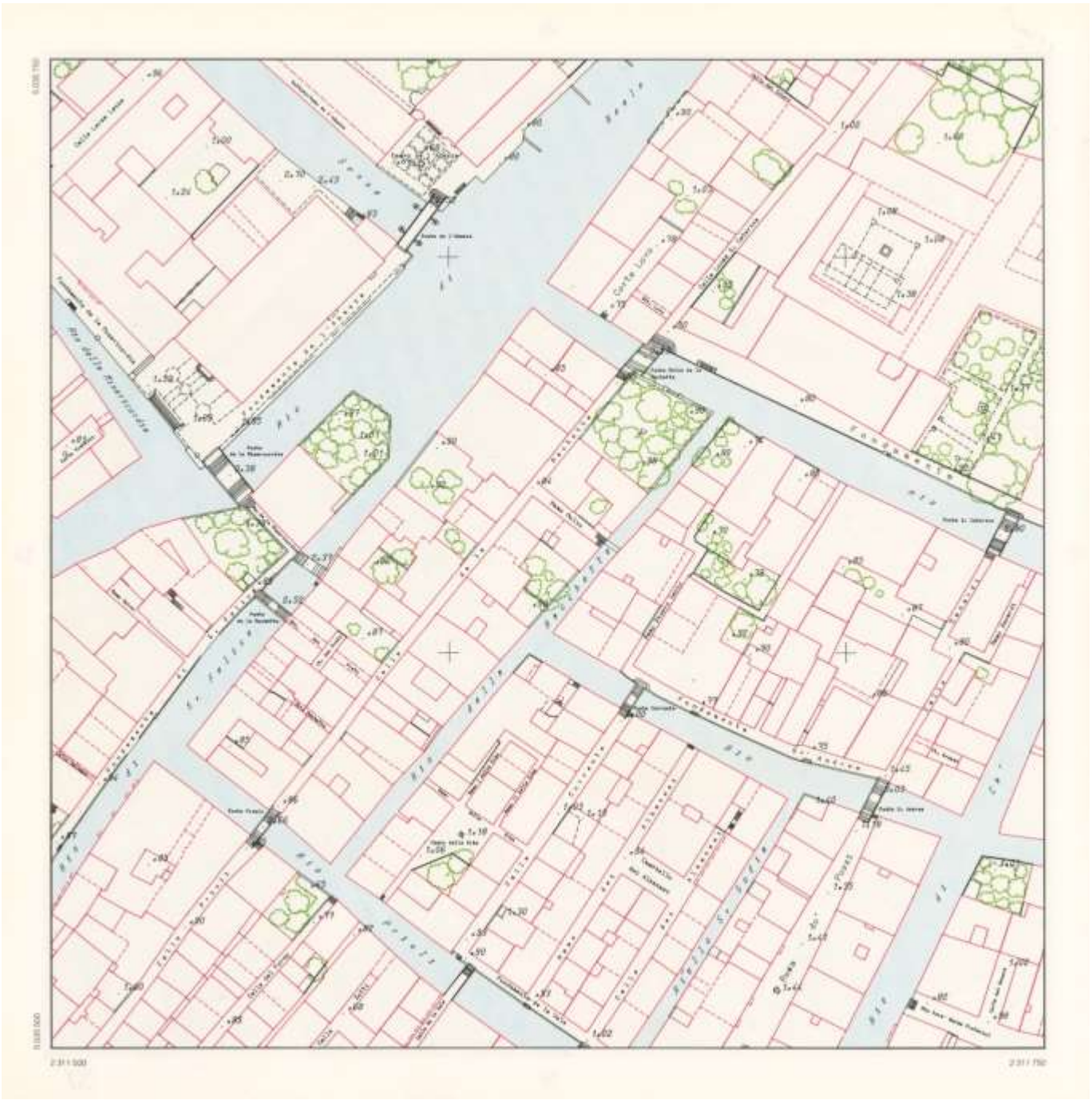
26


Canale delle Navi
Canale della
Fondamenta
Nuova
5 034 250
5 034 000
2 311 500
2 311 750

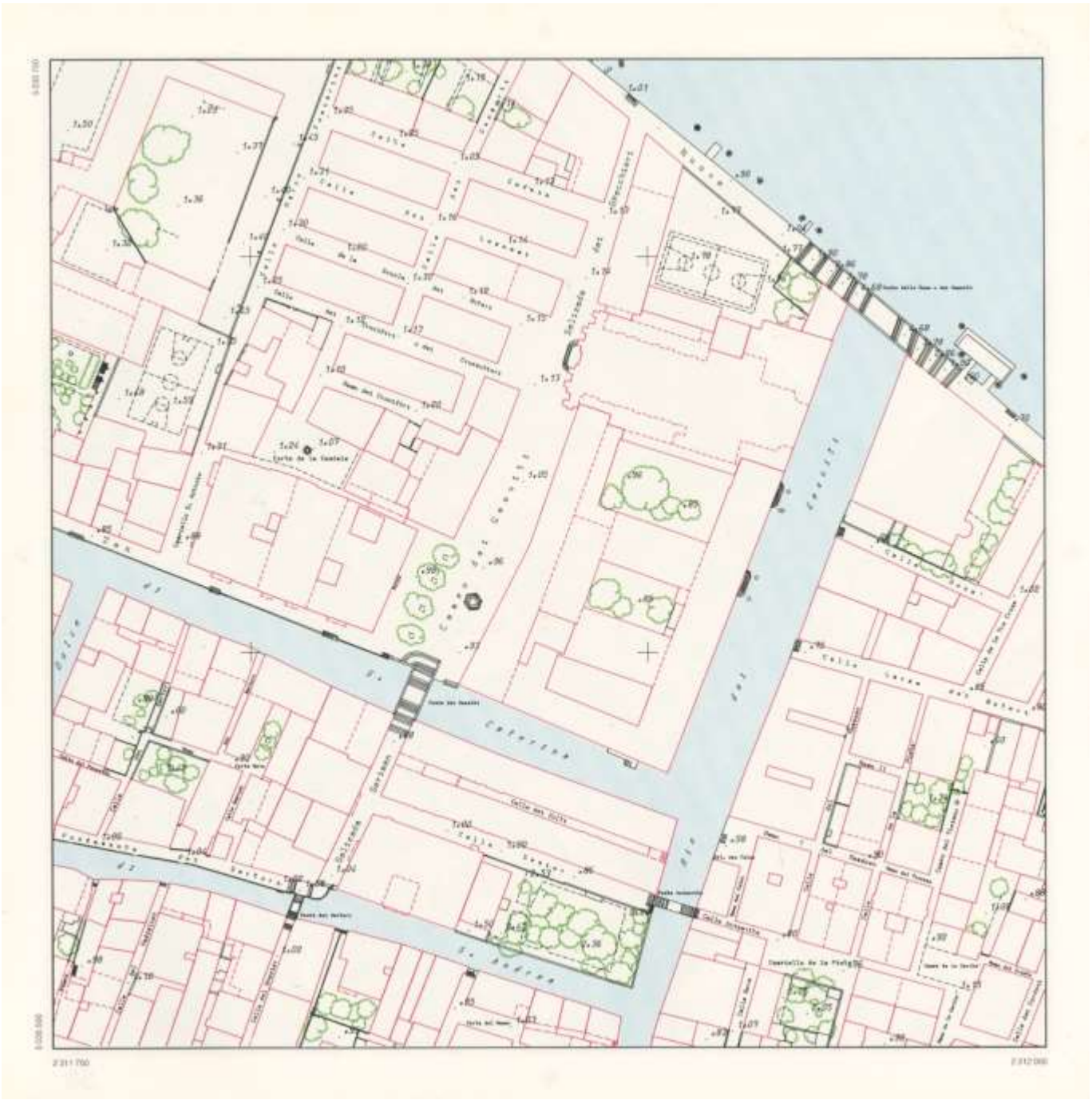
27



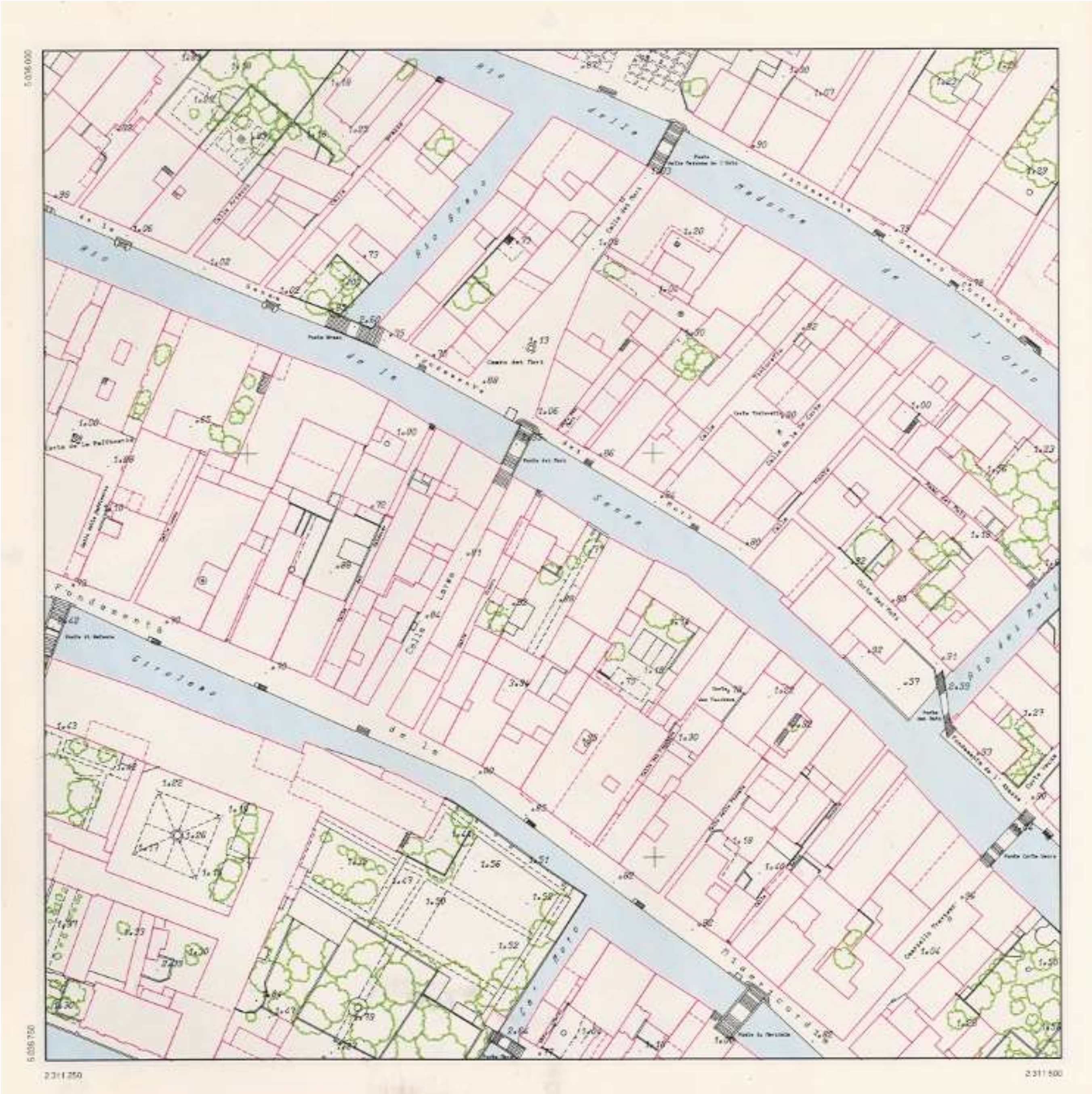
28



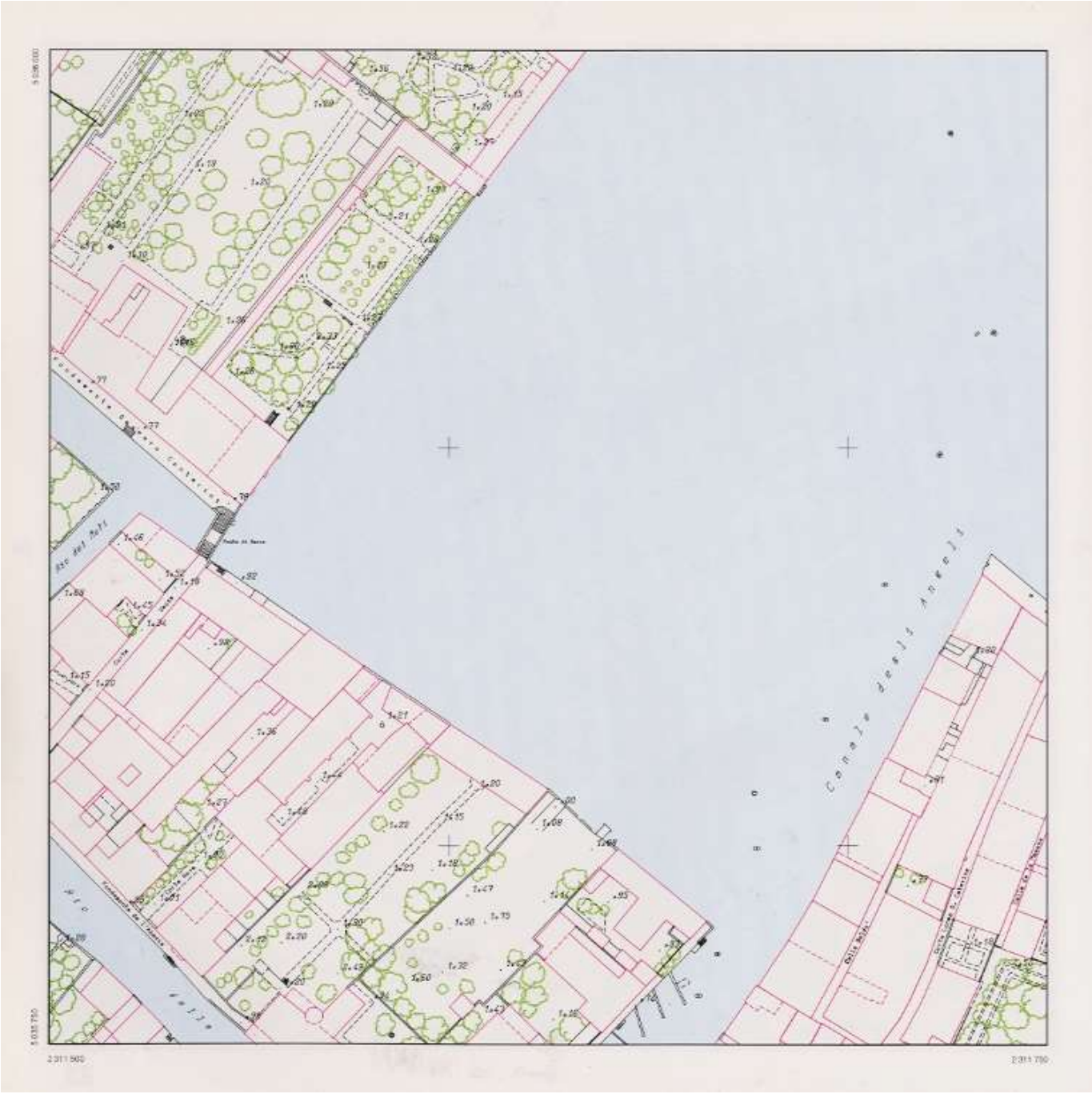
29



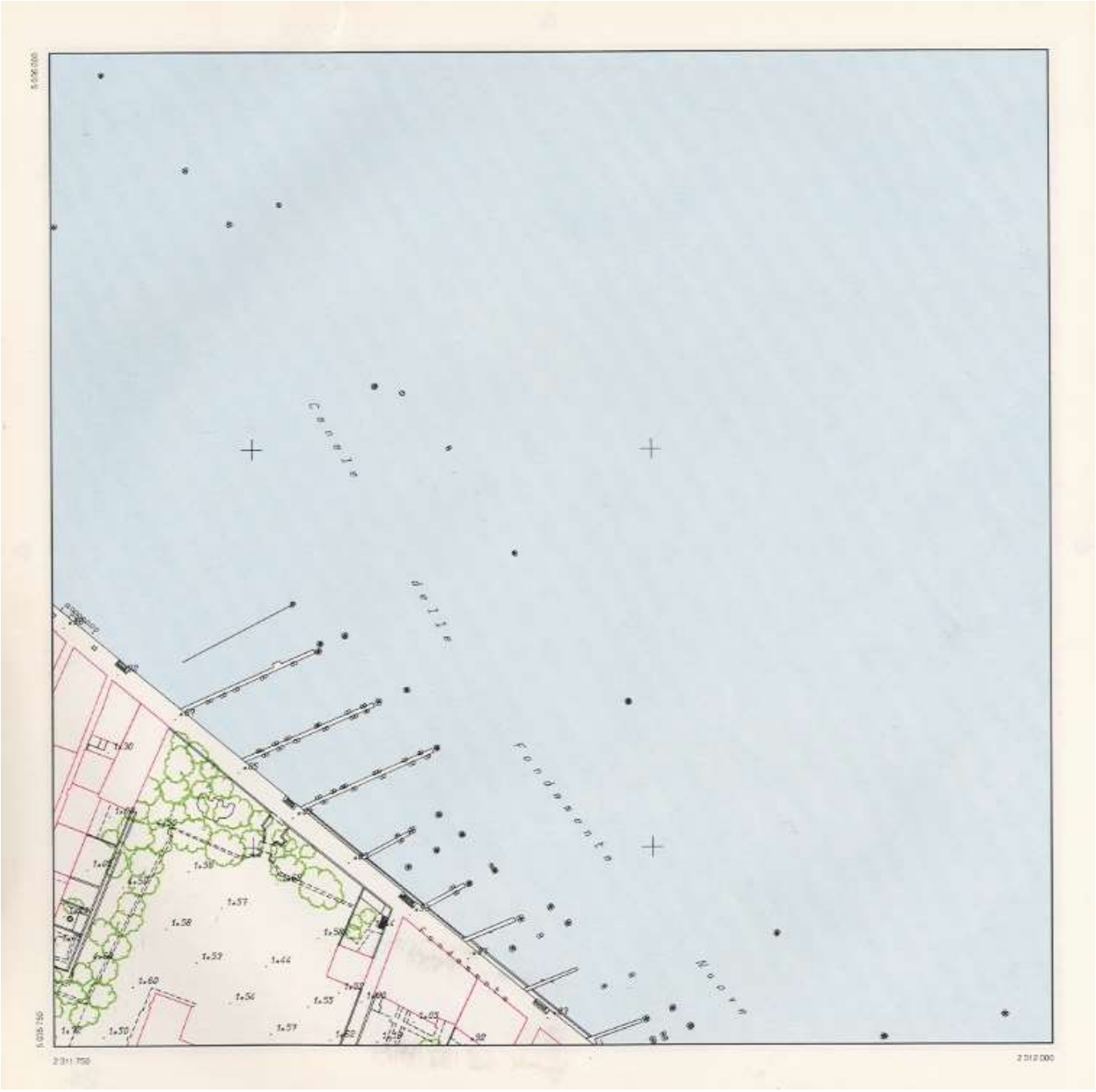
30



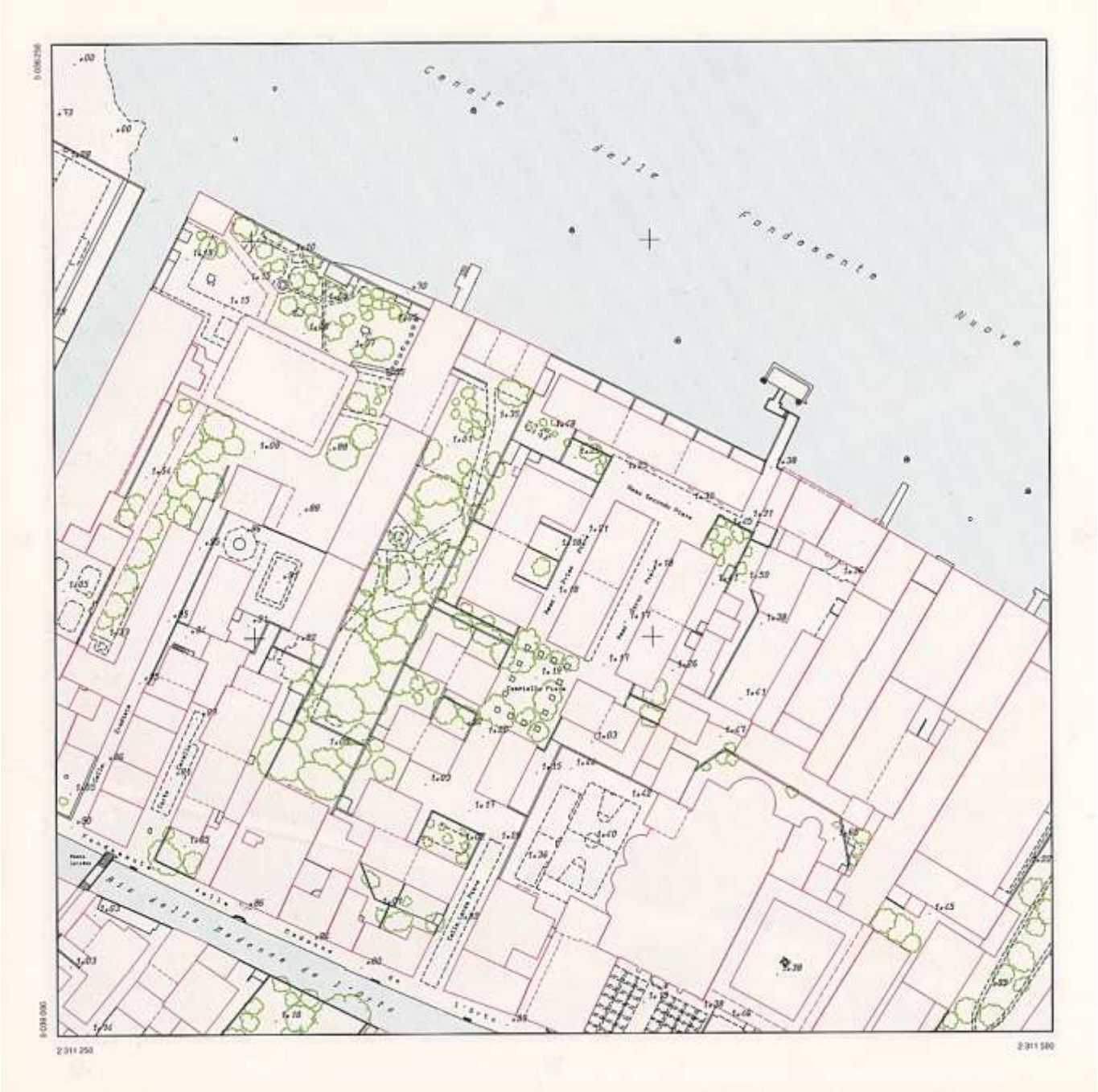
31


Canale degli Angeli
Via del Pilo
Via del Pilo
Via Nuova di Gallura
Via Nuova di Gallura
2.311.500
2.311.750

32



33



34

Venice: Site Survey Notes:

1. Spot Elevations indicated on technical drawings are in meters.
2. The provided 3D digital model was based upon these drawings, but its accuracy cannot be guaranteed.
3. MOSE: The Studio Project assumes that future flooding of Venice will be controlled and not rise above elevation 3.0 Meters above sea level, as the result of the now completed and operational MOSE project.

MOSE is an integrated system consisting of rows of mobile gates installed at the Lido, Malamocco, and Chioggia inlets that are able to isolate the Venetian Lagoon temporarily from the Adriatic Sea during acqua alta high tides. Together with other measures, such as coastal reinforcement, the raising of quaysides, and the paving and improvement of the lagoon, MOSE is designed to protect Venice and the lagoon from tides of up to 3 meters (9.8 ft) above Sea Level. Currently it is raised for tides of more than 1.10 meters. The Venice Water Authority and Venice Local Authority are also raising quaysides and paving in the city in order to protect built-up areas in the lagoon from medium high tides below 1.10 meters (43 in), the height at which the mobile barriers will come into operation). Measures to improve the shallow lagoon environment are aimed at slowing degradation of the morphological structures caused by subsidence, eustatism, and erosion due to waves and wash. Work is underway throughout the lagoon basin to protect, reconstruct, and renaturalise salt marshes, mud flats and shallows; restore the environment of the smaller islands; and dredge lagoon canals and channels.

See: https://en.wikipedia.org/wiki/MOSE

35

36

37

38


Google Earth


Google Earth


Google Earth


Google Earth

39


Google Earth


Google Earth

Campi of Venice:

Campi of Venice are the principal sites of public life in this city. Over one hundred in number, these squares vary in character, form, size and location in the city and offer a rich spectrum of urban experiences to residents and tourists alike. The creation of a new campo for Venice is at first a dilemma, as it cannot be based upon on the original purposes and intentions that created the historic campo.

While local neighborhoods remain, the cultural, economic, religious and political context from which these town squares were created no longer exists. However, the experiences we have in these historic settings are as real and important to the survival of the city as its landmark structures and the Grand Canal itself. Campo or any successful urban square are experienced as events rather than as an object. The spatial experience is dependent on parameters derived from the laws of three-dimensional design, cultural influences and the dynamic effects of time, season and weather.

As possibly the last campo to be added to Venice, it can be formulated on the traditional precedents such as urban theater or cultural destination, and/or with contemporary concepts such as “landscape-urbanism, an extension of Venetian gardens” “aquatic-urbanism”, an extension of the lagoon, “networked-square,” an extension of communication, “urban system,” a decentralized form.

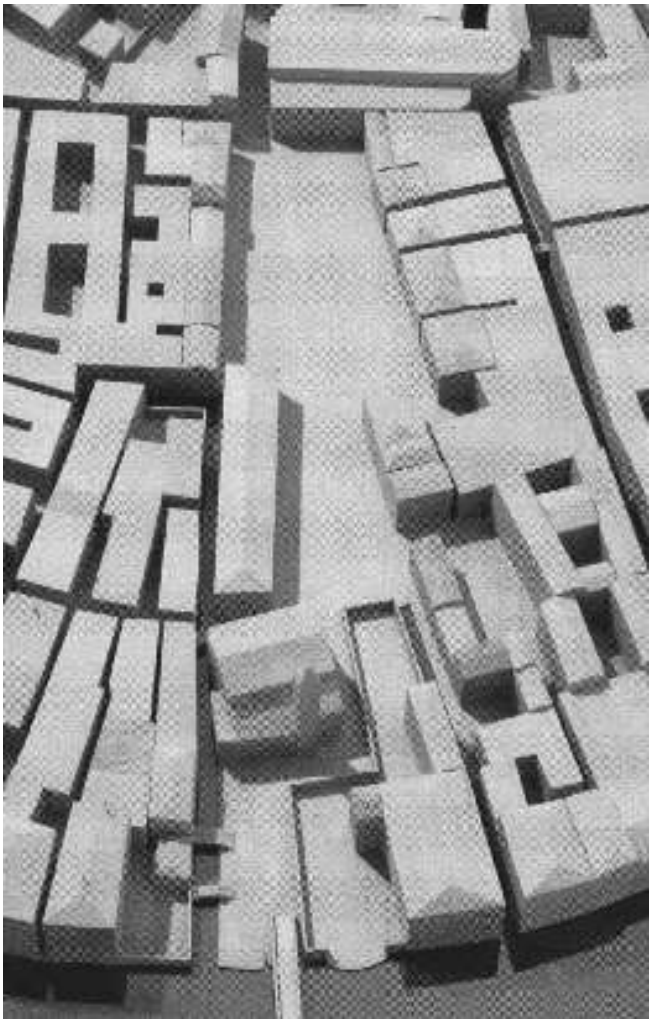
When you build a thing, you cannot merely build that thing in isolation, but must repair the world around it, and within it so that the larger world at that one place becomes more coherent and more whole; and the thing which you make takes its place in the web of nature as you make it.
One day, when we have learned the timeless way again, we shall feel the same about our towns, and we shall feel as much at peace in them, as we do today walking by the ocean, or stretched out in the long grass of a meadow.
Christopher Alexander:
The Timeless Way of Building

They are called campo (fields) because they were originally cultivated spaces or used to graze cattle. Now, it is an open, irregularly shaped paved space surrounded by buildings. These buildings, which vary scale, historical period, height (up to five stories) and in function, often contain small shops on the ground floor and private dwellings above. Campo are always located at the crossing point of pedestrian routes, and occasionally at the intersection with canals. A campo brings together the ten to fifteen thousand people, of every age and social background, living and working within its neighborhood. It is the village square, public living room, where elders sit and talk, where chance meetings occur, where teenagers flirt, children play, where there are farmers' markets, outdoor theater and street performances, and family or community festivals take place.

Life in the Venetian campo may well be more complex and more satisfying than on any other urban square in the world. This is, in part, due to its relatively small size, because it is solely pedestrian, as a meeting point for people from all over the world. It is as an unlikely oasis in the lagoon. Because of the multiple functions, it serves throughout all times of the day and throughout the year, it can be both an intense or Spartan setting.

The Venetian author Francesco Sansovino, in 1581, described the many little quarters of his city as self-contained worlds, islands that they had been at the origins of Venetian history. The more than one hundred Campo are indispensable in their spatial power, their unpredictability, relief from the dense, narrow passages of the city, diversity of activity, visual character, and landmark qualities, yet they were anything but formally planned. They were the result of a process for centuries. Today, nearly all Venetian Campo are paved with grey-colored trachyte. While a few contain a tree or two, most are fundamentally empty. Almost all have outdoor seating, and are connected to the surrounding ground floor building functions and activities.

Each Venetian campo has its own distinct, sometimes droll in-dividuality.
Even though we have no record of a definite design intent for the creation of these squares, most nevertheless speak to us with an oddly spatial gesture, challenging us to specific movements, suggesting particular attitudes.
In contrast to rigorously planned squares, these spaces do not reveal a clear image of an urban planning idea.
The individual campi differ from one another because they represent different types of elemental characters of architecture, exterior space, movement, scale and extend an evocative invitation to explore.



40

41

42

43

One part of architecture wants to advance along with scientific thought and technological development, while the other desires to focus on the eternal enigma of human existence.
The discipline of architecture is impure in the sense that it fuses utility and poetics, function and image, rationality and metaphysics, technology and art, economy and symbolism.
Architecture is a muddle of irreconcilable things and categories.
Juhaqni Pallasmaa

Architecture is a continuing dialogue between generations, which creates an environment across time.
Vincent Scully

Architecture is about exploring culturally, historically, psychologically, anthropologically, and topographically, every project is different.
So, the real risk is that as an architect you end up imposing our stamp before you understand what the reality of a place is.
It is not always necessarily to integrate with the context. Sometimes architecture should not integrate, but should make a contribution to the context.
You must employ a homeopathic process instead of surgery, because cities are vulnerable and you can easily destroy their subtle dynamics.
Renzo Piano

Architects have made architecture too complex.
We need to simplify it and use a language that everyone can understand.
Toyo Ito

There is a danger when every building has to look spectacular; to look like it is changing the world.
I don't care how a building looks if it means something, not to architects, but to the people who use it.
David Chipperfield

Architecture is like writing.
You have to edit it over and over, so it looks effortless.
Zaha Hadid

Architects don't invent anything; they transform reality.
Alvaro Siza

I would like the buildings I make to say:
"I understand something about what is around me".
I don't want them to give the impression of being aliens or having nothing to do with what is already there.
This is not an aesthetic matter, at least not primarily; it does not start with having to establish formal contact with the surroundings.
It is like searching for a kind of sameness in the form of emotional contact - an emotional reaction to the surroundings expressed through architecture.
Peter Zumthor

The difference between an architecture of technical functionalism and one of emotional functionalism is that the first simply attempts to get the job done with a minimum of effort as it appeals to reason alone; the second is technically functional in addition to establishing a place of dreams, desires and the intangible.
Nathaniel Coleman

Life is not just a series of calculations and a sum total of statistics.
It's about experience, it's about participation, it is something more complex and more interesting than what is obvious.
Daniel Libeskind

Buildings are not idiosyncratically private institutions: they are public performances both to the user and the passerby.
Thus, the architect's responsibility must go beyond the client's program and into the broader public realm.
Though the client's program offers the architect a point of departure, it must be questioned, as the architectural solution lies in the complex and often contradictory interpretation of the needs of the individual, the institution, the place and history.
Richard Rogers

Initialing an architectural project comes down to specifying what the questions are, before any answers can be given.
Kazuyo Sejima

44

Rather than imposing a style upon different sites and climates, or pursued irrespective of program, the unique character of a program and a site becomes the starting point for an architectural idea.
The phenomena of the space of a room, the sunlight entering through a window, and the color and reflection of materials on a wall and floor all have integral relationships.
The materials of architecture communicate through resonance and dissonance, just as instruments in musical composition, producing thought and sense-provoking qualities in the experience of a place.
Steven Holl

Simplicity is the ultimate sophistication.
Leonardo da Vinci

Perfection is achieved not when there is nothing more to add, but when there is nothing left to take away.
Antoine de Saint-Exupery

I'm an artist, a designer, a craftsman, interior designer, half-architect.
There's no one name that fits me very well.
Dale Chihuly

I want people to be overwhelmed with light and color in a way they have never experienced.
Dale Chihuly

Program: Glassworks The Glassworks is composed of four working studios created and supported by the Dale Chihuly Foundation. Its artists in residency program attracts glass makers from around the world, who direct and teach groups of apprentice contemporary art glass making during their two-year grant. Each of the eight artists have twenty-four apprentices, whose two-year internship creates glassworks which are displayed and sold in the Glassworks four shop-galleries. Both the artists in residence and the apprentices will live in the surrounding neighborhoods.

Each of the four Glassworks include a workplace consisting of material supplies and storage, hot-shop furnace area with seating for the public, glass finishing area, packing and raw material storage area, and both private interior and private exterior galleries, for the work completed by the artist in residence and their apprentices.

During his career, Chihuly created more than a dozen well-known series of works, among them, Cylinders and Baskets in the 1970s; Seaforms, Macchia, Venetians, and Persians in the 1980s; Niijima Floats and Chandeliers in the 1990s; and Fiori in the 2000s. He is also known for his large architectural installations. In 1986, he was honored with a solo exhibition, *Dale Chihuly objets de verre*, at the Musée des Arts Décoratifs, Palais du Louvre, in Paris. In 1995, he began *Chihuly Over Venice*, for which he created sculptures at glass factories in Finland, Ireland, and Mexico, then installed them over the canals and piazzas of Venice. In 1999, Chihuly started an exhibition, Chihuly in the *Light of Jerusalem*. In 2001, the Victoria and Albert Museum in London curated the exhibition *Chihuly at the V&A.* His Garden Cycle began in 2001 at the Garfield Park Conservatory in Chicago. Chihuly exhibited at the Royal Botanic Gardens, Kew, near London, in 2005.

The foundation requires that the new Glassworks be designed and constructed in a manner which is consistent with the quality and spirit of Chihuly's work.

a) Direct connection between materiality and form.
b) Clearly recognizable assembly of parts,
c) Combination of functional logic and aesthetic celebration.
d) Assembly that is in direct dialogue with its environment, culture and in response to its context.

He also requires that the new Glassworks and its public spaces make a positive and lasting contribution to the city, and the adjoining neighborhoods, for residence and tourists alike.

The Chihuly Foundation requires that the shop-gallery spaces be designed specifically for the nature of art glass, its method of displace/sale, architectural character of the space, quality of natural and artificial lighting, scale and proportion of the space, relationship to the exterior content. They intend that that artwork itself be the primary focus of the patron's experience.

Unlike paintings, the glass artworks are three dimensional, are themselves "full scale," vary in position from which they should be experienced, some are intended and able to placed in exterior, wet and sunlit conditions.

Like paintings, the glass artworks are extremely fragile, highly valuable, and should not be touched. They must also be protected from theft or vandalism.

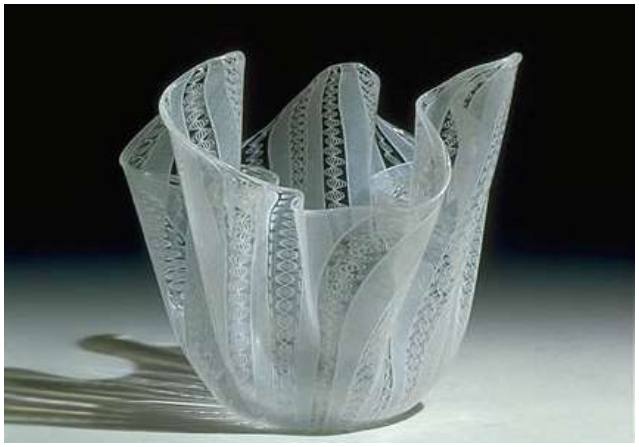
Dale Chihuly is most frequently lauded for revolutionizing the Studio Glass movement by expanding its original premise of the solitary artist working in a studio environment to encompass the notion of collaborative teams and a division of labor within the creative process.
However, Chihuly's contribution extends well beyond the boundaries both of this movement and even the field of glass: his achievements have influenced contemporary art in general.
Chihuly's practice of using teams has led to the development of complex, multipart sculptures of dramatic beauty that place him in the leadership role of moving blown glass out of the confines of the small, precious object and into the realm of large-scale contemporary sculpture.
In fact, Chihuly deserves credit for establishing the blown glass form as an accepted vehicle for installation and environmental art beginning in the late twentieth century and continuing today.
A prodigiously prolific artist Chihuly's work balances content with an investigation of the material's properties of translucency and transparency

The things of this world reveal their essential absurdity when they are put in the Venetian context.
In the unreal realm of the canals, as in a Swiftian Lilliput, the real world, with its contrivances, appears as a vast folly.
Mary McCarthy

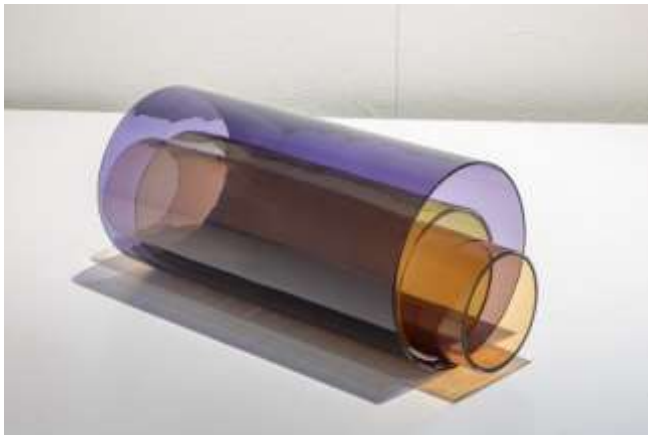
46

47

Samples of Contemporary Glass by Artists in Residence



48



Functional Requirements:

The studio project program includes; interior and exterior spaces for the Glassworks, new public campo, new public garden, and the connection of three public pedestrian paths of the city. It also includes shops/galleries, a ristorante, trattoria and portego.

Each of these elements is important, as is their successful interrelationship and architectural design. To be successful the proposed design must succeed at many scales, and be synthesized into the Venetian context.

See: https://allaboutglass.cmog.org/

1. Glassworks:

Glassworks includes Hot Shop Equipment Area, Art Storage, Studio Work Area, Public Seating, Artwork Storage and Public Areas.

1. Hot Shop Equipment Area:

1 @ Canned Heat Glass Studios, 400# Electric Moly Furnace
2 @ Canned Heat Glass Studios, 22" Glory Hole
2 @ Canned Heat Glass Studios, Large Warmer
2 @ Canned Heat Glass Studios, Large Bench
2 @ Canned Heat Glass Studios, Large Garage
8 @ Canned Heat Glass Studios, Annealing Oven 54", Stacked

Studio equipment can be "free standing" or "enclosed."
See: https://www.cannedheatglass.com/

Other Equipment:

Bulk Silica and Glass Storage, bagged and boxed
48" Color Rod Storage Racks
Mineral and Chemical Glass Tempering Materials
Glass Hand Tools & Glass Molds
Blow Tube Storage Racks
Protective Gear and Suite Storage
Acetylene Torch Storage Rack
Mobile Tool Chests
Mobile 36" x 36" Work Tables

2. Studio Work Area:

For two visiting craftspeople and three assistants, 16' x 32' +/- floor area with 30' minimum height floor to ceiling, two bench areas, and concrete floor adjacent to the Hot Shop Equipment Area.

3. Public Seating Area:

Fixed tiered seating for a minimum of 50 people.

a. The public must be restricted from entering the studio work area, but be able to see the artists at work, directly and via large screen monitors.

b. The Hot Shop activities can also be opened to the exterior in good weather permitting passers by seeing the artists at work.

4. Artwork Storage: (1,250 sq. ft.)

Rack and cabinet storage for finished artwork.

5. Public Areas, Maintenance and Utilities: (750 sq. ft.)

Including mechanical rooms, public and artist restrooms, housekeeping facilities.

Notes:

a. Each Glasswork's storage area must have direct access to a canal for the loading and offloading of materials and artwork.

b. Each of the four Glasswork's Hot Shops will work on independent schedules, and must have their own mechanical systems, private and public access, restrooms, security and egress systems.

c. The Glasswork's Hot Shops areas require stack natural and fan induced ventilation due to the extreme heat of glass making. This portion of the facility is not air conditioned.

d. The Glassworks Studio and Seating areas cannot have direct sunlight or shadows falling on the work area, which is necessary to provide safe working conditions.

e. The entire Glassworks Studio Work Area and Seating areas must have natural light, without shadows, of uniform distribution and low intensity throughout.

f. Waste heat from the furnaces is to be captured providing supplemental winter heating in conjunction with the ground water heat pump systems.

g. See the Contemporary Art Glass folder for examples of work that will be created in the Glassworks.

Glassworks: **4 @ 5,000 sq. ft. each**

49

2. Shop / Gallery:

Each of the four Shop/Galleries will display and sell both the past work of Dale Chihuly and the art that is currently being created by the eight guest craftspeople in residence.

a. The Shop-Galleries must be seen and be directly accessible from public pedestrian paths frequented by tourists and those simply passing by. They must have a "public presence" on either the campo and/or a major pedestrian path.

b. As a major source of revenue, the shops should be a special setting for the display and sale of the glass art.

c. Each shop will store its stock within the store's display areas.

d. The service counters should have direct sight lines to control the entry, have access to the display areas, to provide guidance for the visitor, and to provide security.

Shop-Galleries **4 @ 2,000 sq. ft. each**

Shop-Galleries Exterior Courtyards 4 @ 1,000 sq. ft. min.

a. The exterior courtyards are to be secure spaces, protecting the artwork that is on display from vandalism and theft.

b. Research and consider the type of exterior environment in which Chihuly and other contemporary artists might intend to display his art.

50

The following pages are examples of the work of Chihuly, some of which can be displayed in the four Shop-Galleries' secure exterior courtyards:

See: https://www.chihuly.com/work

a. *BASKETS* "I had seen some beautiful Northwest Coast Indian baskets... and I was struck by the grace of their slumped, sagging forms." –Chihuly

d. *INSTALLATIONS "Glass is the most magical of all materials. It transmits light in a special way." –Chihuly*

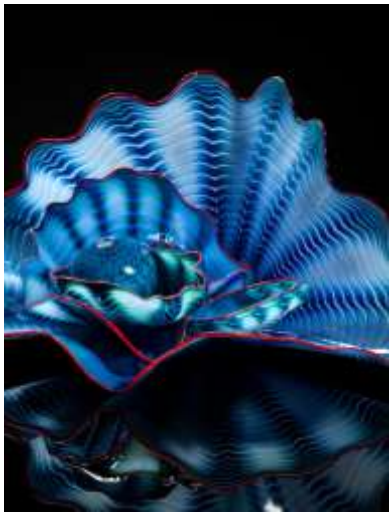
b. *CYLINDERS "We came up with this technique where we'd lay out little bits of glass on the steel table ….. and then pick it up with molten glass." –Chihuly*

e. *JERUSALEM CYLINDERS "...I love the look of glass crystals." –Chihuly*

51

c. *IKEBANA "The quintessential Ikebana would be a Venetian... with a long stem coming out of it, perhaps two or three stems. And it might be six feet high." –Chihuly*

g. MACCHIA "...I loved the…ones that seemed to make the least amount of sense, like the really crazy ones—purple and chartreuse." –Chihuly



h. PERSIANS "The Persians started out as a search for forms." –Chihuly

k. SEAFORMS "If you work with hot glass and its natural properties, it begins to look like something that came from the sea." –Chihuly

i. PUTTI "To me, the Putti look best made out of glass....Maybe it's because you can see through it. They're happier in glass." –Chihuly

l. SOFT CYLINDERS "Halfway into the blowing process, the gaffer comes down on the drawing with the molten glass and fuses it to the surface." –Chihuly

52

j. ROTOLO "Rotolo rekindled my excitement for working with clear glass. I was really amazed by the complexity and brilliance of the form." –Chihuly

m. VENETIANS "I started the series with the simple idea of replicating these strange Art Deco vases." –Chihuly

53

3. Trattoria and Ristorante:

As we envision the future visitor experience, we are delighted to be developing two exciting new dining options—for people who want a wonderful fine dining experience and for families with children looking for casual dining with lots of options.
Gail Harrity

Dining is to provide two very different experiences. One a Trattoria, an informal interior and exterior setting for the enjoyment of traditional Venetian meals. The second a Ristorante, a venue formal dining interior and exterior setting of Venetian cuisine.

a. Trattoria: The Trattoria is intended to maximize its relationship to the existing and proposed pedestrian movement around and through the site. A trattoria is less formal than a ristorante, but more formal than an osteria. There are generally no printed menus, the service is casual, wine is sold by the decanter or glass rather than the bottle, prices are low. The food is modest but plentiful (mostly following regional and local recipes) and in some instances, is served family-style at common tables.

The primary cooking area is to be in the open, and be visually part of the culinary experience, for as many patrons as possible including its adjacent counter seating. Careful attention should be made to the grouping of various types of seating in relationship to the architecture and surrounding contexts.

At other than the counter, the service is by waiter and waitress, which can also be serviced by dumb waiter systems to serving stations. Beyond the service of meals and snacks, the Trattoria is a place to relax, sit, converse, and possibly seek shelter from the rain, cold or the heat of the sun.

The Trattoria must be easily recognized by those walking by with an entrance that is directly found, and is easily accessible from canals and at least one public pedestrian path. The Trattoria's exterior informal dining area must located at grade. It must be able to be shaded from the sun and rain, and also have direct access to the food preparation areas.

b. Ristorante: The second dining experience is intended to maximize its relationship to the unique surrounding context. It too must be easily recognized from canals and public pedestrian paths.

It serves lunch and dinner only, and requires a single reception and waiting area for its patrons. The design should include seating areas of a variety of seating types appropriate to the architecture and surrounding context, and must accommodate individuals, two people, small or large groups. The exterior dining areas must be able to be protected from the rain and heat of the sun.

To have just a concessionaire wasn't up to the standards of what we were aiming for. We wanted to offer our membership and visitors something on a level of quality with the rest of the foundation.

Run by the Constellation Culinary Group, the reputation is to be for "Michelin Star fine international dining," serving locally sourced food, inspired in its creation of Venetian cuisine and within its own unique architectural setting.

Dining is and always was a great artistic opportunity.
Frank Lloyd Wright

The Trattoria will open to the public at 7:00 AM and closes at 12:00 midnight.

The Ristorante will open to the public at 11:00 AM and closes at 12:00 midnight.

They will both be open throughout the year, and in all weather.

The Trattoria and Ristorante food preparation areas are to be organized on the center meal cooking island layout (see examples in the Google Drive "Restaurants" folder), with surrounding dishwashing station, food pickup station, and dessert and salad preparation areas, including a separate entrance for food pickup and dish return.

The island-style layout places ovens, ranges, fryers, grills, and other principle cooking equipment together in one module at the center of the kitchen, while other sections of the kitchen are placed on the perimeter walls in the proper order to preserve a circular flow. This layout is very open and promotes communication with supervision of the food preparation. It also results in open floor space areas within minimum alcoves for easy cleaning. (Commercial kitchen design includes a complex set of requirements and regulations including fire protection, health and safety, specific ventilation requirements, food handling procedures, etc. which are not part of this course requirements.)

54

Trattoria Dining Area	**2,000 sq. ft.**
Kitchen and Storage	**500 sq. ft.**
Public Exterior Dining Area	**2,000 sq. ft. min.**
Ristorante Dining Area	**4,000 sq. ft.**
Kitchen and Storage	**1,500 sq. ft.**
Staff Restrooms & Changing	**1,000 sq. ft.**
Private Exterior Dining Area	**2,000 sq. ft. min.**

4. Portego:

Considering the uniqueness of the project site and context, the Director asks that the public spaces and circulation areas, including their planned and unplanned events, be considered as important as the required programmatic areas. She cites the success of the Piano and Roger's Centre Pompidou in Paris and Frank Gehry's Fondation Louis Vuitton also in Paris, where the public experiences may be more as significant and remembered than the art itself.

A primary function of the Portego is to host social and cultural activities of the Chihuly Glassworks Foundation throughout the day and at special times. (Traditionally Portego are the transitional spaces and connections between a canal and opposite pedestrian path of the city, and also connect the public realm of the ground plain to the private world of upper levels of a Palazzo.) It is intended that it also serves as gathering space, "salon-living room" for formal and informal events, live performances including music, plays and the spoken word. It is *not* intended to be an isolated or otherwise enclosed room. It is in effect an interior and private "Campo or Piazza" for the Glassworks.

It is intended that the Portego be a part of the public life of the Glassworks.

Portego **4,000 sq. ft. min.**

5. Glassworks Interior Public Spaces:

The Chihuly Glassworks Foundation is a cultural institution where the public spaces, places of socialization, rest and movement are central to the experience of the visitor. Dale Chihuly requires that the public (non-programmed) interior spaces of the building(s) be an important aspect of its architecture and the experience of the visitors. The architectural quality of all public circulation, meeting and relaxation spaces, i.e. "connections" between the functional elements, are meant to be memorable and significant.

Public spaces and their thresholds often announce and preface entrances to (functional) spaces.
They are integrated into the sequence of arriving and, with their braking properties, slow down those approaching.
In particular, thresholds in entrance areas organize the transition and mediate between outside and inside.
In their extended form or in summation, thresholds also create spaces. Together with space defining elements, they establish the staging for threshold spaces.
Till Boettger

Total **TBD**

6. Services & Administration

a. Portego Services: Coat Check Area, Furniture and Equipment Storage.
b. Administrative Offices: Director Suite, Administrative Assistant Office

Total **2,000 sq. ft. Est.**

7. Glassworks Foundation Logistics:

Materials will arrive by boat, will be docked inside, and loaded and off loaded into a secure area.

Art Handling and Packing Work Area	**2,000 sq. ft.**
Art Storage Rooms	**4 @ 750 sq. ft.**
Total	**5,000 sq. ft.**

8. Building Services:

It is necessary that the shipping and receiving, the building's general supplies, Trattoria and Ristorante's food stuffs, refuse and other materials be received or shipped by boat. Boats will be docked along a new fundamenta which leads directly to building's service entries or docked directly at the exterior of a building's services entries. Service areas above or below ground level require service elevators.

Building Maintenance Storage
Building Supplies Storage
Employee Restrooms / Lockers
Building Manager's Office

Total **4,000 sq. ft.**

Electrical Services Room
Sewage Pump Processing Room
HVAC Systems Room(s)

Total **4,000 sq. ft.**

55

9. Circulation & Services:

Public Restrooms	**TBD**
Egress Refuge Areas	**TBD**
Emergency Egress	**TBD**
Public Circulation and Gathering Spaces	**TBD**
Services Circulation	**TBD**
(See the IBC and ADA for requirements)	
Total	**TBD**

10. Glassworks Foundation Courtyard:

The Glassworks Foundation requires a private exterior courtyard for important social and cultural events such as its monthly musical performances, the benefactors' quarterly reception, hosting the three-month long annual events of the Biennale Art or Architecture festival and the Carnevale di Venezia.

It must be able to provide shade from the sun and rain, be open to the sky in good weather. It is intended that this exterior space be part of the Foundation's setting, and not directly part of the passersby's experience, or public promenade, On occasion, events in the courtyard will be required to be by invitation only or ticketed.

Private Courtyard **4,000 sq. ft. minimum**

11. Misericordia: Campo & Landscape:

Urban planning approval for the Glassworks Foundation is predicated upon the creation of a new public Campo / Piazza and Landscape / Garden within the project site area.

The quality of design of these two public functions is as important to the success of the Glassworks as architecture of the building itself.

The Campo and Garden can either be inter-related or separate spaces. They must be publically accessible throughout the day and night. They must also connect and be an integral part of pedestrian and boat movement around or through the project site.

A. Venetian Campi:

Streetscapes and piazzas are the principal sites of public life in this city. The squares vary in character, form, size and location in the city and offer a rich spectrum of urban experiences to residents and tourists alike. The creation of a new piazza for Venice is at first a dilemma, as it cannot be based upon on the original intentions and forces that created the historic spaces. While local neighborhoods remain, the cultural, economic, religious and political context from which these town squares were created no longer exist. However, the experiences we have in these historic settings are as real and important to the survival of Venice as its landmark structures and cultural history. Piazza or any successful urban square are experienced as spaces and events rather than as an object. The spatial experience is dependent on parameters derived from the laws of three-dimensional design, cultural influences and the dynamic effects of public life, time, variation of seasonal and weather.

As possibly the last streetscape piazza to be added to Venice, it can be formulated on the traditional precedents such as 1) “urban theater” or cultural destination, and/or with contemporary concepts such as 2) “landscape-urbanism”, an extension of Venetian gardens” 3) “aquatic-urbanism” an extension of the lagoon, or 4) “networked-square,” an extension of city, region international communication.

Open, irregularly shaped stone paved public space are surrounded by buildings and ground floor activity: the buildings, which vary scale, historical period, height (up to five stories) and in function. They often contain small shops on the ground floor and private dwellings above. Campo are usually located at the crossing point of pedestrian routes.

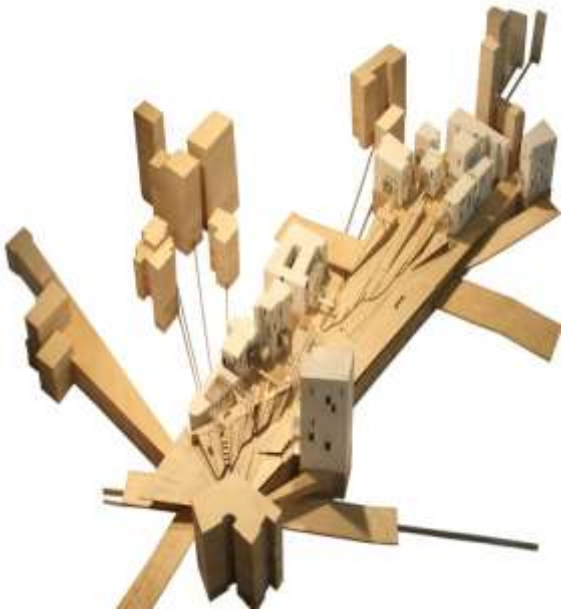
A large piazza can bring together ten to fifteen thousand people, of every age and social background, living and working within its neighborhood. It is the village square, public living room, where elders sit and talk, where chance meetings occur, where teenagers flirt, children play, where there are farmers' markets, outdoor theaters, street performances, and where family or community festivals take place.

They are unique in their variety, unpredictability, relief from the dense, narrow passages of Venice, diversity of activity, visual character, and landmark qualities, yet most were anything but formally planned. They were the result of a process for centuries. While a few contain a tree or two, most are fundamentally empty. Almost all have outdoor seating and very importantly are connected to the functions and activities of the surrounding building’s ground floor.

Whoever enters the interior of this city never knows what he will see or by whom he will be seen in the next moment. No sooner does anyone appear than they have already left the stage through another exit.
Winfried Georg Sebald

To the guest, Venice is experienced as the city of campi, narrow pedestrian passageways, narrow canals, bridges and of course the Grand Canal. There are eighteen major campi in Venice, with many dozen more smaller public campi. The historical center of religious, political, cultural and commercial life of separate neighborhoods, campi provided and continue to provide the public “living room” in which goods are sold, artists perform, families celebrate, children play, neighbors watch the “”world pass by” and one of the many destination point for tourists. They are also landmarks, places to meet, find ones bearings in Venice’s dense and highly complex urban fabric.

Anfiteatro Campo, Lucca, Italy	150 x 250	37,500
Campo Dei Fiori, Rome, Italy	150 x 350	52,500
Grand Place, Bruge, Belgium	300 x 300	90,000
Medina, Tunas	150 x 150	22,500
Cheske Budejovice, CZ	400 x 400	160,000
Market Place, Warsaw, Poland	240 x 295	70,800
Square, Prague, CZ	300 x 400	120,000
Piazza Campo, Siena, Italy	300 x 350	105,000
San Gimignano, Italy	130 x 150 + 80 x 100	12,000 + 8,000
Piazza Duomo, Milan, Italy	350 x 500	175,000
Piazza Erbe, Verona, Italy	125 x 400	50,000
Piazza Maggiore, Bologna, Italy	350 x 400	140,000
Piazza Mayor, Madrid, Spain	308 x 423	127,500
Piazza San Carlo,Torino, Spain	200 x 450	90,000
Piazza San Marco, Venice, Italy	260 x 500	130,000
Piazza Signoria, Florence, Italy	250 x 350	87,500
Place des Heros, Arras, France	200 x 400	80,000
Place Vosges, Paris, France	450 x 450	202,500
Plaza Dubrovnik, Croatia	40 x 700	28,000
Plaza Mayor, Salamanca, Spain	250 x 250	62,500



56

It's a deliberate gap that interrupts the mass and clamor of buildings and streets, breaking up the flow of daily business and creating a space where people can come together, by design or happenstance.
City squares are planned absences—they're defined, first of all, by what they're not.
A city park already has a definition (grass, trees, paths) that tells you how it's to be used: for leisure, for recreation, as a withdrawal from the city, with the illusion of being in nature and often alone.
Squares unlike parks, don't take you out of the city.
As an extension of urban life, neither natural nor solitary, they're of the city as well as in it, but with a function that alters through history.
Because of their very emptiness, they are full of possibility.
Their essential feature is open space, and their essential function is sociability.
Where much in the modern city is private and inaccessible, squares are for the public.
People gravitate to them in order to yak, kibitz, palaver, gossip, argue, show off, watch, eavesdrop, play, protest, hustle, cn, love, fight.
In the case of Italian piazze, French places, and Spanish plazas, the restaurants, cafés, and shops that line the perimeters encourage the ease of human encounters.
Even squares built to a more modest scale can seem like pockets of (welcome solitude or) isolation at the heart of a city, where the urban buzz suddenly goes quiet.
They possess a theatrical quality, as if the square is a stage and everyone in it a performer, even if the assigned role is that of an audience member.
George Packer

57

Public Exterior Space Requirements:

Campo and Garden 40,000 sq. ft. minimum.

B. Venetian Gardens:

Because Venice was created by filling the salt marshes of the lagoon, its soil and natural landscape is an important resource. Every cubic foot of the wetlands is important. Although the depth of topsoil is limited to a foot or two, and gardening and natural landscapes are an important part of Venetian life. As the Venice grew from many small agrarian islands to the extremely dense urban city, natural settings have transformed from agricultural needs to places of refuge, shade, decoration.

There are more than 500 private gardens in the city, with only one public park. Most of these gardens are invisible as they are hidden behind the facades and walls of the palazzos. The majority of gardens and courtyards are completely private. Even a small garden in Venice, even when enclosed by high walls, has all the elements of a grand garden creating a landscape of drama and solitude. Water, sky and vegetation, climbing vines, shrubs, trees, and other elements provide an escape from the narrow pedestrian streetscape, and density of the city.

Adjacent to the project site is the Scuola Vecchia, which has two private gardens that began in the 15th century. The first part is the courtyard of the former convent of Augustinian monks. Its aromatic herbs and older plants date from the medieval period. Although this garden is adjacent to the Misericordia project site, it is generally not accessible to the public.

The most publically accessible gardens of Venice are located at the Eastern end of the city, within and adjacent to the Biennale site. They take the form of a traditional “park of lawn and trees.” The new public garden-landscape adjacent to the Glassworks will be the first major public garden along the Fundamenta, and in the northwestern area of the Venice. To succeed over time it must be to be self-maintaining, incorporating new landscaping technologies for minimal use of water, insecticides and also be soilless. New technologies permit new landscaping strategies, forms and experiences.

As the project site is located at the edge of the Venetian lagoon, is adjacent to one of the primary canals entering Venice, and adjoins, albeit hidden, two important private gardens. It is the boundary or connection between the dense city and the natural landscape of the lagoon.

58

C. Architectural Landscapes:

Waterscape: saline lagoon, canal and rio, water garden, reservoir. tidal, reflecting pool, reservoir. natural vegetation. waterways, water displays: water jets and walls, cascades, accessible waterscape. Playful. Calm, Theatrical, Winter-scape, Summer-scape, Night Lit, Turbulent and Still, Reflective and Opaque,

Natural Landscape: untamed, never pruned, indigenous materials, reaching its own equilibrium, illustrating the natural cycles of growth and decay. With are no specific paths, nor absolute edges. Natural landscapes are self-maintaining, composed exclusively of indigenous flora and fauna. They evolve into a natural equilibrium with climate, soils and weather.

Formal Landscape: creates orchestrated sequences that are integrated into and derived from the classical forms in the city landscape. Plant materials are cultivated for specific effect, trimmed to control and define man made form, and are selected for specific horticultural events throughout the year. Architectural landscapes are outdoor rooms, capable to be enclosed or open to vistas. Their forms, colors, textures and details are often derived from the characteristics of the adjacent and related architecture.

Self-sustaining Landscape*:* self-maintaining, water conserving, soil-less, non-chemically dependent, lightweight. New technologies create an orchestrated series of displays and harvests. No longer ground based, landscapes forms vary from thin lines to vertical planes, from static to dynamic movement. Systems respond to variations seasonal, daily and weather conditions.

Project Site from West

59

See Studio's Google Drive:
"Landscape"

I do not divide Architecture, Landscape and Gardening; to me they are one.
Luis Barragan

The world is moving into a phase when landscape design may well be the most comprehensive of the arts. Man creates around him an environment that is a projection into nature of his abstract ideas.
It is only in the last century that the collective landscape has emerged as a social necessity.
Geoffrey Jellicoe

I must have nature to be soothed and healed, and to have my senses put in tune once more.
John Burroughs

A path can become the thread of a plot, connecting moments and incidents into a narrative.
The narrative structure might be a simple chain of events with a beginning, middle, and end.
It might be embellished with diversions, digressions, and picaresque twists, be accompanied by parallel ways (subplots), or deceptively fork into blind alleys like the alternative scenarios explored in a detective novel.
Charles W. Moore, William J. Mitchell, and William Turnbull

60

Landscape References:

Landscape Architect	Project
Burchhardt	MFO Park
Carlo Scarpa	Brion Cemetery
Carlo Scarpa	IVAV Courtyard
Carlo Scarpa	Querini Stampalia Courtyard
Diller Scofidio Renfro	Highline, NYC
Ecosistema Urbano	Ecoboulevard
James Corner	Field Operations projects
Patrick Berger	Parc Andre Citroen
RO&AD Architects	Moses Bridge
Bruno Munro	
Fernando Caruncho	
Kathryn Giustafson	
Peter Latz	
Piet Oudolf	
Wirtz International	

The Poetics of Gardens: Moore, Mitchell, Turnbull, MIT

61

Program Space Summary:

1. Net Square Foot Interior Areas:

Total Interior Net Square Feet: (a + b)	56,000 sq. ft.
a. Interior Public Spaces	38,000 sq. ft.
b. Interior Service Spaces	18,000 sq. ft.
c. Restrooms	TBD
d. Public Spaces, Circulation and Egress	TBD

Estimated Gross Interior Sq Ft

69,000 to 84,000 cu. ft.

Estimated Gross Interior Volume:

1,500,000 cu. ft. to 2,000,000 cu ft.

Maximum Building Ground Cover Area: 20% of site.

2. Exterior Glassworks Foundation and Public Areas:

a. Shop-Gallery Courtyards	4 @ 1,000 sq. ft. minimum
b. Foundation Exterior Spaces:	8,000 sq. ft minimum
c. Public Campo and Gardens:	40,000 sq, ft. minimum

Architectural programming consultants have provided a list of net floor areas that are predictions only, based upon interviews with clients and in comparison to similar projects.

All Net Square Foot areas are preliminary estimates only, and can be adjusted by plus or minus 10% of the Net Square Foot Floor areas indicated.

Net floor areas do not include the area of wall thicknesses, emergency egress, public egress and gathering spaces, staircases, ramps, public and service elevators, escalators, restrooms, double or triple height spaces, light wells, etc.

The Total Gross Floor Area, including all programmatic interior spaces, restrooms, stairs, storage areas, service areas, mechanical spaces, elevators and escalators, interior and exterior walls, public and egress circulation, is anticipated to be approximately 125% to 133% of the Net Square Foot Floor area.

Regulations, Requirements & Data:

a. The maximum height of the occupied building interior envelope is 103' – 7" above Sea Level.

b. Occupied or unoccupied exterior (not heated or cooled) open or roofed spaces, canopies, shading devices, and other construction can occur to a maximum height of Elevation 128' – 7" above Sea Level.

c. The Moses system to mitigate against the rise of maximum sea level, or flood stage of the lagoon permits the assumption that flood control measures will protect the island from flooding above the Elevation of 3.00 Meters above Sea Level.

d. Buildings in Venice either extend continuously from the shallow lagoon floor on compacted soil, or are significantly above the water, creating covered occupy able exterior spaces, pedestrian passageways and navigable channels or canals.

e. Any proposed covered, semi-covered exterior space or waterway must permit sufficient natural ventilation and daylight whether proposed for occupation or not.

f. Dock-like construction over the water is not permitted, except for marinas and their walkways.

g. The Venetian Lagoon is tidal, rather than at a relatively fixed elevation of a lake or pond.

h. Venetian weather should be analyzed to determine the extremes and patterns of weather on the design of interior and exterior spaces and architectural characteristics:

i. The Universita luav di Venezia's urban plan and design standards require that all new construction be related to the morphology of the historic city as described below:

1) Responding and relating to the variation in scale of the surrounding Venetian context.

2) Continuing the scale and continuity of building façades that enclose the canal spaces.

3) Continuing the fundamenta's pedestrian walkway into the adjoining neighborhoods.

4) Providing dual and equally important pedestrian and boat access to the Glassworks.

5) Developing public piazza and gardens that are an integral extension of existing the urban fabric.

6) Integration of private courtyards within the Glassworks site.

7) Responding to and expressing the unique experiential and phenomenological characteristics of Venice.

j. The maximum Building Coverage of all building interior spaces, (from exterior face of exterior walls) is 20% of the total lot area.

k. All areas, other than unoccupied storage and mechanical spaces must have natural light as per the International Building Code.

l. Building maintenance services will occur between Midnight and 8:00 AM.

m. All occupied and un-occupied interior spaces will be protected by fire suppression and smoke exhaust systems.

n. All elevator lobby areas, egress and other stairwell landings will be equipped with emergency call and communications systems.

o. All energy consumption for the project will be exclusively electrical, with supplemental high efficiency geothermal ground water based heat pumps for heating and cooling, and alternative energy sources such as photovoltaic systems for electrical services.

Energy must be also recaptured from the four hot shop's chimneys.

The required supplemental system is composed of the following:

Nordic: W-1000 Commercial Water to Water Heat Pump

Size = 29" x 60" Vertical Configuration

Heating: 1,076,100 Btu/hr EWT = 104 F
Input = 74,774 Watts COPh = 4.22

Cooling: 981,700 Btu/hr EWT = 54 F
Input = 47,213 Watts COPc = 6.10 EER = 20.8

Number of W-1000 systems is dependent upon maximum hourly heating and cooling loads.

See: https://www.nordicghp.com/for-dealers/manuals-and-specifications/

p. The Glassworks is freely open to the public and does not sell tickets.

q. Materials and building systems for the design must accommodate the high level of humidity and the saline climate.

62

r. The water quality of Venice's canals varies substantially in quality throughout the year. Swimming or bathing in any waterway of Venice is profited by law. The open lagoon is relatively clean, although saline.

s. Contemporary landscape architecture design strategies should considered new technologies and systems, which are self-sustaining, require few resources, minimal fresh water, do not require soil, and can be automatically maintained.

t. Seasonal change in Venice can be significant, including snow, ice covered canals, high and low water, fog, high humidity and temperature. The weather of Venice is extremely dynamic throughout the day. In the Spring and Fall, the day begins overcast with fog, and clears by mid-morning to often sunny skies.

u. Venice, more than virtually any other inhabited city, is a physical and experiential record of the past, thirteen hundred years of history, and beginning in the year 697. The project should incorporate the expression of "time" as a component of the design.

Time can be considered in many ways such as the history of the city, the character of the weathering of exterior facades, the seasonal transformations, the patterns of cultural events, the cycling of day and night, the slowness of pedestrian and boat movement through the city, the isolation of Venice from the events and pace of the "outside world."

Time and distance is measured differently in Venice. The pedestrian travel, combined with complex travel routes, results in slower and closer experiences. Time and distance is experienced differently in Venice. As a result, the details of the city life and its architecture are readily seen.

63

v. Building surfaces in Venice are either decorative, or simply the expression of the fundamental material of which they are made. Surfaces often show decay and the effects of time, which is most apparent at the changing water line. Although paradoxically unit masonry, they are covered with a veneer for water protection and expression of design aesthetics.

w. The Glassworks Foundation directors seek a design for the Glassworks that "is part of both the natural and urban context." And, therefore, require that the design *"not be floating",* i.e. *"not like boarding or occupying a boat."* They seek a design that is "part of its place and time" rather than "*moored at the fundatmenta*."

x. How should the design be influenced by the differing scale and functions of the adjoining architecture to the south, west or east, and the open lagoon to the north?

y. How should the path(s) of movement through the four glass hot shops and other functions of the program be orchestrated?

z. After tourist attractions close, tourists and residents alike dine, walk, socialize and enjoy the Venetian evening. How can the Glassworks Foundation become part of this traditional?

Adjacent Context:

64

65

Project References:

Advanced Studio I Google Drive:

The Studio's Google Drive is the primary reference for the studio project and includes the following:

Architectural References
Art Glass
Cafes & Shops
Carlo Scarpa
Concepts & Theory
Digital Site Model
Facades
Hotshops
Landscape
Presentation
Site
Student Work
Sylabus
Technical References
Venice
Video

Conceptual Design Texts:

Architecture Principia: Borden & Andrews
https://www.pearson.com/en-us/subject-catalog/p/architecture-principia/P200000000814/9780133112023

A Language of Contemporary Architecture: Luna & Yim
https://www.routledge.com/A-Language-of-Contemporary-Architecture-An-Index-of-Topology-and-Typology/Luna-Yim/p/book/9781032245386

1. Readings:
a. Thinking Architecture (Peter Zumthor)
b. Layers in Architecture (Carlo Scarpa)
c. The Picturesque and Serial View, (Gordon Cullen)
d. Urban Composition, (Leon Krier)
e. Nodes and Networks, (Bernard Tschumi)
f. Heterogeneous Systems, (Rem Koolhaas)
g. The Venice Variations; Sophia Psarra; www.ucl.ac.uk/ucl-press
h. AuftritteScene: the Campi of Venice; Janson & Burklin, Birkhauser

2.Venetian Landscape:
a. The Venetian City Garden: John Dixon Hunt, Birkhauser
b. The Gardens of Venice: Albrizzi and Pool, Rizzoli

3. Architectural History:
a. http://en.wikipedia.org/wiki/Acqua_alta
b.http://www.comune.venezia.it/flex/cm/pages/ServeBLOB.php/L/EN/IDPagina/22795
c. The City of the Falling Angels: John Berendt, Penguin
d. Francesco's Venice, Da Mosto, BBC
e. History of Venice: John Julius Norwich, Alfred Knopf, 1981
f. Venice: An Architectural Guide: Biucchi and Pilling, Batsford, ISBN071348781X
g. A History of Venetian Architecture: Concina, Cambridge, 1998.
h. A Guide to Venetian Domestic Architecture: Egle Trincanato, Canal & Stamperia
i. Venice: the city and its architecture: Goy, Phaidon, 0 7148 3005 4

4. Websites:
Google Images
Archdaily.com
Flickr.com

5. Venetian Landscape:
a. The Venetian City Garden: John Dixon Hunt, Birkhauser
b. The Gardens of Venice: Albrizzi and Pool, Rizzoli, 0-8478-1121-2

6. Chihuly and Art Glass:
a. http://www.chihuly.com/
b. https://en.wikipedia.org/wiki/Dale_Chihuly
c. Venetian Glass, Charta 88 8158 296
d. Glass: A World History, MacFarlane / Martin, University of Chicago
e. Chihuly: Form from Fire, Dale Chihuly, Portland Press, ISBN 978-0933053069
f. Chihuly: Donal Kuspit, Abrams, ISBN 0810963736
g. The Art of Dale Chihuly: Timothy Burgard, Chronicle Books, ISBN 978-0811866088
h.https://www.youtube.com/@corningmuseumofglass/videos

66

7. Architectural Theories and History:
a. *** Concise Townscape: Cullen***
*b. * Embracing the Square: Duncan Corrigall And Byera Hadley*
*c. * Layers in Architecture;*
*d. * Process and Theme in the Work of Carlo Scarpa; Giuseppe Zambonini*
*e. * The Pleasure of Architecture: Bernard Tschumi*
f. The Genealogy of Cities, Charles Graves, Jr.

8. Venice and Site References:
http://map.openseamap.org/
http://aerialphotoimage.com/360/Venice/VeniceAerial.html
http://en.wikipedia.org/wiki/List_of_city_squares
http://en.wikipedia.org/wiki/List_of_city_squares_by_size
http://evolution.veniceprojectcenter.org/evolution.html
http://www.360cities.net/search?utf8=%E2%9C%93&query=venice+italy
http://www.airpano.com/360Degree-VirtualTour.php?3D=italy-venice
http://www.gigapan.com/gigapans?tags=venice
http://www.panoramas.dk/fullscreen6/f7-venice-gondola.html
https://sites.google.com/site/ve13cart/
http://www.pcn.minambiente.it/viewer/
http://www.pcn.minambiente.it/viewer/index.php?services=dtm_20m
http://canals.veniceprojectcenter.org/latency/
https://www.silvenezia.it/
https://portale.comune.venezia.it/content/open-data-urbanistica

http://tiles.arcgis.com/tiles/j80Jz20at6Bi0thr/arcgis/rest/services/Venice_Structures/MapServer/0
http://map.openseamap.org/
http://aerialphotoimage.com/360/Venice/VeniceAerial.html
http://en.wikipedia.org/wiki/List_of_city_squares
http://en.wikipedia.org/wiki/List_of_city_squares_by_size
http://ivrpa.org/?s=venice&submit=
http://ivrpa.org/panorama/sunset-in-venice-italy-3/
http://ngm.nationalgeographic.com/2009/08/venice/venice-animation
http://sit.comune.venezia.it/cartanet/cartanet.asp?idcat=13
http://venice2point0.org/
http://www.venipedia.org/wiki/index.php?title=Main_Page
http://evolution.veniceprojectcenter.org/evolution.html
http://www.360cities.net/search?utf8=%E2%9C%93&query=venice+italy
Results.php?search_form=venice&submit_search=Search
http://www.gigapan.com/gigapans?tags=venice
http://www.panoramas.dk/fullscreen6/f7-venice-gondola.html

10. Reference Urban Squares, Piazza and Campo:

Misericorida Marina, Venezia, Italy	**500 x 500**
Place Vosges, Paris, France	450 x 450
Anfiteatro Campo, Lucca, Italy	150 x 250
Campo Dei Fiori, Rome, Italy	150 x 350
Grand Place, Bruge, Belgium	300 x 300
Namesti Otakar, Ceske Budejovice, Czech	400 x 400
Old Town Market Place, Warsaw, Poland	240 x 295
Old Town Square, Prague, Czech Republic	300 x 400
Piazza Campo, Siena, Italy	300 x 350
Piazza della Cisterna, San Gimignano, Italy	130 x 150
Piazza Erbe, Verona, Italy	125 x 400
Piazza Maggiore, Bologna, Italy	350 x 400
Piazza Mayor, Madrid, Spain	308 x 423
Piazza San Carlo, Torino, Spain	200 x 450
Piazza San Marco, Venice, Italy	260 x 500
Piazza Signoria, Florence, Italy	250 x 350
Place Stanislas, Nancy, France	300 x 350
Plaza Dubrovnik, Dubrovnik, Croatia	400 x 700
Place des Heros, Arras, France	200 x 400

11. Architectural Precedents:

Heavy:

Maryhill Overlook	Allied Works
Corte San Pietro Hotel	Daniela Amorso
Innovation Center	Alejandro Aravena
Zamora Offices	Albert Campo Baeza
Alcarcer do Sal Residences	Manuel Aires
MateusIglesia de Santisimo	Fernardo Menis

Light:

Barrio del Foro Romano	Amann Canovas Maruri
Everday Coffee Pavilion	Sean Godsell
Villa Roces	Govart Vanhoutte
Ingfah Restaurant	Tungthunya

Urban Square:

Lantern	AWP Atelier Oslo
Brick Put Ring Walk	Bloch Durbach
Ecoboulevard	Ecosistema Urbano
Vieux Port	Norman Foster
Market Hall Ghent	Robbrecht & Daem

Landscape:

Parc Andre Citroen	Patrick Berger
MFO Park	Burckhardt
High Line	Diller Scofidio Renfro
Moses Bridge	RO&AD Architects
Parc Della Villette	Tschumi

I. Architectural Concepts and Theories:

The history of architecture is defined by trends and principles that repeat and reoccur.
The evolutionary nature of function and form, and the interrelationship of the way in which building types are conceived, define the meaning of our largest cultural objects.
The built world as a mediator of daily life and a snapshot of cultural technology and humanity embodies a moment of time and an associated way of thinking.
Every piece of architecture emerges from a context that is specific and rational.
Theories are attempts to resolve known problems that are fundamenta
I to how we think. understand and make architecture. These principles establish a genealogy of thought manifested through form.
Architecture Principia: Borden & Andrews

My premise is that fundamental questions simply do not go away, nor can they be assigned to particular past periods. While "answers" are tied to the time of their foundation, fundamental questions in architecture persist and the understanding and experience of their persistence actually makes up the structure of architectural reality.
David Leatherbarrow

The polarity and diversity of great contemporary works of architecture do not immediately suggest a shared set of design concepts, principles or philosophies. Often this diversity is discounted to be the expression of the architect's personality, contemporary fashion, the new, shocking or simply well photographed. There are however a set of architectural concepts and theories which are sufficiently fundamental to have existed through millennia, and maintain their significance without prescribing transitory outcome.

Things are not important; rather it is the relationship between things that matters.
Antoine de Saint-Exupéry

Design Concepts: The following five sets of architectural concepts and their polarities are inherent in any work of architecture throughout time:

A. Singularity, Linearity and Network
B. Order verses Disorder
C. Contextual verses Abstract Urban Morphology
D. Heavy verses Light
E. Mono-Type verses Multi-Type.

Architectural Theories: As architectural history includes philosophies and traditions of design derived from collective evolution over time, and those defined by an individual. While they include "style or period" their implications for architecture and urban design are far more fundamental, determining the natural, urban and architectural world. Each expresses a combination of collective and personal values that define design strategies, variables, rules and decisions.

The following four design theories trace architectural ideas and traditions throughout time:

F. Picturesque
G. Formal
H. Nodal
I. Composite

A. Singularity, Linearity and Network: One of the most fundamental systems of form and order is singularity, linearity, and network:

A singular form, a dot, defines and locates a center of importance, forming relationships to all the surrounding conditions. It can establish presence and landmark status, or be predicated on idealized geometric systems.

A line defines a linear system, establishing sequences, beginning and end, differentiating sides, a sequential ordering system in time, space and experience.

A series of adjacent, perpendicular, askew or overlapping lines defines a network system. Elements are both connected and distributed. Elements are nodal connected by paths and spaces.

Singularity, Linearity or Network systems order and define form which create the shape, scale, relationship of interior and exterior spaces differently. The choice establishes primary relationships to environmental conditions such as the path of the sun, prevailing winds. The choice orchestrates experience by defining significant views, enclosing space, sequencing events. It becomes the underlying system for defining spatial and functional relationships, structural systems, etc.

1. Singularity: The separation and differentiation of a cultural work of architecture is often accomplished by its singularity as it is located in the background vernacular context. Often the landmark characteristics provide hierarchy and wayfinding within the larger urban or natural context.

2. Linearity: A thin and linear form creates site-scale transitions separating the surrounding contexts. It permits the creation of an orchestrated sequence of movement and space that connects activities and contexts. At the larger scale, it can create a series of adjacent urban scale forms, events, paths. Openings within the linear form create passageways or transitions from one side to the other.

Locations in the middle, ends, edges, in-between, are all a profound influence upon the buildings functional relationship to their immediate surroundings, the scale of the design, the movement of people to, through or around the design. Linearity in this context can emphasize panoramas; connect riverbanks, streets or pedestrian movement, correlate to solar movement patterns and seasonal variations.

Linearity separates one side from another. Its thinness divides to varying conditions such as North and South, East and West, etc. The thinness of linearity connects through its transparency, doubling of orientation and connection between inside and outside. Linearity suggests a scale associated with urban systems, infrastructure, landscapes and urban form.

3. Network: A series of paths, interlocking or distributed forms permits ordering systems to create a network of spaces, events, with a series of interior and exterior spaces closely integrated into the context. It potentially separates events and building forms. It can be a series of paths and destinations, patchwork of spaces and enclosures.

Network reduces the scale of functional elements, permits each element to be unique, influences and completes the entire content, is integrated or directs pedestrian movement and experiences, serializes events.

B. Order verses Disorder: The degree to which a system of form is organized, the degree to which the rules of its composition are recognized defines the Order and Disorder spectrum. It can be compared to music; harmony verses dissonance.

1. Order: develops alternative designs from highly ordered, pattern based, rectilinear rooms, spaces and sections, well accommodate programmatic functions, close packing and efficient, are easily measured, are generally repetitive and predictable, provide uniformity of structure or modularity. Repetitive or Tartan Grids, Centerline Relationships, Modules, Proportional. The traditional ordering systems have a nested relationship; created urban patterns, city blocks, building form, individual rooms and spaces, closets and alcoves.
Ordered systems may be discrete "idealized forms," extensions to existing axis, related to formal patterns and geometries of "manmade" environments. Overall, the order is recognizable and defined by a well established set of rules. Extreme ordered systems can result in boredom, fatigue, disorientation, un-functionality, environmental and contextual miss-fit.

2. Disorder: develops alternative design from abstraction of form and geometry non-orthogonal plans and sections, irregular structural patterns, complex shapes and facades, new spatial experiences and functional relationships, novel structural and enclosure systems, a new aesthetic or style.

Disordered systems may appear highly unique, complex, un-understandable. Extreme dis-ordered systems can result in fatigue, disorientation, un-functionality, environmental and contextual mis-fit.

C. Urban Morphology: To what degree should architecture, at its many scales, be derived from its surrounding context, extension of the lineage, traditions and patterns of development? To what degree should architecture, at its many scales, be derived from differing patterns and forms, establishing new relationships, forms and visual characteristics?

1. Contextual Urban Morphology: Urban and building form, including exterior private and public spaces, can be derived from extending and completing the specific characters of the surrounding context through maintaining its scale, patterns of form and movement, relationships of function, fundamentals of aesthetics, materiality, color, etc. Carried to extreme, it can result in caricature, lack of authenticity, pastiche. Architectural history cannot be repeated.

2. Abstract Urban Morphology: Urban and building form, including exterior private and public spaces, can be derived from abstract or new patterns of form and movement, redefining the relationship between functions, new materials and responses to contemporary social and environmental conditions, such as energy conservation and sustainability. Carried to extreme, it can result in private statements or radical events, welcomed as today's fashion but dismissed tomorrow. It can result in dysfunctional relationships between buildings, functions, and aesthetics. Architectural contexts in which relationships between its elements are non-existent or broken.

D. Heavy verses Light: develops alternative experiments derived from pre-existing images of 2D and 3D conceptual models which suggest a spectrum from enclosed to open, thick to thin, etc.

1. Heavy architecture: has a relationship to the materiality context; earth and stone.

2. Light architecture: has the potential to maximize the relationship between the interior functions and the exterior natural and urban landscape.

E. Mono verses Multi Type: develops alternative designs that vary the sameness or uniqueness of the form, order and character of architecture at many scales. This suggests sets, pairs, patterns, and groupings.

A strange and compelling contradiction exists in architecture today.
As digital communication and digital tools make everyone and everything in the world more accessible and more alike, there remains a powerful desire to express qualities of difference unique to each regional community, each specific place, and each individual designer.
Global digital unification also fosters an equally powerful desire to express new ideas in architecture independent of regional place, which fosters a voracious appetite for a new global architecture built around common ideas, not common place.
James Stevens & Ralph Nelson

69

1. Mono-Type: resolves or perfects a single element, functional, structural, environmental, etc. into a repeatable element. The relationship between the elements is both derived from the sameness and relative position. The pairing of two mono-type elements create the simplest set. A grouping of mono-type elements creates series and sequences. Exclusively mono-type systems of design risk monotony, and disorientation.

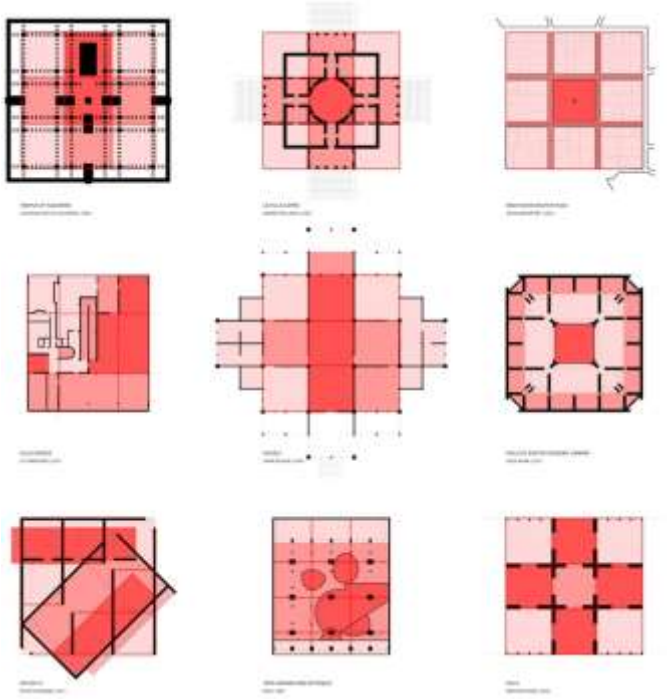
2. Multi-Type: resolves or perfects each element for its unique function, position in context, solar orientation, visual aesthetic, etc. The relationship between the elements is both derived from similarities and differences. A random grouping of multi-type elements can be both monotonous and disorientating

F. Picturesque (Cullen): Architecture and urban design orchestrating the scale, variety, hierarchy, visual characteristics, and movement patterns to provide a story based or theatrical set of experiences. The spaces between buildings and their facades become the "stage-set" of public life.

G. Formal (Krier): Architecture and urban design ordering the relationships between the public exterior spaces, building elements and movement patterns of the context, to create design strategies at multiple nested scales. The relationships of scale, axis, aesthetic, etc. result in rooms becoming coherent buildings, buildings becoming blocks, blocks becoming neighborhoods, and neighborhoods becomes cities. Often Formal systems are intended to provide permanence, as sense of history, cultural lineage.

H. Nodal (Tschumi): Architecture and urban design structured through its systems of pedestrian movement, its points of intersection and nodes of hierarchy of events, A time and experience based system of paths to, connecting with, and experiencing differing functions, both interior and exterior. A system of movement and discovery, a patchwork of places or landmarks interconnected, experienced through a combination of hierarchical paths or random patterns of movement.

I. Composite (Koolhaas): Architecture and urban design that combines and interrelates functions, interior and exterior areas, movement and space into a overlaid, heterogeneous and less differentiated system. Composite systems are often adaptable, strategized to combine diversity and difference. Composite systems may purposefully negate rules, traditions, precedent. Often composite systems are intended to adapt over time.



Singularity:

At the Center, Differentiated, Self-Contained, Internally Ordered, Set Apart, Separated

Inherent in the project is the expression of a culturally significant work of architecture. To be recognized and valued over time, through its relationship to the surrounding context. Whether courthouse, museum, library, religious structure, or other cultural institution, singularity is integral it their expression of value.

The collective recognition of cultural value requires singularity to be separated from the vernacular or background context. Conversely, singularity expressed by uniqueness or novelty risks obsolescence or dismissal over time. Replicating past architectural characteristics discounts the integrity of the new cultural institution, while solely personal or unique architectural characteristics may not find lasting value or positive recognition.

Singularity can be created through idealized formal or geometric ordering systems, such as the Palladio's 1567 Villa La Rotonda's outside Vicenza, Italy. It's completely symmetrical design, intersection of cross and square plan, 3x3 grid, with central circular hall and dome, and four porticoes.

All proportioned in plan, section and elevation to proportional ratios and patterns. From each of the four porticos there are panoramic views to the surrounding countryside, as the Villa sits both on top and within the surrounding landscape.

Singularity can be created by new forms and aesthetics. The 2014, Fondation Louis Vuitton by Frank Gehry has been received as a unique, emblematic and bold building, presentation Paris with an extraordinary space for art and culture.

To reflect our constantly changing world, we wanted to create a building that would evolve according to the time and the light in order to give the impression of something ephemeral and continually changing.
Frank Gehry

71

Historically, centralized systems have been the most common organization system. A centralized system is one that focuses on a central space or object in the plan.

Centralized systems come in the form of squares, circles, ovals, triangles, and stars. Often the space can be recognized as a singular. self-resolving, and formally complete entity, such as a church interior or a courtyard. In other examples, it might take the form of a solid structure or object, either as an architectural (building) or urban (city) element.
Architecture Principia

Linearity:

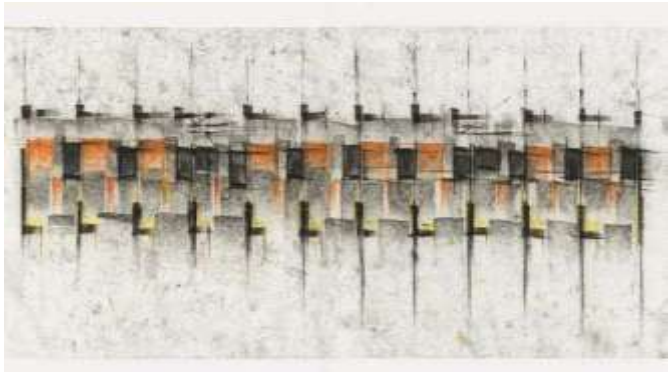
Sequence, Dividing, Thin, Ends and Middle, Short verses Long, Perspective, Distance, Opposing Sides

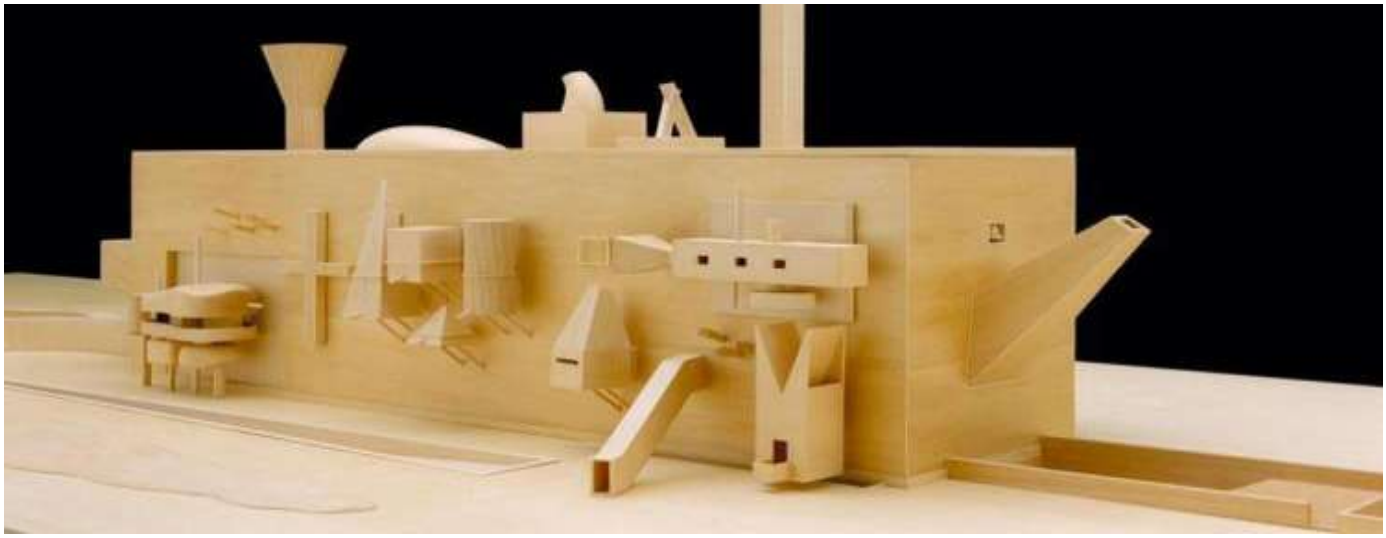
Inherent in the project is the expression and benefits of the linear building envelope. The building envelope's length and narrowness is similar to the collection of many similar and different "pieces" which are part of an urban block. The narrowness and proportion of the building envelope can be developed as a discrete sequence of varying events or spaces, an assembly of differing building forms, floor heights, number of stories, all with a variety of scale and architectural characteristics. But, the simple linear building envelope might also suggest a singular larger scale cultural institution, with continuity of events, or large scale spaces, taking a more important role in the urban fabric, consistent with the many adjacent architectural and cultural landmarks.

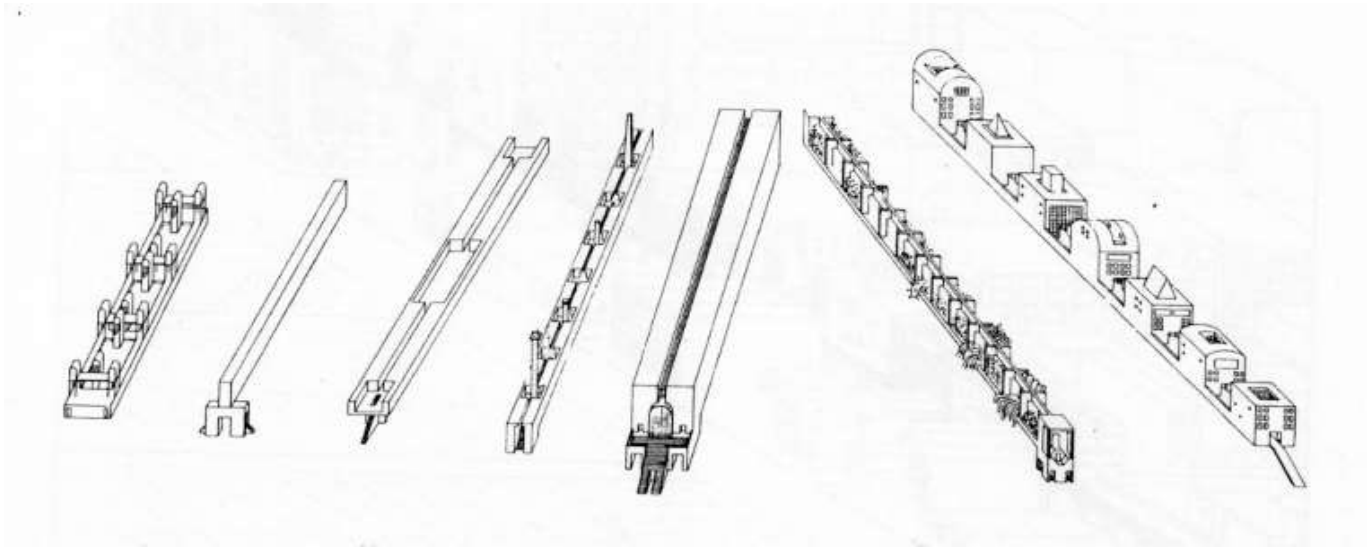
Linearity suggests an order of succession, a sequence that combines the attributes of uniformity and predictability, with difference and surprise. Compositionally, like music, it is the choice between one continuous note, a musical phrase or tune or random notes. Somewhere between a single note and random notes is music. Architectural linearity enhances the need to define and develop a set of organizing principles, forms, patterns, and then selectively choose and create differences. All of the arts, of which Architecture is one, share the attributes of order, rules, logic and disorder, random, surprise. Linearity may emphasize the difference between north and south, or east and west. End conditions are particularly unique and important.

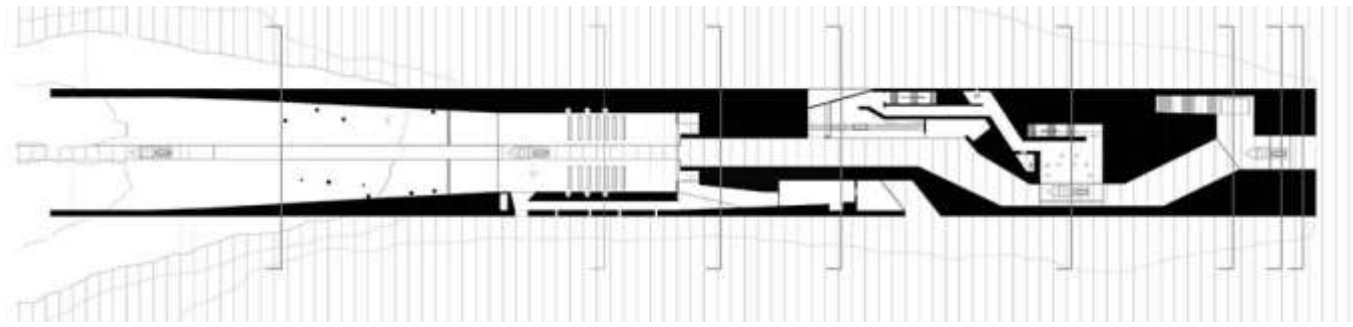
Linear A linear system is one that organizes elements along a line or axis.
A linear system can be single-loaded or double-loaded. or have a point-to-point arrangement. These schemes can be either architectural in scale (such as a simple hallway) or urban in scale (such as a boulevard).
A single-loaded system implies that one side is given priority and weighted with ancillary spaces; a double• loaded system uses both sides. whereas a point-to-point system is concerned with the elements being connected at either end.
Architecture Principia

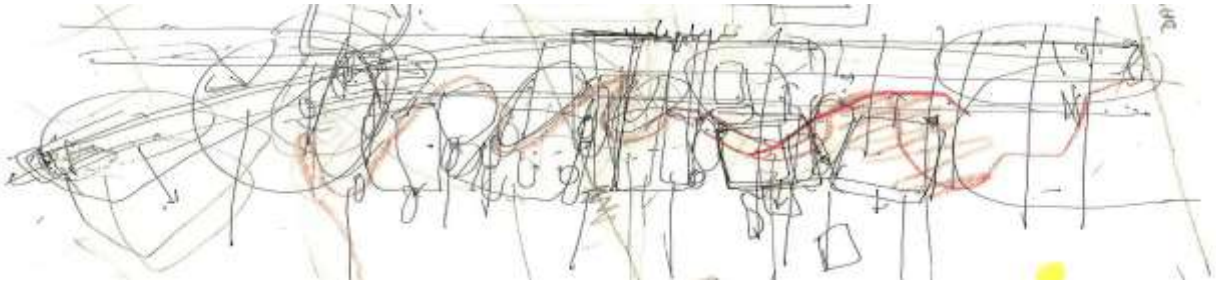
72



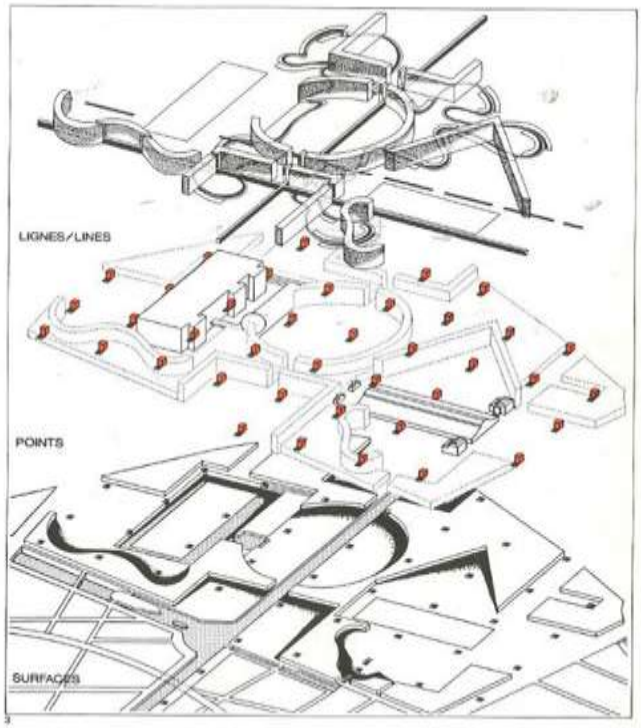








73



Parc de la Villette

Bernard Tschumi

Network:

Field Theory, Distributed, Connecting, Diverse

Contemporary architecture as a multifaceted, combining traditionally separated functions, creating a distributed system of events, basing architecture on time-based experiences, adapting or generalizing architecture to accommodate unknown and future conditions.

Network ordering systems value decentralized movement in which there are points of activity, a diverse and distributed system of events, places and functions affecting a large portion of the entire site.

Points of interested would either be found in the existing context, or new / missing points of interested are be created. The strategy is to find unique places and events, move from one to the other, see or find one's next destination that are part of a larger system and scale, fitting into or creating a relationship to the overall urban or natural context.

Multiple paths might connect existing and surrounding contexts and create new points of interest. The pedestrian system provides choice in movement from direct and purposeful connection to random and spontaneous travel.

74

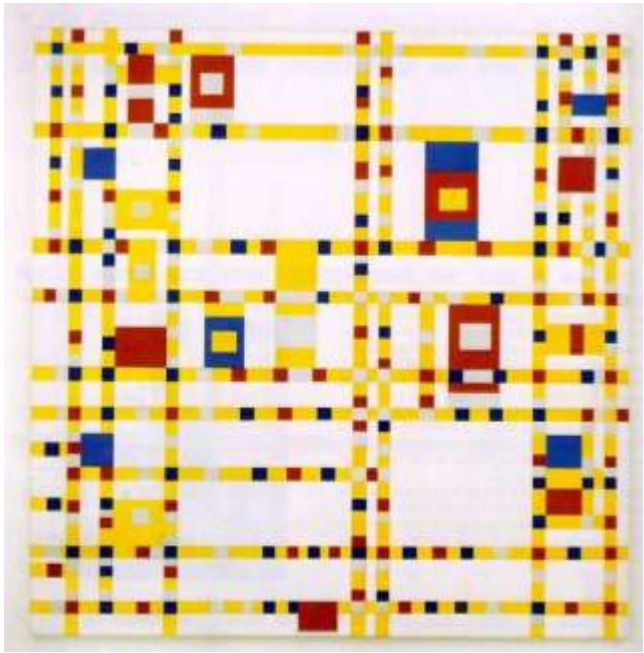
Dispersed *Field A dispersed field first refers to buildings that separate the components into discrete objects and then deals with the interrelationships of the piece-to-piece, piece-to-field, and the field as a whole.*
The geometric
association of one component to another can be overtly organized into legible patterns, surreptitiously organized through more concealed ordering, or fully disorganized to intentionally disregard a collective order.
This system
can be employed at both the architectural and urban scale.
The typical Roman encampment is a prime example of an organized dispersed field system.
It arrays
disparately dimensioned objects within a regimented field. A disorganized and dispersed field is typified by the ubiquitous sprawl of suburban development, where independent local decisions outweigh the collective vision of the total composition, resulting in juxtapositions and anomalies.
Architecture Principia

Order:

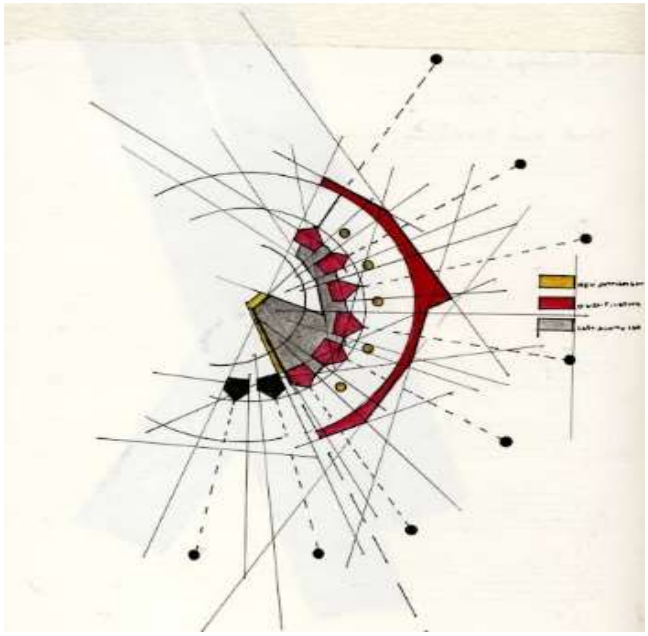
The often symmetrical, highly ordered, pattern based pre-contemporary or “Modern” architecture, i.e. prior to the Bauhaus School, is the underlying ordering system for most architecture. Rectilinear rooms, spaces and sections well accommodate programmatic functions, are close packing and efficient, are easily measured, are generally repetitive and predictable, provide uniformity of structure or modularity.

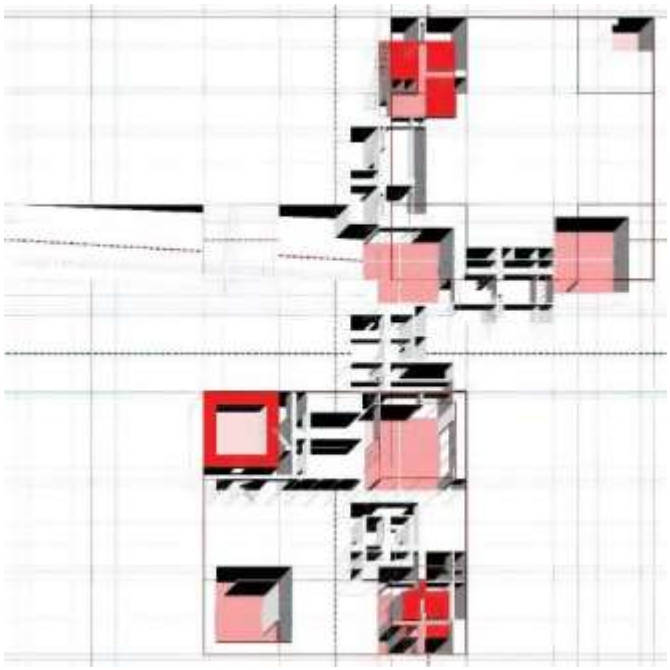
Repetitive or Tartan Grids, Centerline Relationships, Modules, Proportional Systems have been a fundamental aspect of traditional drafting, “T” Square, Parallel Rule formulated architecture.

The traditional ordering systems have a nested relationship; created urban patterns, city blocks, building form, individual rooms and spaces, closets and alcoves.



75





76

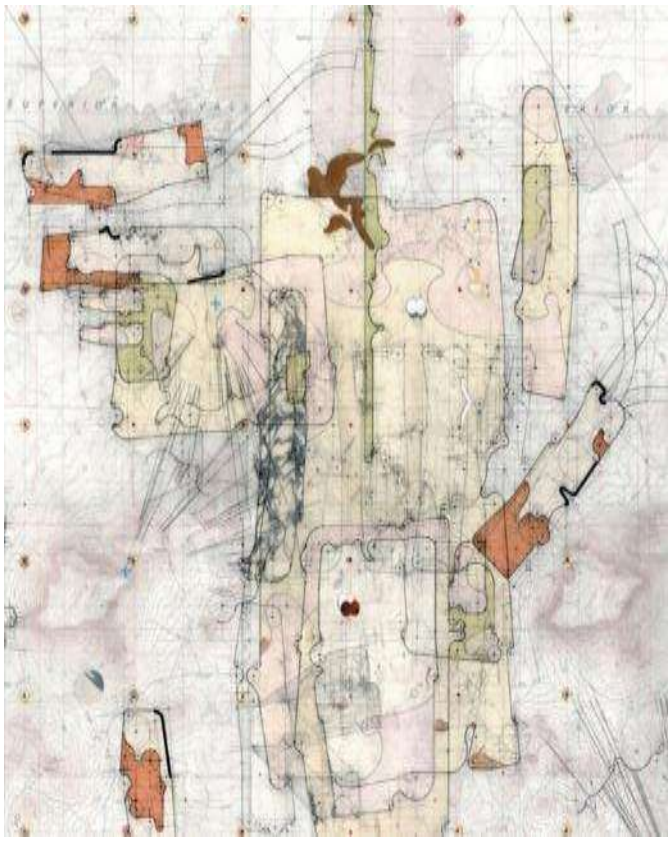
Disorder:

The abstraction of form and geometry has been a fundamental and integral attribute of post Beaux-Art architecture. The symmetrical basis of pre-contemporary architecture has developed into a language of form that includes non-orthogonal plans and sections, irregular structural patterns, complex shapes and facades.

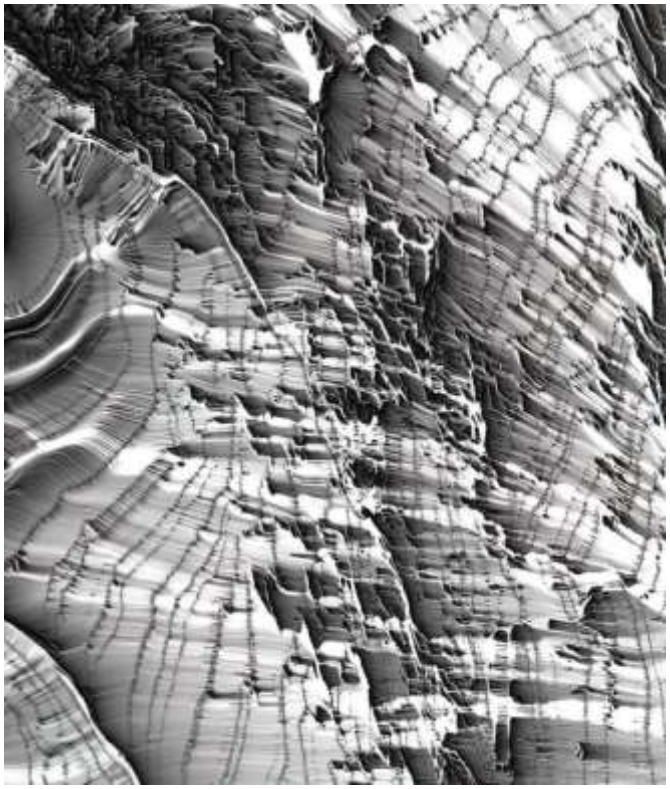
Starting with Dis-Order images and geometries can be instrumental in creating new or novel forms and aesthetics. It provides one of the means for creating new spatial experiences, functional relationships, novel structural and enclosure systems, a new aesthetic or style. All of which illustrate the time and place of a new work of architecture in the current 21st Century. Its abstraction, separation from context, whether physical, environmental, aesthetic, technical or form proves the opportunity for experimentation and newness.

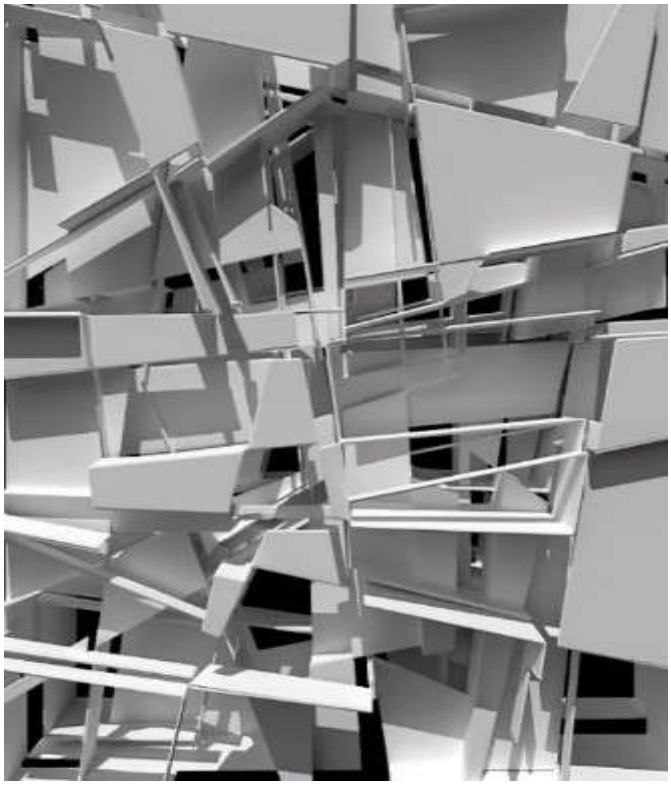
On the other hand, novel newness may grow out of fashion, seem out dated, obsolete, the shock or joy of the new may become boring, possibly only understood by its designer, soon dismissed, forgotten, and possibly hated?

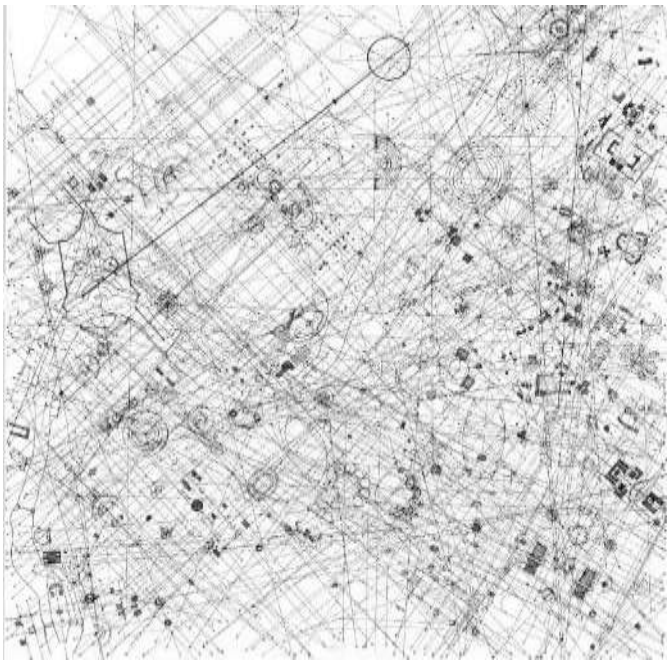
How does starting with Disorder image provide a means for the design to “express the new: be of its time and place” without negatively affecting its context, or becoming un-respected or discredited over time? What qualities are necessary for a new work of architecture to become timeless?



77







78

Heavy Architecture:

Figure-Ground, Permanence, Enclosed Space, Isolated, Stable

Monumentality in architecture may be defined as a quality, a spiritual quality, inherent in a structure that conveys the feeling of structural perfection that has contributed in great part to their impressiveness, clarity of form and logical scale.

Heavyweight buildings are those which have their facades and internal walls subdivide space, provide environmental protection and act as the structure of the building. Composed of a single material that provides water and air tightness, thermal insulation, visual and light control, acoustic isolation, physiological isolation and are related to the landmarks of architecture until the last century.

Generally, building of this type have thick walls that extend from the foundations to the sky. The lateral stability of the building is either accomplished through thick walls, or positioning walls at right angles for buttressing. Internal surfaces, colors and textures extend to the external elevations of the building. Heavyweight architecture can also be accomplished through thin physiological barriers, permanently in place, dividing, stable illustrated by the sculpture of Richard Serra.

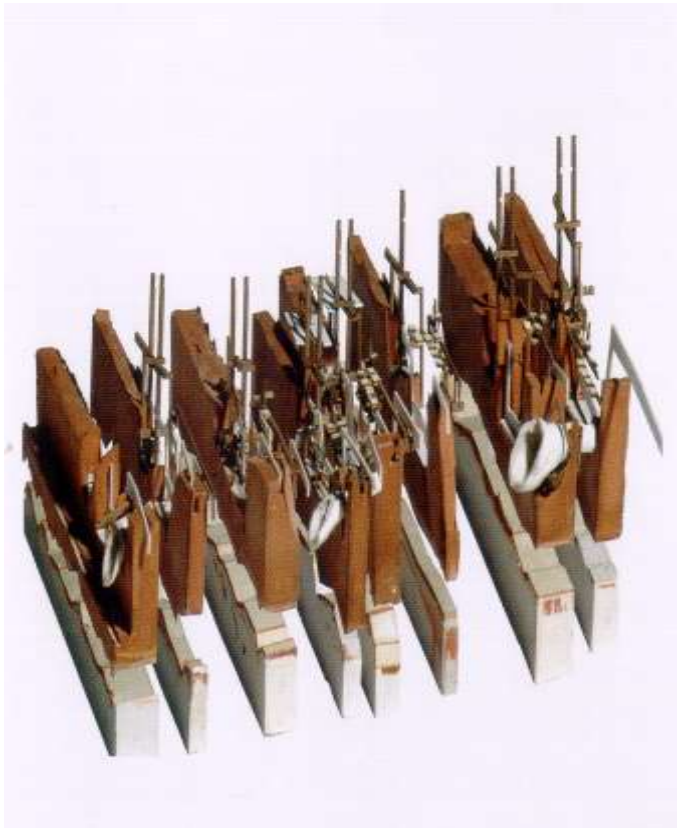
No architect can rebuild a cathedral or another epoch embodying the desires, the aspirations, the love and hate of the people whose heritage it became.
Therefore, the images we have before us of monumental structures of the past cannot live again with the same intensity and meaning.
Their faithful duplication is irreconcilable.
But we dare not discard the lessons these buildings teach for they have the common characteristics of greatness upon which the buildings of our future must, in one sense or another, rely.
Louis I. Kahn

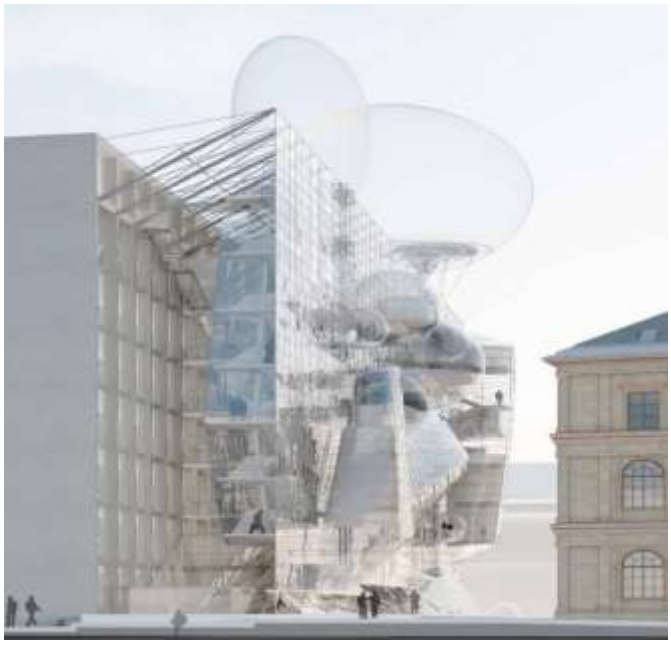
Proportions should govern the parts, so that they may give the appearance of a body perfect and whole, rather than a sum of incomplete and disjointed parts.
Leon Batista Alberti

79

Maryhill Overlook	Allied Works
Corte San Pietro Hotel	Daniela Amorso
Innovation Center	Alejandro Aravena
Zamora Offices	Albert Campo Baeza
Alcarcer do Sal Residences	Manuel Aires
MateusIglesia de Santisimo	Fernardo Menis

80





Light Architecture:

Movable, Connective, Adaptive, Anti-Space, Unbounded, Continuous

An architecture which is contemporary: new materials, environmentally responsive, expressive of the limits of what is possible, eventful, exploring new methods and assemblies, risk taking, extending the new, a surprise and a celebration, other than. The search for slim, light, transparent, adaptive architecture has led to the use of glass, metal and other thin sheets as the primary space dividing system. The role of structural support and stability is provided by a separate structural frame rather than the wall itself. As a result, the building is "skin and bones."

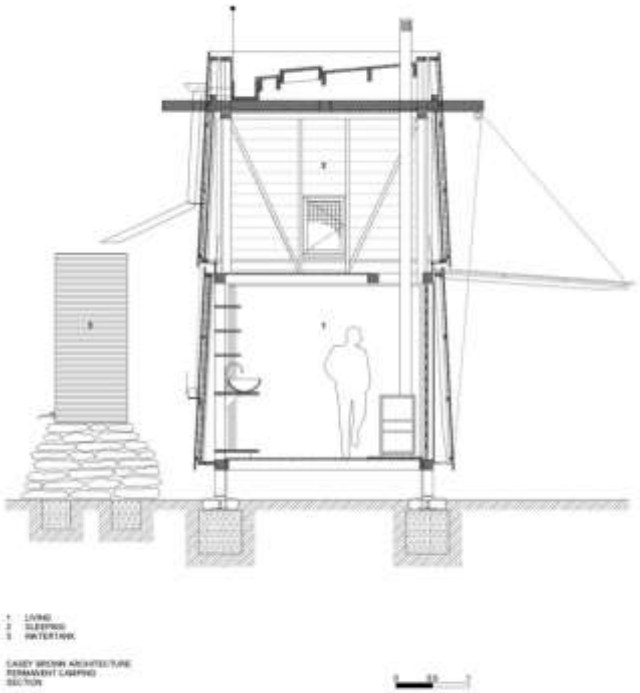
Transparency, environmental responsiveness, and direct connection between spaces emphasized. While protection from sunlight, direct views to the exterior provide the opportunity for dynamic elevations. Added to the variety of single layer and double layer glass technologies, lightweight buildings are often clad in metal sheet, fabric or other light filtering materials. Lightweight architecture has the potential to move, adapt, and respond to seasonal change and weather, changes in use, enclosing or extending space.

Architects have preferred to change the existing environment rather than enhance what is there.
Yet architects who irreversibly denaturalize environments and contexts do so on behalf of third parties.
Do architects really operate in an empyrean realm governed solely by personal aesthetics, which bear no relationship to society, citizenship and cultural memory?
Should they not have a broader vision when they design and build a structure transforming a city or the natural landscape?
Salvatore Settis
Director of Getty Research Institute

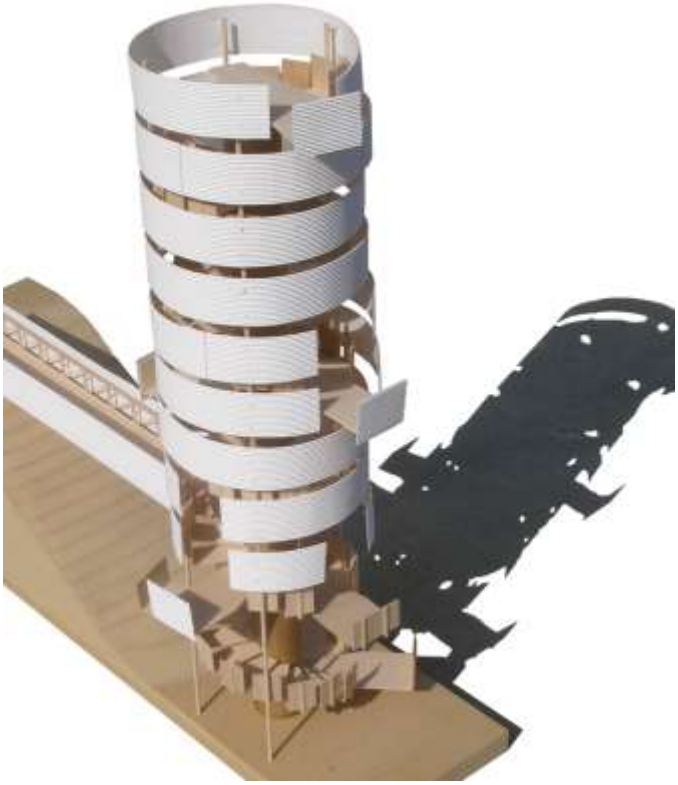
81

I used to be a symmetrical freak and a grid freak. I used to follow grids and then I started to think and I realized that those were chains, and that grids are an obsession, a crutch.
You don't need that if you can create spaces and forms and shapes. Scale is a struggle.
Lighting is always a difficult, complex problem.
The question: do we make an absolutely new thing that has nothing to do with its context and surrounding architecture, or do we make a kind of homage to the place but not like the real place, real architecture.
I am not going to do either of those things.
It will have a familial relationship.
Frank Gehry

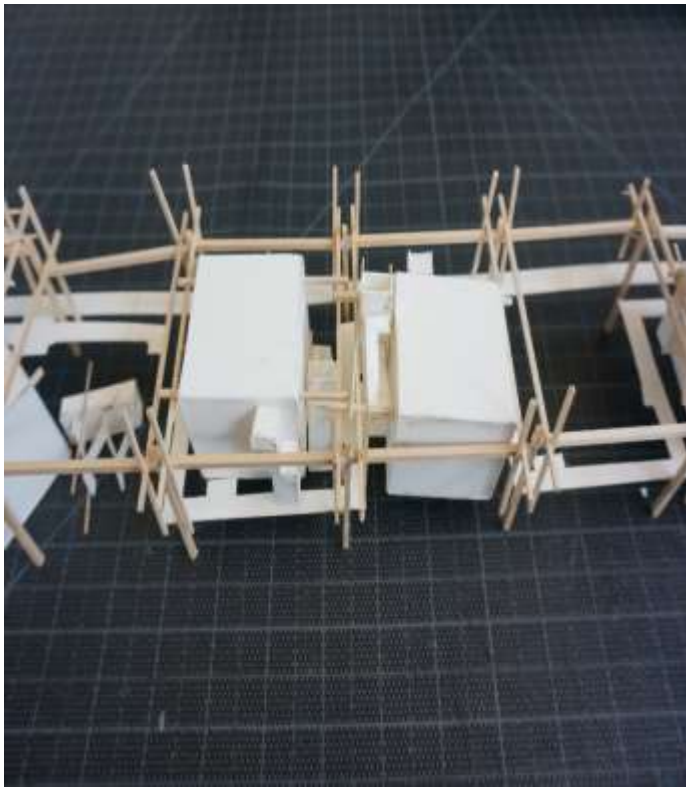
Barrio del Foro Romano — Amann Canovas Maruri
Everday Coffee Pavilion — Sean Godsell
Villa Roces — Govart Vanhoutte
Ingfah Restaurant — Tungthunya

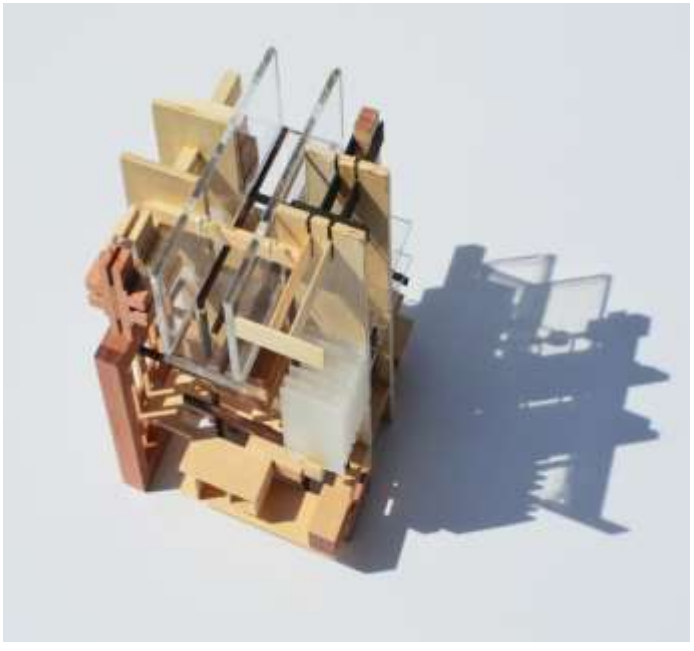

1 LIVING
2 SLEEPING
3 WATER TANK
CASEY BROWN ARCHITECTURE
PERMANENT CAMPING
SECTION

82



83





Multi-type Architecture:

Varied, Maximizing Differences, Perfected, Localized, Ideal

The multi-type is generally viewed as a precise fit to site, function, local conditions, climate, the nuances of place, and differences of function, variation of experience, diversity, surprise, contextual differences, and hierarchy. Their uniqueness can be generated from local conditions, the expressive values of the design or builder, disregard for precedent, desire to be or express the new. The multi-type provides potentially the highest level of visibility, identity, ownership, functional and environmental perfection to the architectural work.

In its purest sense, every room/space is unique, nothing is exactly the same. Multi-type can range from a purposefully rich variety of experiences, to an extreme condition of undifferentiated complexity, delight or chaos.

The complexity of multi-type is often illustrated by random or hybrid visual systems, ranging from countless elements randomly within a context or conversely strategically differentiated elements in a complex framework or context.

84

In what ways can a multi-type be more than a collection of non-repetitive elements?

What relationships can develop between non-repetitive elements?

When should irregularity or non-predictability be introduced into an architectural concept or situation?

At what point does complete variety result in chaos, extreme or oppressive complexity, disorientation?

Mono-type Architecture:

Similar, A Set, One of Many, Related, Identical

A monotype is generally viewed as having a rational set of spatial, formal and functions relationships which are idealized, logical when identically or near identically repeated, creating recognizable symbols. There basic attribute is sameness, a set of similar or identical pieces.

Monotype implies multiple instances of the identical designs, whether discrete or part of a larger whole.

In its purest sense, monotypes are replicated with little difference, or developmental variation. Their advantage is in part their twin-ness. As they are a set, they often collectively create an architectural system at a larger scale. Commonality results in uniform and predictable relationships. However, the repetition of monotype elements in architecture can obscure larger concepts, where a collection of many identical smaller elements do not create other scales of building mass, scalar relationships to context, appropriate human scale, or are inconsistent with structural or environmental requirements.

Is it possible to create a prototypical architectural design, which is also adaptable with minimal variation to the specific physical locations, environmental orientations, architectural characteristics, urban conditions?

In what ways should a monotype be more than a collection of exactly repetitive elements?

What types of variations or exceptions should be introduced into a mono-typical system?

At what point does complete uniformity result in disorientation, boredom, a force-fit?

85

Picturesque:

Gordon Cullen's Townscape focuses upon analyzing and extending existing conditions, creating visual variety and hierarchical architectural characteristics, and seeks to find the most appropriate fit for new architecture in its setting.

Cullen's (picturesque, vernacular) focuses is upon the sequence and variety of the visual experience in time, from eyelevel, way finding, landmarks, arrival, etc. He prioritizes architecture as series of events, "theater" which one discovers over time. It is at the scale of someone walking, finding their way, seeing a destination, discovering, finding somethings unexpected, thus creating visual memories. It is analogous to a comic strip or theatrical script.

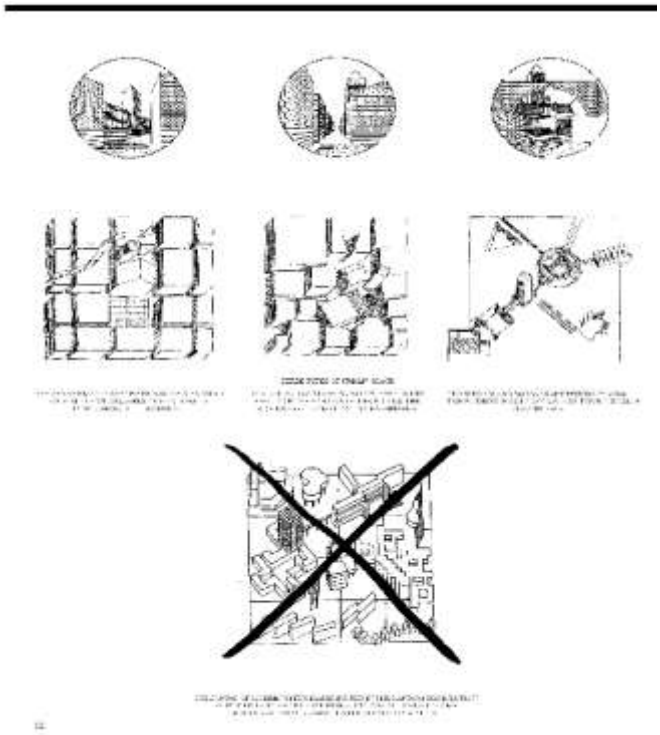
Cullen's asks how does the design take advantage of the place itself, and use the program to create a specific experiential / visual narrative.

His objective might be to design based solely upon the picturesque and contextual conditions of the existing context, or to orchestrate specific experiences within a neutral or uniformly experiences context. In a sense, the design is a "stage set" viewed by the pedestrian from eye level as they move through the site and building. Its focus is the boundary conditions between inside and outside, public and private, human scale, way finding, background and foreground buildings, vernacular and landmark.

86

Cullen's view is that urban landscapes and the buildings that help form them are pedestrian experiences, experienced from eye level at a walking pace. They provide a variety of experiences, scales of space, near and far views, present surprise experiences, provide multiple paths for exploration, combine multiple functions, have hierarchy and formulate exterior space as a series of public rooms and varying visual experiences.

https://en.wikipedia.org/wiki/Gordon_Cullen



Formal:

Leon Krier's Architecture and Urban Design focuses upon analyzing and extending existing systems of organization and form to find the most appropriate fit for new architecture in its setting. Krier's (formal, classical) focus is upon the architectural relationship between the existing contexts ordering principles such as axis, hierarchy, urban blocks, landmark and background, related architectural characteristics and language, particularly as an extension of the public realm,

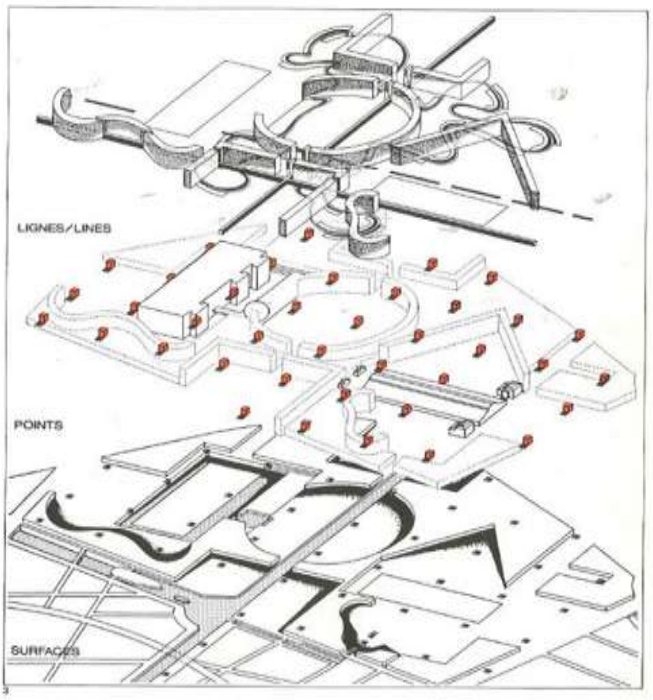
Design principals are derived from center-lines, axis, hierarchy of streets, background and landmark buildings, definition of the

87

public realm, the shared character and aesthetic of the facade, common architectural characteristics such as fenestration, roof forms, variation in size and scale, organization of interior functions, private exterior areas, etc.

Individual buildings are derived from and considered to be an extension of the existing urban and landscape context. There is an emphasis on the collection of individual buildings into an urban block. Blocks and landscapes are part of a larger urban system. Cultural and other public institutions are given importance,

https://en.wikipedia.org/wiki/L%C3%A9on_Krier



Nodal:

Tschumi's The Manhattan Transcripts and Architectural Concepts views contemporary architecture as a multifaceted condition, combining traditionally separated functions, creating a distributed system of events, basing architecture on time-based experiences, adapting or generalizing architecture to accommodate unknown and future conditions.

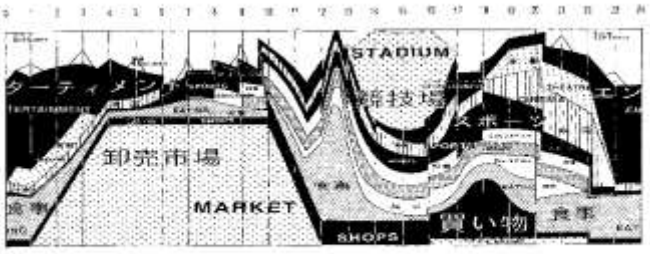
Tschumi values an orchestrated system of movement to interact with a system of activity or landmark nodes. The points of activity create a diverse system of events, differences of place and functions which impact the entire site, connecting adjoining neighborhoods which are also understood as a singular construct..

Points of interested are either be found within the existing context, or are created as new / missing points of interested. The strategy is to find unique places and events, move from one to the other, see or find one's next destination, create a system of unique and individual places that are part of a larger system and scale, while fitting into or creating a relationship to the overall urban or landscape context.

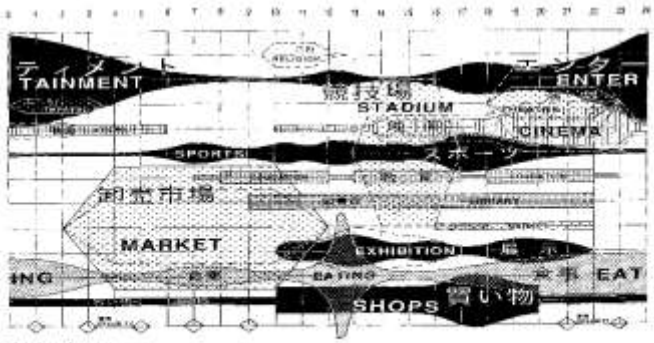
Nodes located at the intersection of pre-existing or new pedestrian baths are enhanced by "follies" which provide points of interest, and a variety of interior and exterior functions. The pedestrian system provides choice in movement from direct and purposeful connection to random and spontaneous travel.

https://en.wikipedia.org/wiki/Bernard_Tschumi

88



Montage of programs



Timeline diagram

111

Composite:

Rem Koolhaas's Delirious New York and S, M, L, XL view contemporary architecture as a multifaceted condition, combining traditionally separated functions, creating an interrelated system of disparate events, basing architecture on time-based experiences, adapting or generalizing architecture to accommodate unknown and future conditions.

Koolhaas considers contemporary values, the politics of art, the clash between tourist and resident, the purposeful combining of elements as a means to provoke change and adapt into the future. He might consider the traditional separation of both the private and public functional elements of the design no longer appropriate. Space would be defined by activity and program. New architectural forms are derived from functional overlaps, and movement paths.

https://en.wikipedia.org/wiki/Rem_Koolhaas

89

Hybrid

Perhaps the most common condition is not the employment of any one organizational system taken through a project, but the combination of multiple organizational systems, deployed for their localized efficacy.

Synthesizing aspects of multiple systems or splicing varied systems into one another, the hybrid is perhaps the most common method of the pluralist, postmodernist style that emphasizes form over the clarity of plan.

The integration of varied systems allows for internal contrast of spatial types, collagist formal composition methodologies. reinterpretation of traditional types through contemporary cultural conditions, varied material and technological capabilities, and diverse spatial agendas.

The resulting hybridizations allow for spatial complexities, nested compositions, and diverse (yet juxtaposed) decedents of the primal organizational methods.

Architecture Principia

II. Conceptual Design I & II

Architectural design is neither seeking the new with a blank piece of paper, nor defined by precedent and the past, with a pre-established set of rules and characteristics. Architectural design education generally is biased towards newness, novelty, personal creativity, technical development or performance. Architectural design in the profession is evolutionary, biased by the values and previous work of the practice, the history and lineage of architecture, legal regulations and liability, short-term and long-term cost, among many other factors.

The recent developments of verbal or visual based artificial intelligence design systems, and sophisticated automated rendering systems suggest that the architectural design, now and in the future, starts "from the end rather than beginning" either by: 1) selecting from hundreds of AI generated design variations in their photographic context, or 2) responding to visually appealing automated renderings of any architectural proposal. The future of architectural design may therefore focus more upon selection, evaluation, insight and instinct rather than transitioning from the unknown to the real, or from ones idea to a design proposal.

Current AI systems are limited by the sources from which the draw information and develop alternatives. They are restricted to a limited set of open source information.

The Advanced Studio's conceptual design process will begin, like AI systems, with a set of images of conceptual architectural works, which provide alternatives to visualize and explore a wide range of concepts from the outset. It will also consider a set of architectural concepts and theories, which are fundamental to all architecture, past, present and future.

Past architectural periods can be defined by their "styles" which evolved from a unique set of common values and rules. The Beaus Arts emphasized surface, symmetries, "room", base-middle-top, etc. The Bauhaus emphasized space, asymmetry, structural expression, etc. Recent contemporary architecture is diverse, devoid of a single set of well-defined set of values or rules, often characterized as the result of personality, or new design methods. Today, it is difficult to define a common design vocabulary.

Architecture's responsibility to building performance and environmental sustainability has no common set of design characteristics nor architectural vocabulary. Its analytical measurement may not directly influence a design's visual, programmatic nor contextual characteristics. While it suggests a climate based regional architecture, based upon local reclaimed materials or advanced materials and systems, it has yet to define a clearly articulated set of rules comparable to that of either the Beaus Arts or Bauhaus.

The creation of architecture has never been either completely new or derived for historical precedents. It is neither the personal expression of one individual, nor the collective decision of many. To be relevant over time it must develop from architectural history and theory, express present conditions and values, all of which maintain their relevancy and appreciation into the future, in some cases many centuries or millennium.

Unlike almost everything else that is designed, architecture is fixed in place and responds to its specific context; culturally, programmatically, environmentally, aesthetically, physically and technically. Significant architectural practices are the result of insightful and skilled practitioners who develop a set of values that prioritize many design determinants, utilizing both personal and shared design methods, all of which they have developed over time.

The greatest of architecture is the result of design experimentation within a framework of theoretical, technical choices and philosophical values. Whether it is a specific formal or visual aesthetic, a set of technical systems and details, or discrete design vocabulary, architectural is built upon previous work.

We cannot construct anything if we have not thought of it and conceptualized it first, and we shouldn't conceptualize anything that we cannot build.
One must dream, but at the same time be capable of making those dreams a reality.
Architecture can mysteriously materialize ideas; it is the Built Idea.
Therefore, when I speak of the structure, I want to underline that the importance of structure lies not merely in its bearing of loads, but also in something much more important, namely in establishing the order of the space.
The "structure of the structure" relates to the need to establish an order proper to the structure itself.
Only when Architecture is true, in its conception, in its idea, and in its material expression can it gain access to beauty.
It does this when it is the result of a specific and developed idea that is laid down in a coherent structure and remains consonant with logically arranged materials.
In short, this architecture fulfills the Vitruvian principles of Utilitas, Firmitas and Venustas.
Only when the idea, the development, the structure, and the construction are true can it arrive at the level of aesthetic beauty.
Principia Architectonica, Alberto Campo Baeza

90

The Conceptual Design Phase will begin by starting with seven design concepts selected from a library of dimensional images. Each image or pair of images will be superimposed upon three dimensional models of the site suggesting alternative designs; functionally, contextually, formally and conceptually. The two dimensional designs will then be brought into the third dimension. Designing is informed by; the design process itself, what is learned from the creation of alternatives, what is consciously created, what is instinctively discovered. What should be done and why is developed from seeing and responding to a varying set of architectural characteristics, at scale, in response to the specific details of the site and context, and programmatic conditions.

The following concepts are part of the initial Conceptual Design studies:

a) Contextual and Abstract Urban Form
b) Singularity, Linear and Network
c) Order and Disorder

A. Contextual Urban Form: The character of an urban setting is often identified with unique local or region attributes shared by virtually every building. Whether the result of traditions of construction, local materials, a response to climate and weather, cultural differences, often the character of a place is the result of design characteristics that are beyond those of a single building.

The ever-changing nature of tradition and technology prevents the replication of history by architects. There are numerous architectural attributes of context which can be the basis for architectural design including; density, order or randomness, scale, formal systems, color, fenestration type, functional organization, nature of the streetscape, character of the street and upper levels, courtyards and alleys, the formation of public spaces, orientation to sunlight and natural ventilation, and the creation of shadowed spaces.

Using the Google Drive's Library of 2D Contextual images select one or more images, and experiment with numerous design alternatives extending the 2D images into three dimensions, in the context an aerial photograph of the site plan. The studies are to include physical modeling on prints of the context's site plan.

B. Abstract Urban Form: Architecture at its core is the establishment of order, creating relationships between architectural elements, space, movement, time. The formation of building structure, movement systems, hvac systems, and functionality all require ordering and formal decisions. Whether patterns of symmetry, proportion, center line, symbolism or contemporary devices such as networks, non-Euclidean form, dynamic or adaptive forms, 2D patterns, random or complex systems, all are fundamental to creating urban and architectural design.

Regular grids, checker boards, geometric patterns all provide ordering devices requiring "difference and exception" to respond to non-regular forces such as climate, seasonal variation, hierarchy, orientation, experience, interest.

Tartan grids differentiate the regular grid by variation of scale, position, color, etc. providing a ordering device with inherent "difference and exception."

Non-geometric images inherently have implied meaning, as interpreted through the experiences and values of the observer.

Using the Google Drive's Library of 2D Abstract images select one or more images, and experiment with numerous design alternatives extending the 2D images into three dimensions, in the context an aerial photograph of the site plan. The studies are to include physical modeling on prints of the context's site plan.

C. Singular, Linear or Network: Part of the Conceptual Design studies are to consider and illustrate how the design studies can become a singular, linear or network ordering system in the context of site and a means for conceptualizing the program.

D. Order, Disorder: Part of the Conceptual Design studies are to consider and illustrate how the design studies can be based upon ordered or disordered ordering system in the context of site and a means for conceptualizing the program.

What is discovered from the design process, the reaction and instinct to what is seen, is as important as logically developed designs. The objective is to discover in the selected image(s) and their 2D and 3D models the best architectural concepts, characteristics and strategies that suggest meaningful site and context relationships at the urban scale, and begin to define a set of architectural concepts and strategies for the project at the building scale. The studies are to speculate and understand not only what is possible but what are the range of strategies for the "best" architectural and urban scale design concepts.

Questions:

a. Selected Images:

What are the architectural characteristics, ordering systems, and concepts that are inherent in the selected contextual and abstract images? Why were the source images chosen? What are their design characteristics that best relate to the specific conditions of the design project? How might their qualities be developed throughout the projects design?

b. Exterior Areas:

What should be the location, scale and character of required public Piazza / Square and Landscape / Garden?

c. Movement Systems:

What are the alternative strategies for connecting the pedestrian and boat based movement systems around or through the site?

91

d. Function and Scale:

What are the minimum and maximum limits, and variations of scale and size, that establish an appropriate scaler relationship to the context and functional program? Does the 2D overlaid image on the site and its 3D model approximate the overall scale and volume of the programs interior and exterior spaces?

e. Typology:

What are the advantages of a contextual or abstract ordering system?

e. Form:

What are the advantages a singular, linear or network organizational form?

f. Order:

What are the advantages an ordered form verses a disordered form?

g. Context:

How integrated is the relationship between the interior (building) and exterior (campo and garden) architectural concepts and elements? Is the ground (context) as successful as the figure (building)?

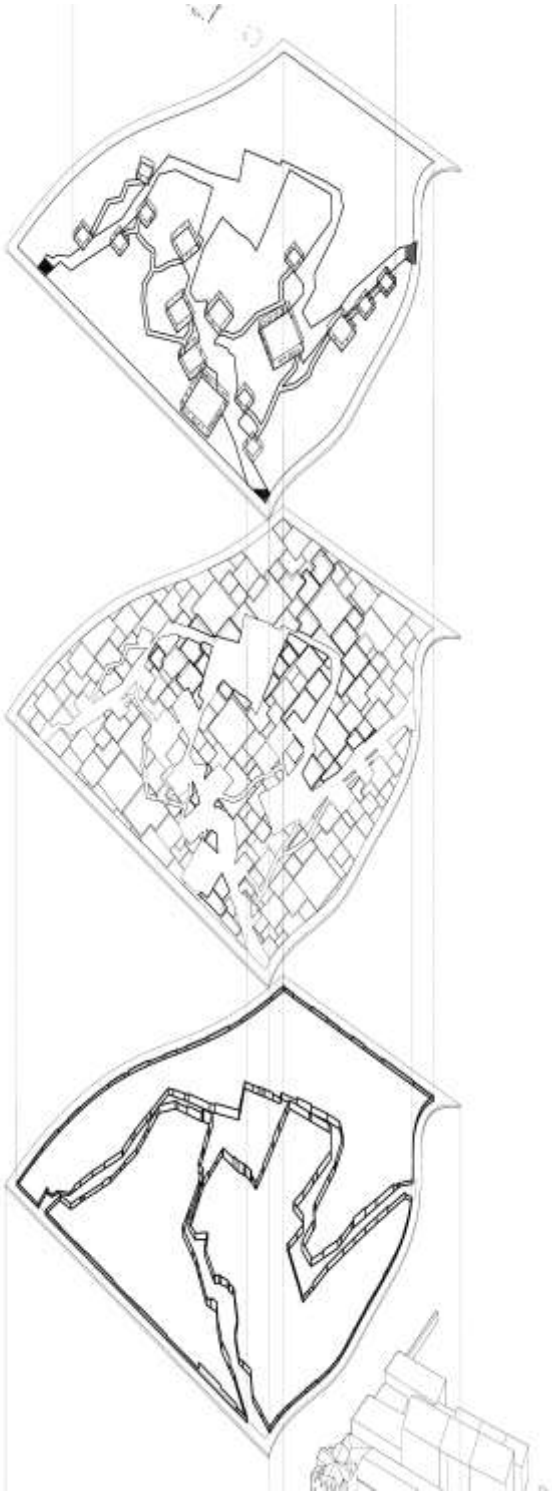


Figure-Ground Diagram: Synthesis of “figure” building elements with “ground” landscape and waterway elements.

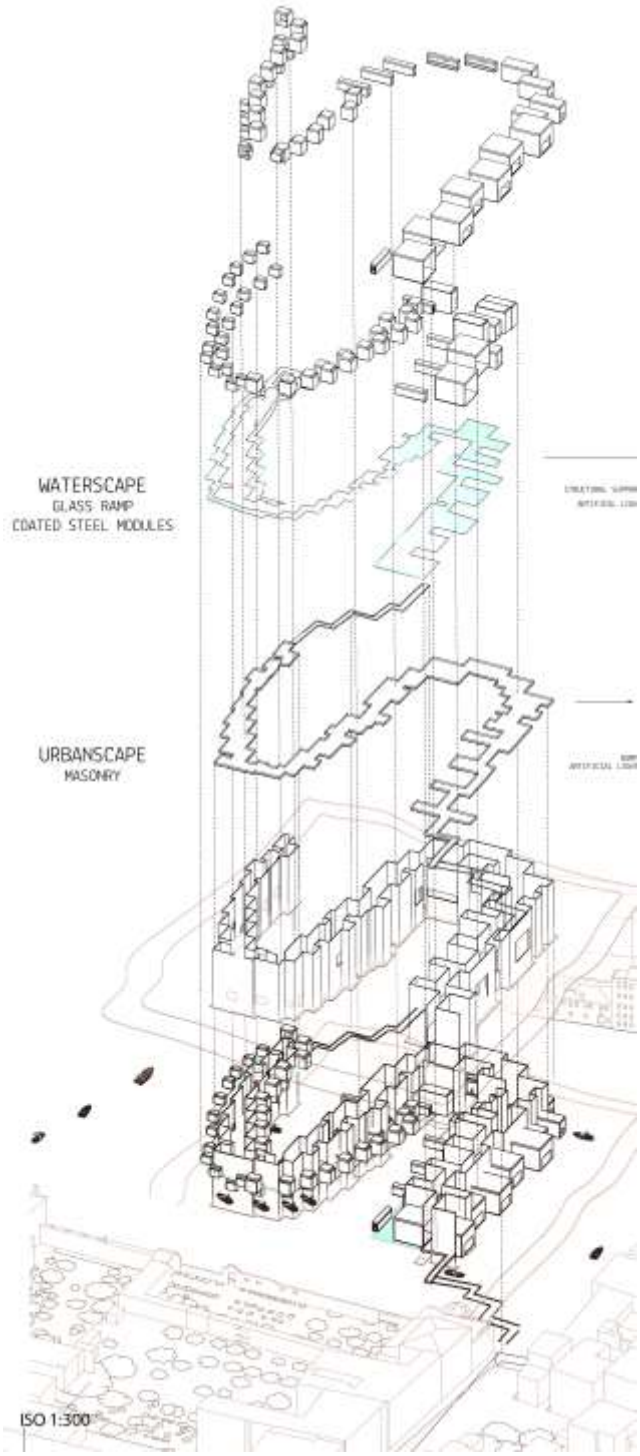


Figure-Ground Diagram: Synthesis of “figure” building elements with “ground” landscape and waterway elements.

92

Design Process: Physical Model & Site Photographs

Physical Site Model is to have a Google Earth aerial view image, *with the marina removed*, to scale, as the base of the model and 2D chipboard "stage set facades" on the three sides of the site extending along the canals and fundamenta.

Physical Model with 3D Abstract Form Design Study

Conceptual Design I: Presentation Requirements

1. Notated Conceptual Design Image(s): How is the "best design" a development of the selected image(s)? What architectural characteristics is it based upon, and how have they been maintained and the basis of the design?

2. Photographs: Two each (minimum) best Abstract and two each (minimum) best Contextual physical design models in the context of the site.

3. Photographs: Two (minimum) best 3D Singular, Linear, Network, Order, and/or Disorder physical design models in the context of the site.

4. Perceptual Views: Eye Level photographs of the best two (minimum) physical models.

5. Architectural Concepts and Theories: Notated diagrams of "best design," which illustrates how the following studies have formulated the design:

a) Contextual Urban Studies
b) Abstract Urban Studies
b) Singularity, Linear and Network
c) Order and Disorder

6. Figure-Ground Diagrams: "Figure" building forms, "ground" landscape-garden, and their composite diagram, with notations explaining design qualities of both systems and their composite design. Are the exterior public spaces as successfully designed as the interior spaces, and vice versa?

93

7. Written Statement: One hundred words, maximum, defining your initial conceptual basis of your project.

Consider the following:

a) How does the concept "complete" the urban and lagoon context?

b) How is the concept derived from and expressive of the selected design concept images?

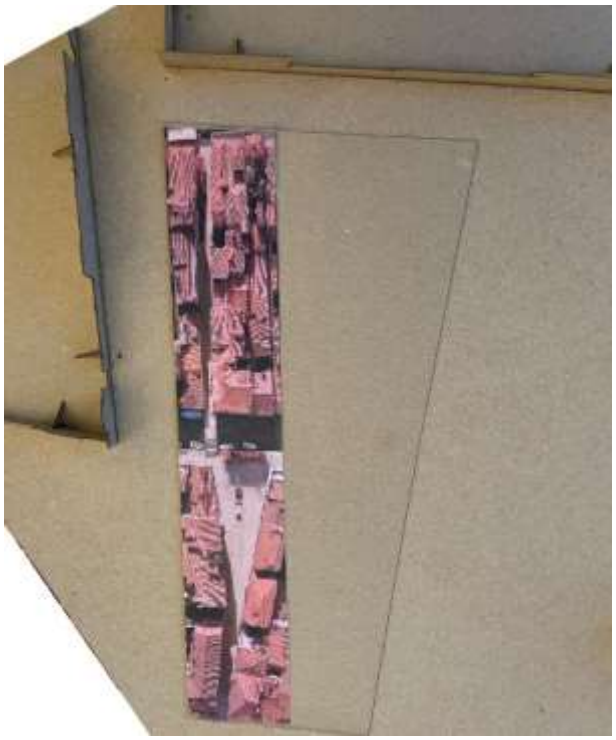
c) How does the concept interpret the functional program of the Glassworks and exterior public functions?

Examples of 2D Contextual Studies (missing Google Earth photographic base)

Urban Block with campo and lagoon overlook

Four Heavy Palazzi with private Gardens

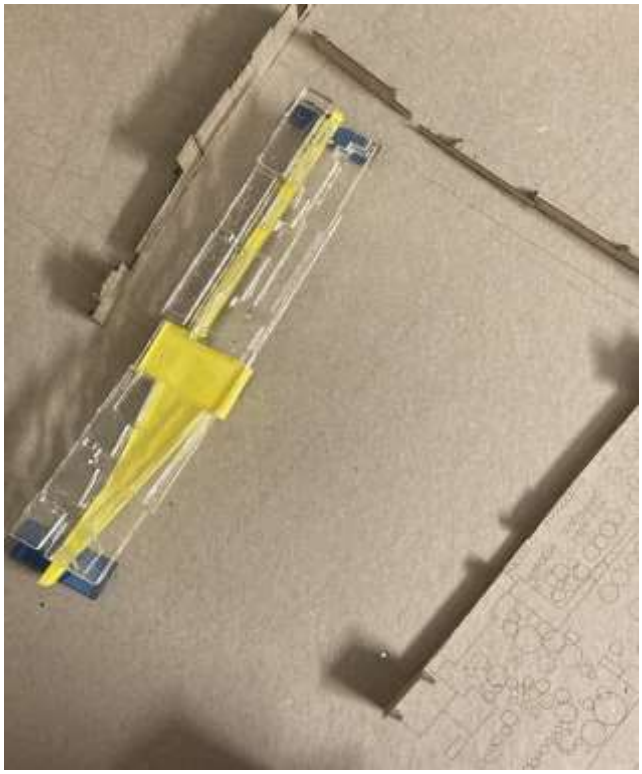
94



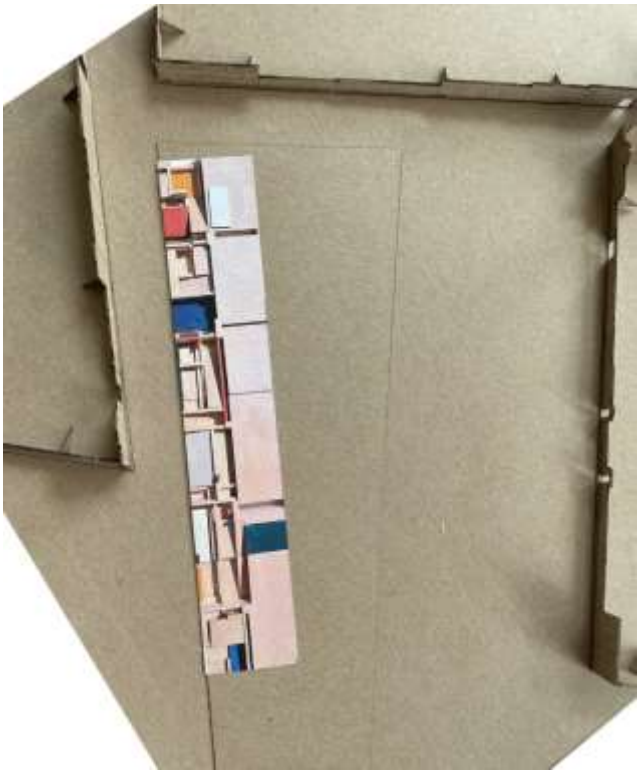
Internal Pedestrian Street to Campo at Fundamenta

Urban block with Private Courtyards end Campo

Examples of 3D Abstract Studies (missing Google Earth photographic base)



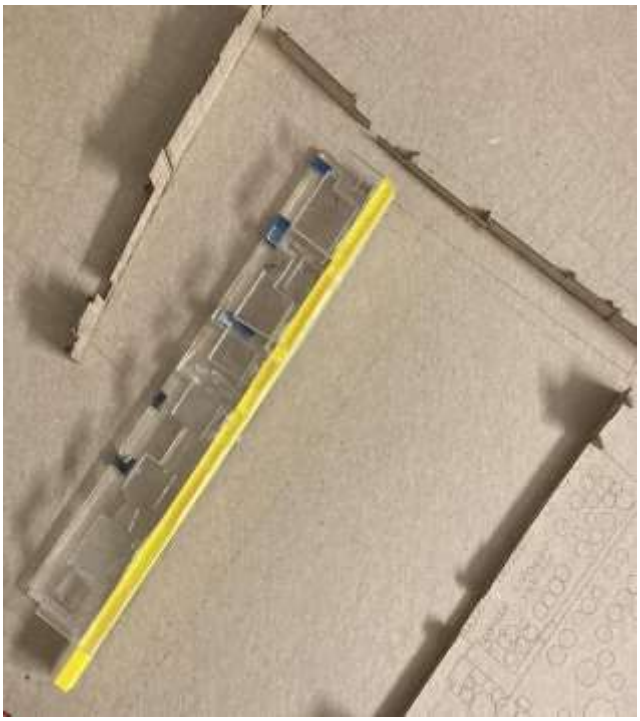
Pedestrian Street to Campo at Fundamenta



Six Blocks with Walled Courtyards and Canal Facades

95

Yellow Facades, Blue Campo, White Urban Blocks



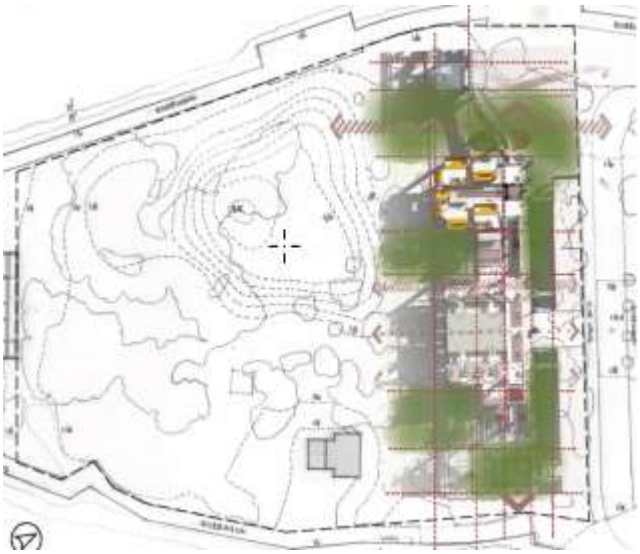
Yellow Arcade, White Palazzo along Canal & privates Courtyards.

Example of Design Process: Combining two abstract images, developed into 3D design, through Technical Development Phase.

2D Design Studies of sources images in site context.

2D Network Design Study on site plan.

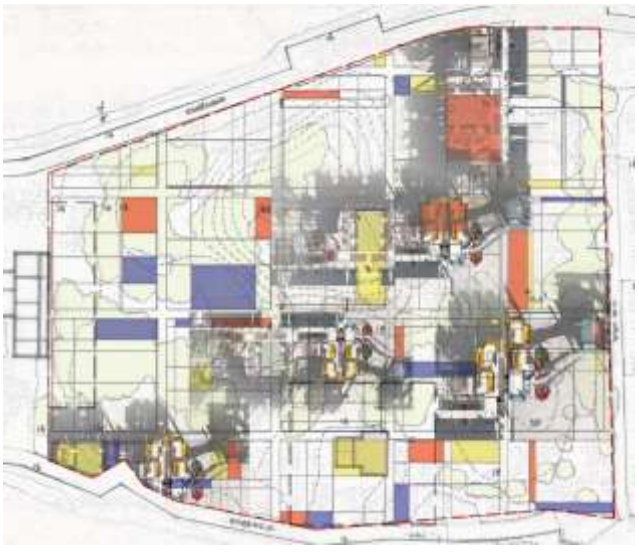
3D Design Studies derived from 2D Design Studies.



2D Linear Design Study on site plan.

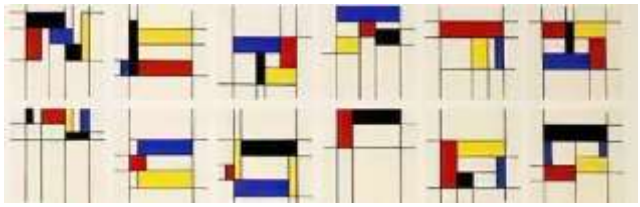
96

Network and Linear selected source 2D images.



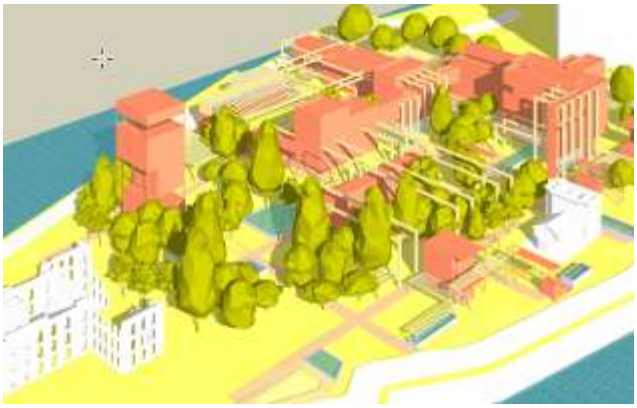
Composite 2D Network and Linear Design Study

Composite and Network 3D Design Study



Conceptual Study of Interior and Exterior Functions

3D Digital Model of Composite & Network Design Study



Conceptual Design

97

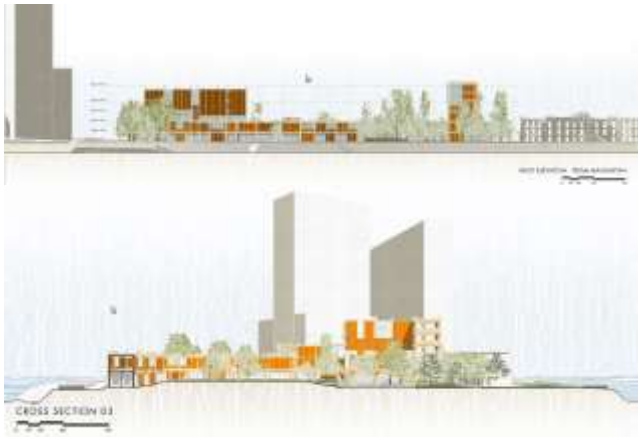
Conceptual Design Elevation view in site context.

Eye level perceptual view of design in site context.

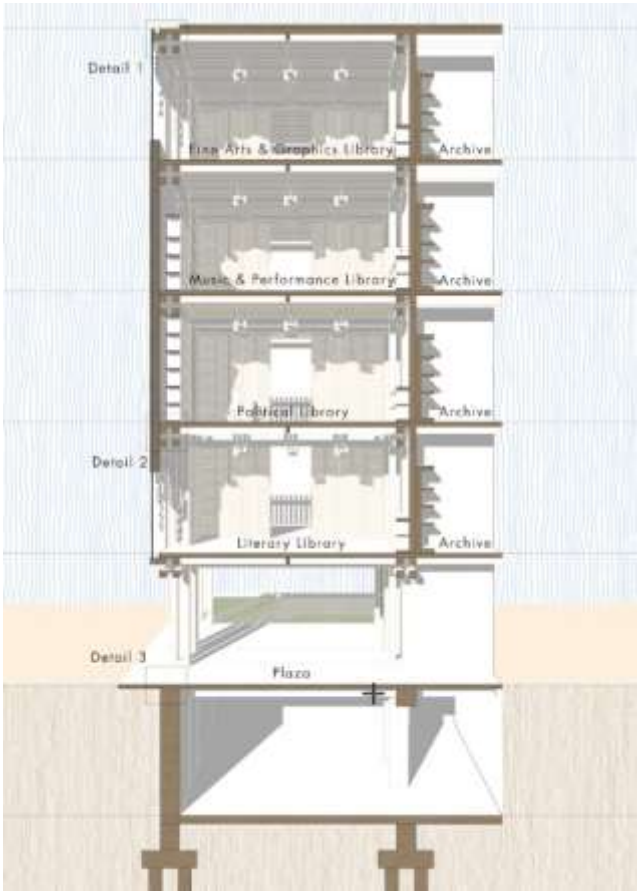
Schematic Design Site and Floor Plan

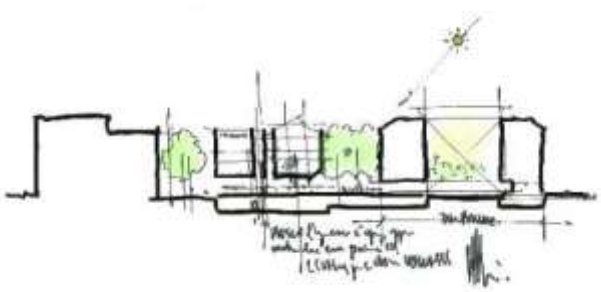
Technical Development

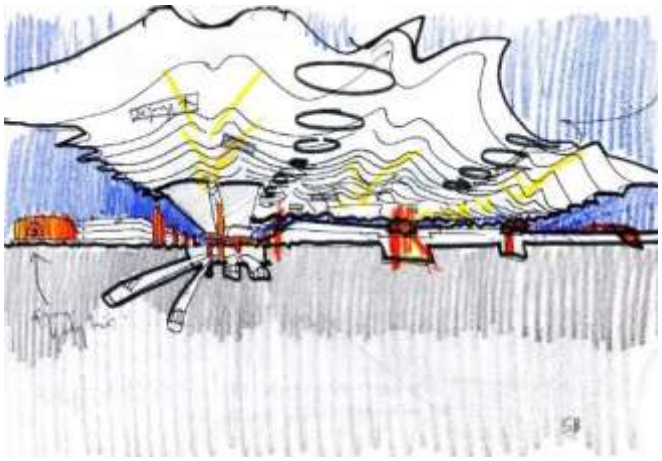
98

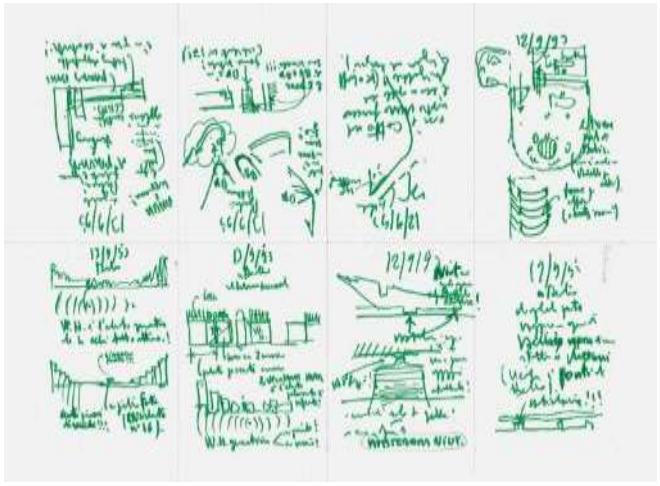


Design Development









Conceptual Design II

The next stage of Conceptual Design focusses upon the development of architectural concepts that are based upon your previous work, and through experimenting with the following concepts:

a) Heavy & Light,
b) Mono-Type & Multi-Type
c) Picturesque, Formal, Node, Composite

What is the story of your design (concept)?
What architectural characteristics are most appropriate to story of your design (concept)?
Which of these concepts is the best expression of the site?
Which of these concepts is the best interpretation of the program?

The defining of an architectural concept is the beginning; differentiating a specific design strategy, which is the result of a very well-articulated point of view. It is the expression of the specific location, function, time and place of the design, and the insights and interpretations of the architect.

At the same time, Conceptual Design also addresses the specific requirements of the functional program, the site and context, defines specific relationships to the urban or natural landscape and climate.

It organizes and creates appropriate sizes, scales and relationships between functions, both interior and exterior, as well as the development of public and private circulation systems. It does so, while conceptualizing public spaces, circulation systems, architectural forms and volumes at an accurate scale and within the project setting.

99

Process: Working at 1 to 600 (1" = 50') scale develop conceptual sketches, diagrams, and architectural figure ground drawings, digital and physical models addressing the more specific programmatic requirements and contextual conditions of the project.

The final conceptual design sketches, models and drawings must also include the fundamental qualities of heavy-light, and mono-type, while also developing a logical relationship between functions spaces, both interior and exterior, the development of public interior and exterior circulation, appropriately scaled to the functional program and context.

The conceptual architectural drawings should accurately represent the general size and height of all programmatic spaces both interior and exterior, the piazza and garden public spaces, and interior and exterior circulation systems in three dimensions, within the context of the 20% Maximum Building Coverage requirement, Site Boundaries, and adjoining context and neighborhoods.

The Conceptual Design II studies should create at least two evolutions of the design, testing and developing specific architectural concepts and intentions.

Conceptual Design II:

The design studies are to add the following concepts:

a) Heavy & Light
b) Mono-Type & Multi-Type
c) Picturesque, Formal, Node, Composite

All architecture is a combination of the characteristics "Heavy to Light," and "Mono-Type to Multi-Type. These architectural characteristics define the broadest range of architectural forms and aesthetics, structural systems, environmental and functional relationships, technological and material choices within architectural design.

All great architecture over the millennium express these characteristics. While they define specific architectural characteristics, they do not prescribe a specific architectural concept, period or style. Often great architectural works are the result of being exclusively heavy or light, such as cave verses a tent. Some are based upon the opposing differences between heavy and light such as that of a Gothic cathedral. Edward Lutyens is quoted as saying; *"That all great works of architecture are best made out of one material, organized and expressing by how it is made."*

The intention of the Conceptual Design II studies is not to begin anew, but rather develop the Conceptual Design I "best design," finding appropriate Heavy-Light and Mono-Multi Type characteristics which relate and develop your architectural concept, while completing the context, and generally organizing the interior and exterior functions.

Generally, it is best to directly digitally duplicate the Conceptual Design I "best design," without any variations from the original design. Then modify the digital design and its twin physical model, exploring design alternatives based upon the list of design concepts. The design process is seeking variations on the themes, rather than developing random alternatives.

What are the best possible expressions of the original Conceptual Design image, and its "best design" that result from considering the architectural concepts of Heavy & Light, and Mono-Type & Multi-Type?

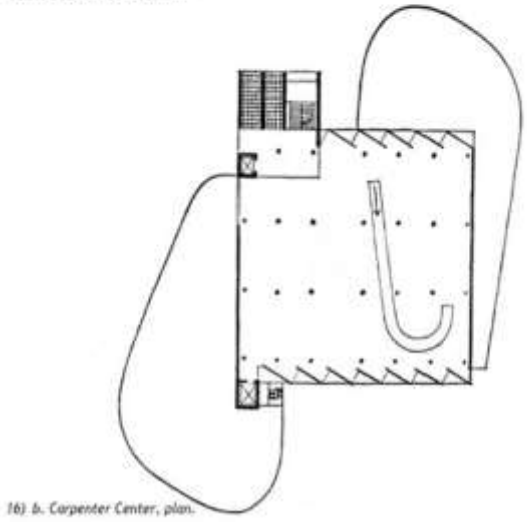
For example: the polarity or dialogue between Heavy and Light includes a wide range of architectural characteristics:

1) The psychology of space,
2) The relationship between spaces,
3) The separation or connection between interior and exterior spaces,
4) The nature of the structural system,
5) The degree to which the architecture is dynamically changing or static,

For example: the polarity or dialogue between "Monotype and Multi-type" includes a wide range of architectural characteristics:

1) The identicalness of functionally similar spaces,
2) The balance between order and disorder,
3) Variations of experience, scale, mood,
4) Importance,
5) Human and contextual scale,
6) Logic of structural and mechanical systems logic,
7) Relationships to varying conditions such as sun paths, seasons, times of day, variety of events, weather, orientation,
8) Hierarchy of scale or systems, etc.

15) b. Claypotts Castle, plan.



16) b. Carpenter Center, plan.

Heavy and Light Architecture

100

Design Process: Physical Model & Digital Model

Physical Site Model is to have a Google Earth aerial view image, *with the marina removed*, to scale, as the base of the model and 2D chipboard "stage set facades" on the three sides of the site extending along the canals and fundamenta.

Digital Site Model is to have a Google Earth aerial view image, *with the marina removed*, to scale, as the base of the model and complete 3D building massing of the surrounding context.

A. Heavy - Light:

1. Select a few similar examples of Heavy and Light images from the Conceptual I: "Heavy-Light" folder. Interpret their potential meaning, design potential as it applies to the specifics of this studio project and, importantly, to your work this far.

The images should illustrate Heavy-Light characteristics that illustrate your architectural ideas, concepts and design intentions, and also provide new insights about the development of your design.

2. Review the images and select the single "best" Heavy and single "best" Light image.

If your design was to be developed as exclusively Heavy, what would be the advantages and disadvantages?

How would it advanced your architectural intentions and redefine your concept?

If your design was to be developed as exclusively Light, what would be the advantages and disadvantages?

How would it advance your architectural intentions and redefine your concept?

3. Create a set of "Heavy" and "Light" 3D physical and / or digital study models. Overall, the studies also strive to maintain the best conceptual and architectural characteristics of the original Design Research selected image(s), while also developing your design further.

B. Mono-Type and Multi-Type:

1. Select a few similar examples of Mono-Type and Multi-Type images from the Conceptual Design: "Mono-Multi" folder. Interpret their potential meaning, conceptual and design potential as it applies to the specifics of this studio project and, importantly, to your work this far.

The images should illustrate Mono-Multi characteristics which illustrate your architectural ideas, concepts and design intentions, and also provide new insights about the development of your design.

2. Review the images and select the single "best" Mono-Type and single "best" Multi-Type image.

If your design was to be developed as exclusively Mono-Type, what would be the advantages and disadvantages?

How would it advanced your architectural intentions and redefine your concept?

If your design was to be developed as exclusively Multi-Type, what would be the advantages and disadvantages?

How would it advance your architectural intentions and redefine your concept?

3. Create a set of "Mon-Type" and "Multi-Type" 3D physical and / or digital study models. Overall, the studies strive to maintain the best conceptual and architectural characteristics of the original Conceptual Design I selected image(s), while also developing your design further.

C. Picturesque, Formal, Node, Composite Theories:

Each of the following four design theories encompass a different point of view regarding the overall organization, ordering system, visual and spatial character, relationship between functions, formal/informal characteristics of buildings, relationships to context and neighborhoods.

Consider each theory as a means for further defining your architectural concept and design study. What are, its design "rules," form, influence on program and relationship to context?

Which of the four theories most closely aligns with your Conceptual Design studies thus far?

Which of the theories or combination of the theories should be the basis for the Schematic Development design phase, and why?

101

1. Picturesque: is typified by "vernacular" urban settings which have developed overtime, adapting to topography, pedestrian movement, hierarchies of importance, variation in "human" scale, shared aesthetics, and uniformity of materiality. Buildings are differentiated as "background, continuous" and "landmark, symbolic."

2. Formal: is typified by predetermined and unified organizational systems, typically orthogonal grids, centerlines, with urban blocks. Formal systems generally include hierarchical characteristics through the emphasis of the "center," the uniform distribution of "centers," emphasis of axis such as boulevards and streets, relating locations of importance with cultural or commercial functions.

3. Node: based urban systems establish a network of paths whose intersection create a hierarchy of experience and function. The system is based upon 1) movement along or adjacent to and 2) arrival at events. The node based system can be congruent with existing conditions such as topography, existing patterns of use, completing existing conditions. The node based system can also be a unique pattern or system overlaid onto the existing context, establishing new or unexpected conditions.

4. Composite: based urban systems interrelates or combines functions, removing differentiations of use, or separation. It is a system that adapts over time. Often a system of a general or universal architectural context whose functionally is accomplished at the scale of "furnishings," rather than "room."

Review 1: Conceptual Design

A. Conceptual Design:

Explain your design objectives and strategies by answering each of these questions through written statements and diagrams:

1. Through notated illustrations explain how your best conceptual design is developed from your study and application of each of the following Concepts:
    a) Singularity, Linear and Network
    b) Order and Disorder
    c) Contextual and Abstract Urban Form
    d) Singularity, Linear and Network
    e) Order and Disorder
    f) Contextual and Abstract Urban Form

2. Written Statement: One hundred words, maximum, describe which of the four Theories or combination of the Design Theories should be the basis for your further development of your design at the Schematic Design Phase. Explain why and how this may be accomplished.

4. Written Statement: One hundred words, maximum, defining your revised conceptual of your project.
    a) What is the conceptual basis for your design?
    b) How does the concept "complete" the urban and lagoon context?
    c) How does the concept interpret and express the functional program?

B. Comparable Architectural Diagrams:

Explain and illustrate the "best design's" organization though the following three-dimensional diagrams.
Each of the following requirements should be illustrated at the same scale and point of view.

1. Site Relationships: Illustrate the best Conceptual Design's exterior courtyards and public spaces, pedestrian circulation and entries, pedestrian and boat movement systems and connections, relationships to the architectural and physical context.

2. Formal Ordering Systems: Illustrate the best Conceptual Design's concepts, determinants of form and scale, patterns and organizing principles and relationship to the surrounding context.

3. Functional Organization: Illustrate the best Conceptual Design's primary functions location, approximate size and height, and inter-relationships, both for interior and exterior functions and circulation systems.

4. Figure-Ground: Axonometric diagram of best conceptual design: "figure" building forms, "ground" landscape-garden, and their composite "figure and ground" diagram in the context of the site, with notations explaining design qualities of both systems and their composite design.
    a. Are the conceptual exterior public spaces as successfully designed as the interior spaces, and vice versa?
    b. In what ways does the best Conceptual Design complete and fit the site?
    c. In what ways do the exterior spaces complete the site, neighborhood and urban / natural context?

C. Conceptual Architectural Documentation:

1. Contextual Site Plan: Aerial Google Earth view of "best design" to scale in the context of the surrounding neighborhood. (1" = 100' or 1:1200)

2. Conceptual Floor Plans: Figure-Ground Diagrammatic Plans of "best design" of all other levels in the context of surrounding site. Ground level floor plan to be in the context of the Google Earth aerial view (without marina). (1:300 or 1" = 25')

3. Conceptual Figure-Ground Building-Site Sections and Elevations: Diagrammatic Longitudinal (one minimum), Transverse Building-Site Sections (one minimum), Diagrammatic Elevations (two minimum) in the context of surrounding site. (1:300 or 1" = 25')

D. Perceptual Documentation in 3D:

Explain the "best design" in context and from eye level experientially.

1. Conceptual Phase Model: Physical model detail equivalent 1 to 600 (1" = 50'), with photographs in the context of a site model.

2. Serial Views: A sequence of best design's eye-level Serial View perspectives in context. The sequential views are to illustrate moving to and through the design, as experienced at eye level and in its surrounding site context, including all major interior and exterior spaces.

3. Contextual Views: A set Contextual Views of best design from eye-level (two minimum) and aerial level (two minimum), which are basic monochromatic with solar shadow renderings of the conceptual building massing superimposed on eye level and aerial site / context photographs, with accurate matching of perspective, size, horizon line, lighting conditions and shadows.

Lumion Photo Matching Tutorial:

https://www.youtube.com/watch?v=q25easqTabM and https://www.youtube.com/watch?v=fQXXhLCihfs

Use specific site photographs, not "automatically generated contexts."

III. Architectural Regulations:

The technical and analytical responsibilities of architectural practice have expanded considerably. Requirements for high levels of life safety, equality and accessibility, and complex or hybrid structural systems, all define and control contemporary architecture.

The quality of architecture is dependent upon a sophisticated interrelationship between the conceptual or theoretical and the technical. Architecture seeks to resolve these issues both technically and artistically.

The development of architecture from conceptual to schematic design requires that each of the following technical issues be researched. It is the first test to evaluate the implications of these technical requirements in relationship to your conceptual design and its future development.

These include determining the types of construction that are appropriate to the functions and scale of the building. The primary means of egress: number of exits, distances between exits, maximum travel distances to exits, etc. The accessibility of the design.

You are encouraged to work in teams of two or three to complete the Regulatory Notebooks for your proposed designs. The intention is that this research provides information that will be integrated into your design in the next phases of the project as it controls what can and cannot be done in relationship to your individual set of architectural concepts and designs.

A. Regulatory: *International Building Code 2021: Occupancy Classification, Mixed Use Requirements, Required Type of Construction, Allowable Maximum Floor Areas, Maximum Building Height and Number of Stories, Site Determined Building Area Modifications, Building Separations, Atrium Requirements, Fire and Smoke Barriers, Prescriptive Fire Ratings of Building Construction, Fire Smoke and Sprinkler System Requirements, Restroom Requirements and Stair Design.*

B. Life Safety: *International Building Code 2021: Exit Access, Exit Access Maximum Travel Distances, Aisle Minimum Widths and Combined Widths (Corridors & Stairs), Min and Max Separation of Exits within a space, Maximum Dead Ended Exit Distances, Number of Required Exits, Maximum Common Exit Path Distances, Means of Egress Minimum Widths and Minimum Widths by Capacity, Corridor Continuity, Horizontal Exits, Exit Discharge, Egress Court and Exit Lobby Restrictions, Required Door Widths and Swing Directions, Direct Exit Paths, Elevator and Escalators.*

C. Accessibility: *2010 ADA Standards for Accessible Design: Ramp Slopes and Safety Areas, Wheel Chair Access, Turning Circles and Maneuvering Clearances, Doors and Doorways Requirements, Refuge Area Requirements, Restroom Design, Elevator and Platform Lift Design, Accessible Roots, Equivalency of Design and Accessibility.*

Architectural Regulations Notebook:

See: \SYLLABUS\Regulatory Analysis.
See: \SYLLABUS\2010 ADA Standards Summary
See:\SYLLASUS\2023International Building Code Summary

A. Regulatory, Life Safety & Accessibility Analysis:

See: https://www.buildingcode.blog/

IBC Occupant Load Calculator 2021
https://www.buildingcode.blog/ibc-occupant-load-calculator.html

IBC Allowable Height and Area Calculators 2021
https://www.buildingcode.blog/allowable-height--area-calculator---non-separated-mixed-occupancy.html
https://www.buildingcode.blog/allowable-height-area-calculator-separated-mixed-occupancy-37216.html

Plumbing Fixture Calculator
https://www.buildingcode.blog/plumbing-fixture-calculator.html

High Rise Requirements
https://www.buildingcode.blog/uploads/1/2/9/9/129929641/building_code_blog_-_high_rise_cheatsheet.pdf

IBC Fire Wall / Exterior Wall Intersection Tool
https://www.buildingcode.blog/fire-wall-exterior-wall-intersection-tool.html

104

B. 2010 ADA Standards Summary Document:

Research, highlight and notate issues that apply to your Design Concept proposal.

C. 2021 International Building Code Summary Document:

Research, highlight and notate issues that apply to your Design Concept proposal.

Advanced Studio I Notebooks are intended to be collections of references and information which inform the design. They are references and illustrations of specific aspects of the design process to be used during studio discussions.

They are “scrapbooks” of information, which do not require formal presentation, graphic consistency, etc.

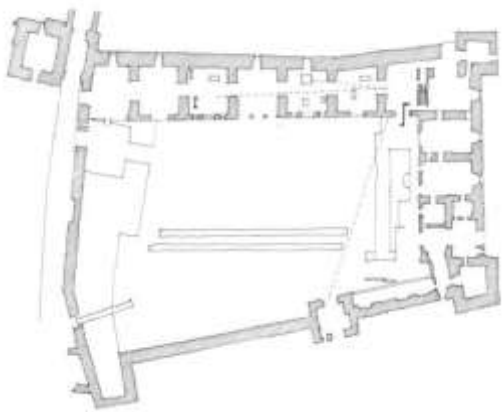
IV. Schematic Design

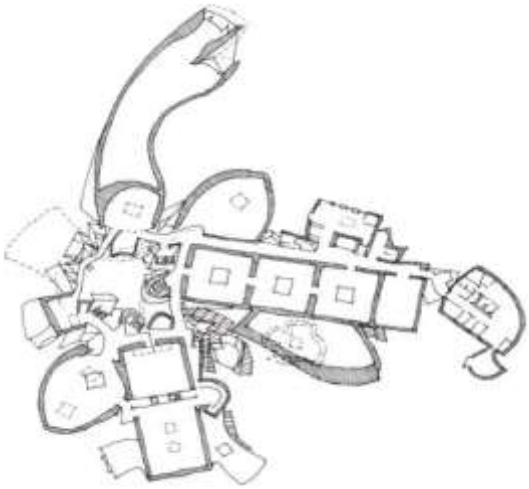
Schematic Design:

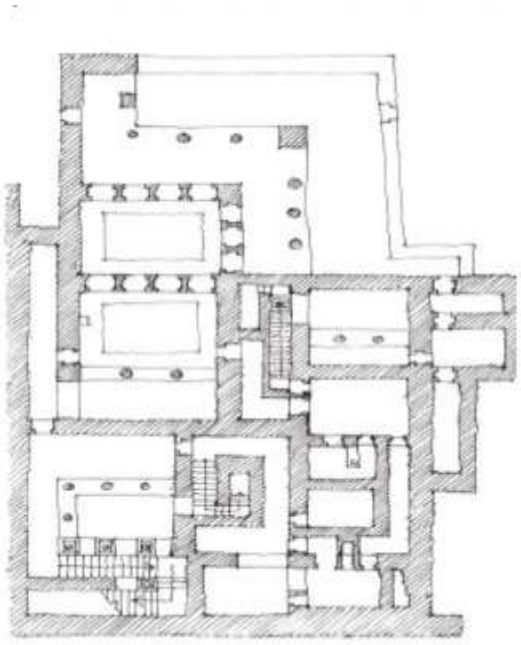
Will focus upon the development of 2D architectural drawings, while further developing architectural concepts and formal strategies, the physical and technical aspects of the design. Architectural schematic drawings illustrate the functional development of rooms and spaces, the architectural and technical characteristics of the building section, the fundamental characteristics of the structural and mechanical systems, and the environmental and contextual response.

Schematic Design illustrates functional relationships of location, size and proportion of all interior and exterior spaces, the design of the primary egress and exit system, design of the primary accessibility, the further development of conceptual strategies for the Glassworks, Shops, Restaurants, Hall and other public spaces.

It develops the conceptual design to incorporate the primary exterior elevation characteristics including glazing, foundations, and conceptual landscaping / site characteristics. Wall, floor, roof thicknesses accurately illustrate structural systems requirements. They are based upon slenderness ratios of columns and walls, and structural span to depth ratios of girders, beams and slabs, trusses and provide lateral stability and minimized deflection for the structure.







Exterior Elevation Notebook:

Develop an annotated notebook of examples of exterior facades or portions of facades of projects with similar architectural characteristics and materials that you are considering to use as a basis for the development of the project.

Consider the application of façade alternative materials, aesthetics, relationships to surrounding context, environmental response, expression of light and heavy architecture, expression of mono-type and multi-type architecture and express to the conceptual and technical aspects of your project.

The notebook should be the basis for the development of the exterior facades of your design in the design development phase of the project.

What should the architectural character of your design be to express its architectural concepts, programmatic functionality, relationship to the surrounding context, and environmental response?

1. Studios Google Drive
2. HCAD Library
3. *See: \FACADES*
4. *See: \TECHNICAL REFERENCES*
5. *See: \CONCEPTS & THEORY*

Schematic Design Format: The level of detail is increased from the Conceptual Design Phase to that associated with 1 to 200 (1/16” = 1’-0”’) scale architectural drawings.

105

Schematic Design Presentation:

A. Concepts & Theories:

1. Explain your design objectives and strategies by answering each of these questions through written statements and diagrams:
    a) What is "story" of your design, what is its concept?
    b) Explain and illustrate how your design and its concept is developed from the following concepts:
        1) Singularity, Linear and Network
        2) Order and Disorder
        3) Contextual and Abstract Urban Form
        4) Singularity, Linear and Network
        5) Order and Disorder
        6) Contextual and Abstract Urban Form
        7) Picturesque
        8) Formal
        9) Node
        10) Composite
2. Notated copy(s) of your original Conceptual Design images that were selected from the Google Drive.

B. Comparable Architectural and Building Systems Diagrams:

Each of the following requirements should be illustrated at the same scale and point of view.

1. Schematic Site Relationships: Illustrate the Conceptual Design's exterior courtyards and public spaces, pedestrian circulation and entries, pedestrian and boat movement systems and connections, relationships to the architectural and physical context.

2. Schematic Formal Ordering Systems: Illustrate the Conceptual Design's concepts, determinants of form and scale, patterns and organizing principles, linearity characteristics, and relationship to the surrounding context.

3. Schematic Functional Organization: Illustrate the Conceptual Design's primary functions location, size and height and relationship to each other, both interior and exterior, public and service circulation systems.

4. Schematic Environmental Response: Illustrate the Conceptual Design's response to Solar Orientation, Daylighting, changes of season, weather, time of day, etc.

5. Schematic Structural Form: Illustrate the Schematic Design's basic structural form character, heavy or light, frame-grid-load bearing wall, etc.

C. Architectural Documentation: (Detail equivalent to 1/16" = 1'-0" or 1:200, except at notated)

1. Schematic Site Plan: Aerial Google Earth view of concept to scale in the context of the surrounding neighborhood. ((1" = 100' or 1:1200)

2. Schematic Floor Plans: Diagrammatic Plans of all other levels of proposed design in the context of surrounding site. Ground level floor plan to be in the context of the surrounding site details and context. (1:300 or 1" = 25')

3. Schematic Building-Site Sections and Elevations: Longitudinal (one minimum), Transverse Building-Site Sections (one minimum), Elevations, including basic façade characteristics (two minimum) in the context of surrounding site. (1:300 or 1" = 25')

D. Perceptual Documentation:

Explain the design in context and from eye level experientially.

1. Conceptual Phase Models: Physical model detail equivalent 1 to 600 (1" = 50'), with photographs.

2. Schematic Phase Model: Physical model, detail equivalent 1 to 600 (1" = 50'), with photographs.

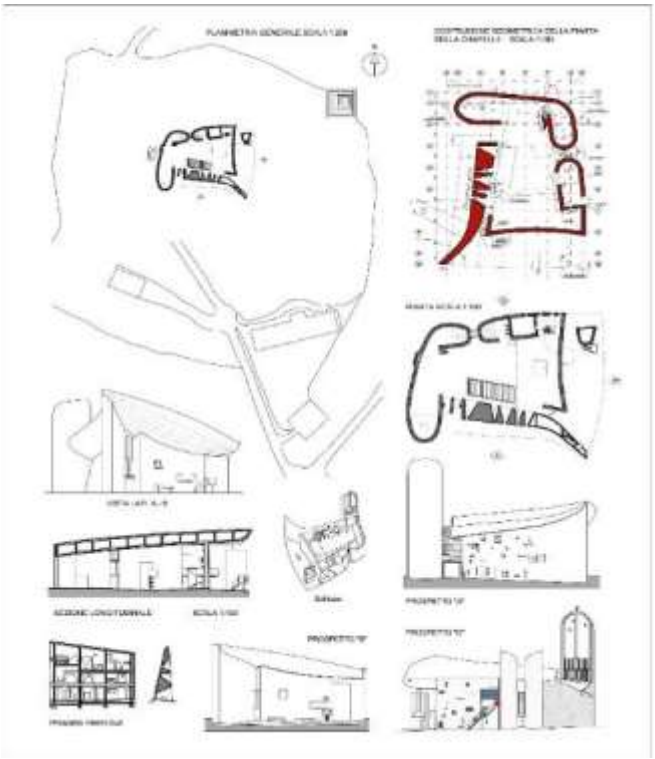
3. Serial Views: A sequence twelve to twenty-four eye-level Serial View perspectives in context. The sequential views are to illustrate moving to and through the design, as experienced at eye level and in its surrounding site context, including all major interior and exterior spaces.

4. Contextual Views: A set Contextual Views from eye-level (two minimum) and aerial level (two minimum), which are basic monochromatic with solar shadow renderings of the conceptual building massing superimposed on eye level and aerial site / context photographs, with accurate matching of perspective, size, horizon line, lighting conditions and shadows, (without building surface color or textures.)

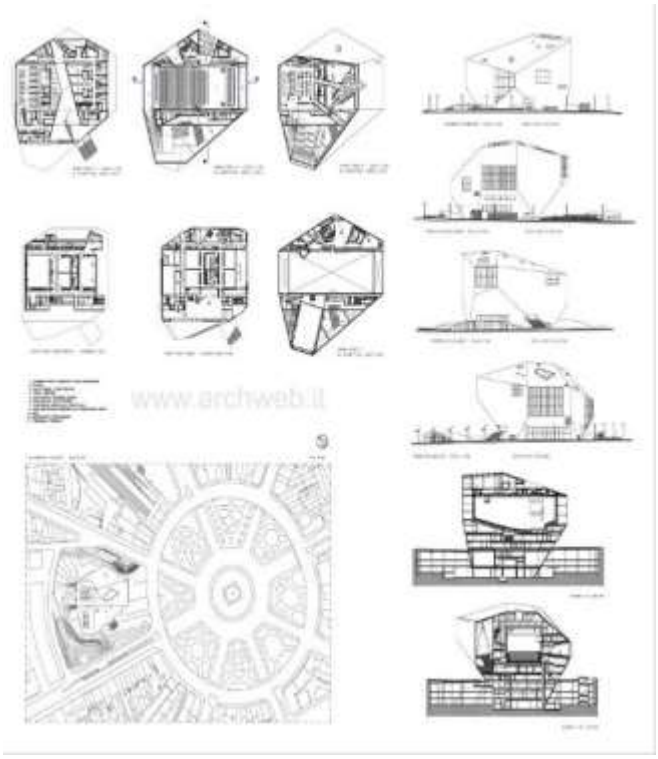
V. Design Development

Design Development is to the further develop the conceptual, functional, regulatory and technical aspects of the Schematic Design.

The level of detail is that associated with 1:100, 1/8' " = 1'-0" architectural drawings. The focus is the development of a set of detailed 2D architectural drawings with all drawings of proposed design shown in the context of the site and neighborhood.



All drawings must be in context (not as illustrated).



All drawings must be in context (not as illustrated).

107

Piazza and Landscape Design Notebook:

Develop an annotated notebook of examples of public squares and landscape spaces with similar architectural characteristics that you are considering to use as a basis for the development of the project.

Consider both the application of contemporary landscape systems for self-sustaining plant materials, water conversation, new landscape forms, and the architectural characteristics that are inherent in the traditional Venetian campo.

The notebook should be the basis for the development of the exterior public spaces for your design.

1. Studio's Google Drive
2. HCAD Library
3. *See: \LANDSCAPE*

Design Development:

The design development phase will focus upon the following:

a. Compliance with all major regulatory, life safety and accessibility requirements.
b. Structural system design and dimensions and including building foundations, component dimensions and lateral stability
c. Environmental control systems locations and distribution systems.
d. Design of the building exterior envelope at the scale of the entire project.
e. Functional details such as the design of kitchens, restrooms, dining areas, exterior courtyards and site landscapes / hardscapes.
f. Selection and design of the exterior façade, its materials, systems, and visual and thermal performance at the building scale.

See the Studios Google Drive:
"Facades" & "Technical References and Tutorials"

Review 2: Schematic Design and Design Development

A. Design Concept:

Explain your design objectives and strategies by answering each of these questions through diagrams and words:

1) What is the story of your design (concept)?
2) Why are architectural characteristics of the Schematic Design most appropriate to story of your design (concept)?
3) Why are architectural characteristics of the Schematic Design the best response to the site and context?
4) Why are architectural characteristics of the Schematic Design the best response to the Glassworks and each of its interior and exterior functions?

B. Comparable Architectural and Building Systems Diagrams:

Explain and illustrate the designs organization though diagrams.
Each of the following requirements should be illustrated at the same scale and point of view.

1. Schematic Site Relationships: Illustrate the Conceptual Design's exterior courtyards and public spaces, pedestrian circulation and entries, pedestrian and boat movement systems and connections, relationships to the architectural and physical context.
2. Schematic Formal Ordering Systems: Illustrate the Conceptual Design's concepts, determinants of form and scale, patterns and organizing principles, linearity characteristics, and relationship to the surrounding context.
3. Schematic Functional Organization: Illustrate the Conceptual Design's primary functions location, size and height and relationship to each other, both interior and exterior, public and service circulation systems.
4. Schematic Environmental Response: Illustrate the Conceptual Design's response to Solar Orientation, Daylighting, changes of season, weather, time of day, etc.
5. Design Development Structural Form: Illustrate the Schematic Design's basic structural form character, heavy or light, frame-grid-load bearing wall, etc.
6. Design Development HVAC Systems: Illustrate the Schematic Design's major HVAC systems and their distribution.

C. Architectural Documentation: (Detail equivalent to 1:100, 1/8" = 1'-0" except as noted)

1. Design Development Contextual Plan: Aerial view of building in the context of the surrounding neighborhood and lagoon. (1:1200 or 1" = 100')
2. Design Development Site Plan: Sectional view of building's ground floor plan in the context of site and surrounding context. (1:300 or 1" = 25')
3. Design Development Floor Plans: Architectural ground level site plan and plans of all other levels. Ground level floor plan to be in the context of the surrounding site details and context.
4. Design Development Building-Site Sections: Architectural Longitudinal (one minimum) and Transverse Building-Site Sections (one minimum) in the context of surrounding site.
5. Design Development Building-Site Exterior Elevations: Architectural Exterior Elevations (four) in the context of the surrounding site and context.
6. Design Development Exploded Axonometric of Design in Context: Illustrating architectural concepts, formal ordering systems, structural systems, life safety regulations, environmental response, etc.

D. Perceptual Documentation:

Explain the design in context and from eye level experientially.

1. Conceptual Phase Models: Physical model detail equivalent 1 to 600 (1" = 50'), with photographs.
2. Schematic Phase Model: Physical model, detail equivalent 1 to 600 (1" = 50'), with photographs.
3. Serial Views: A sequence twelve to twenty-four eye-level Serial View perspectives in context. The sequential views are to illustrate moving to and through the design, as experienced at eye level and in its surrounding site context, including all major interior and exterior spaces.
4. Contextual Views: A set Contextual Views from eye-level (two minimum) and aerial level (two minimum), which are basic monochromatic with solar shadow renderings of the conceptual building massing superimposed on eye level and aerial site

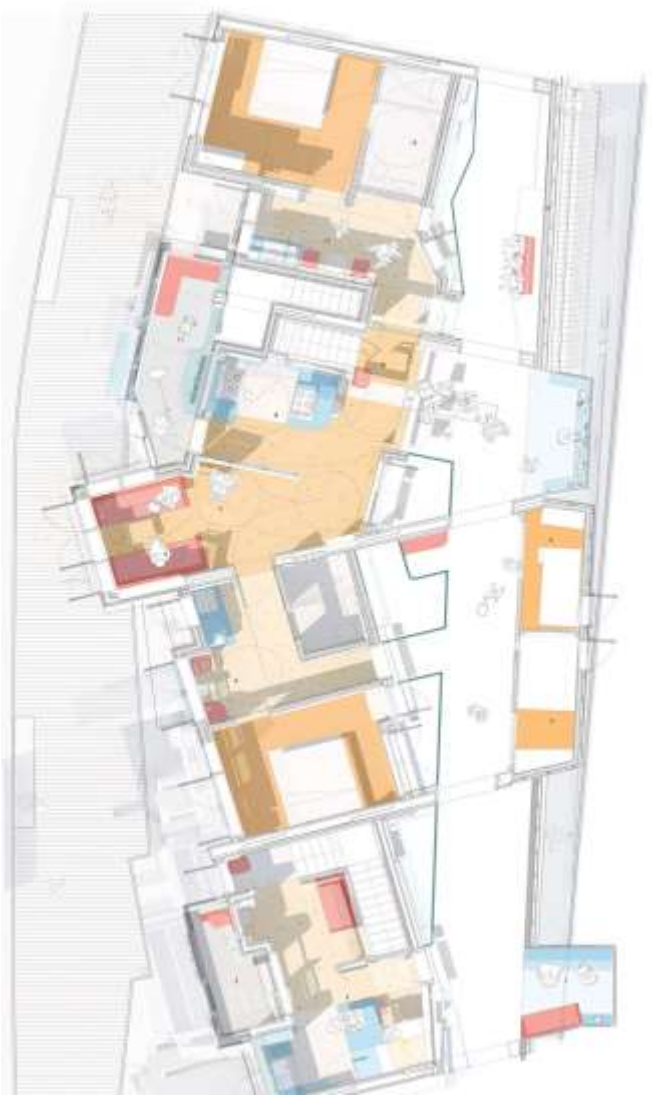
/ context photographs, with accurate matching of perspective, size, horizon line, lighting conditions and shadows, (without building surface color or textures.)

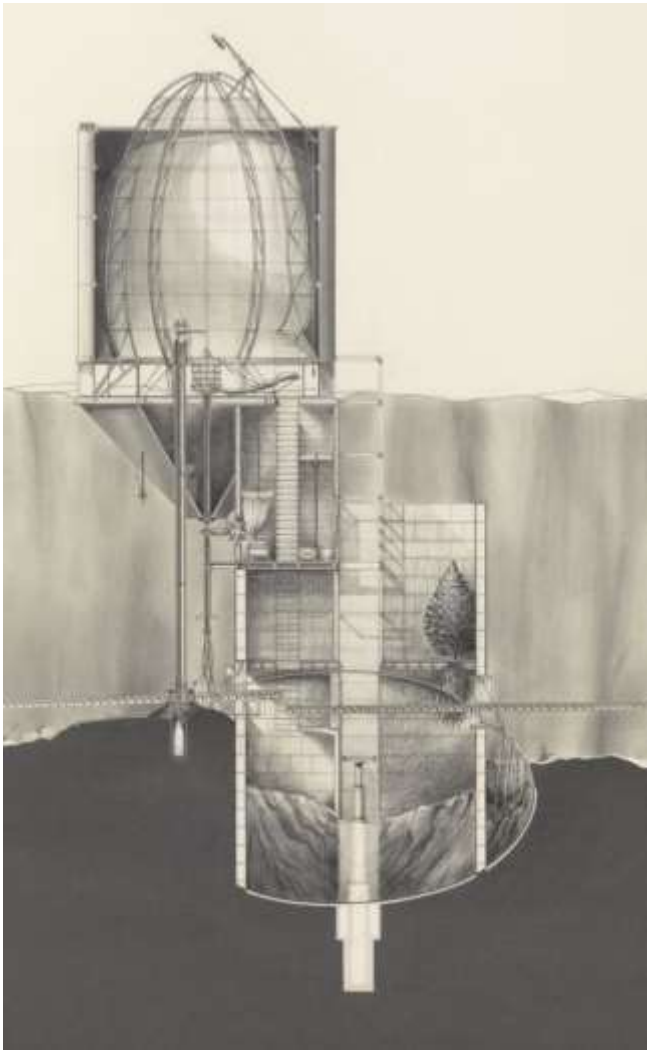
E. Design Development Technical Documentation: (A selected portion of the overall building and site model as follows.)

1. 3D Building Section Digital Model: from footing to roof. A three-dimensional detailed digital model including building structure, enclosure systems, roof, floors, foundations, HVAC integration, light control, materials and systems.
At the level of detail of 1/8 = 1'-0".

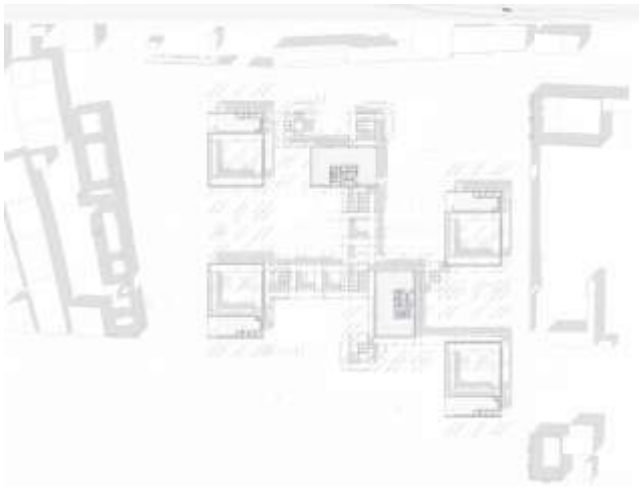
The 3D Building Section model must include the two major façades and their immediate context, including a minimum of one and one half structural bays along the length of the building. The model must also include at least a portion of one of the Hot Shops.

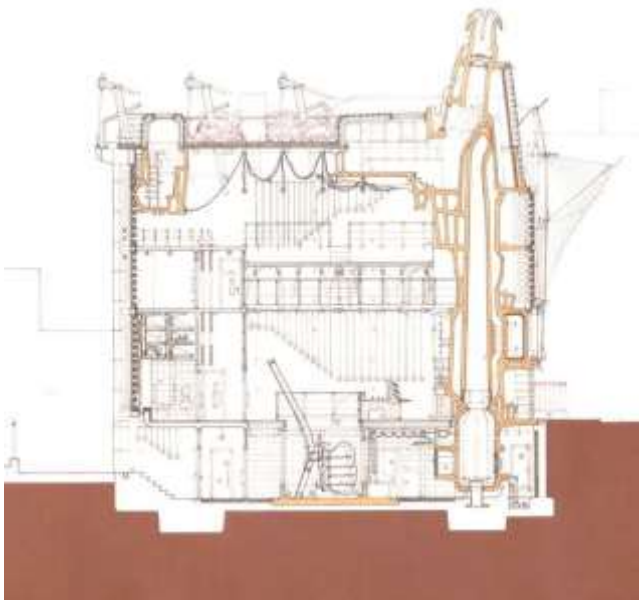
Design Development Level of Detail and Graphic Quality:

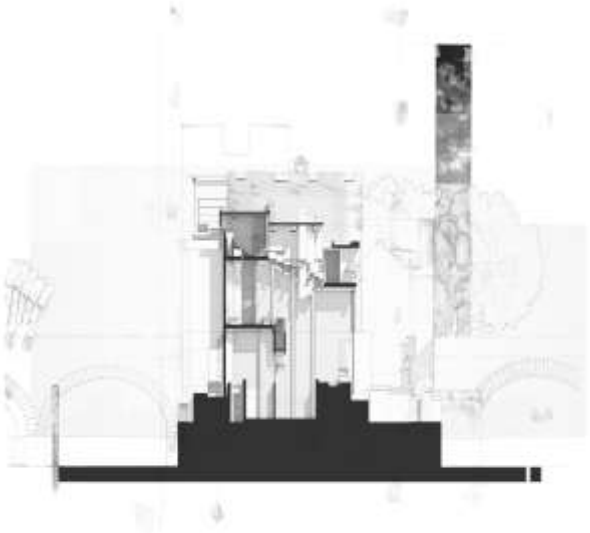




110

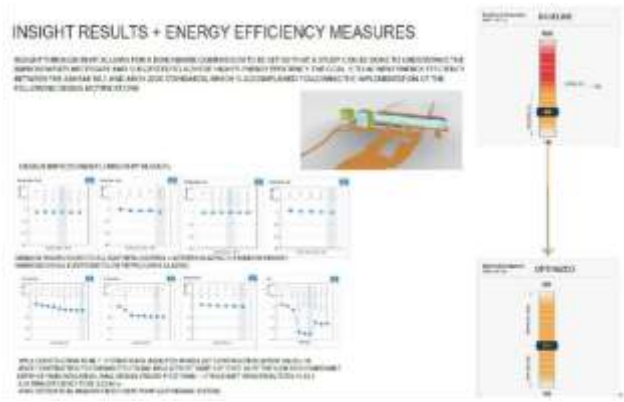


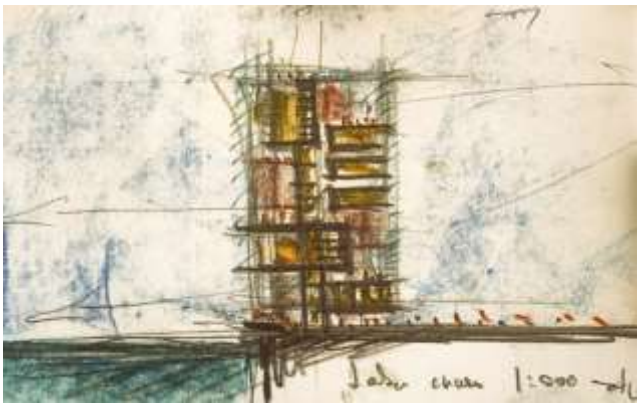




111

VI. Performance and Sustainability:





Prior to selecting specific building materials, designing the details of exterior elevations, determining the insulation levels for the building envelope, analyze the overall energy performance of the proposed design. It is an approximation of the overall building's level of energy consumption. The analysis calculates the overall annual electrical energy consumption. Importantly, it comparatively illustrates numerous design and technical alternatives for the development of the design, including percent of exterior glazing, thermal insulation levels, solar control, solar orientation, etc.

A. Building Performance:

Performance of Energy Consumption, Day-lighting, Solar Protection, Natural Ventilation, Natural Cooling, Building Insulation-Thermal Mass, Building Form and Orientation, Climate, Weather and Diurnal Response, Solar Access, Alternative Energy Sources.

The minimum objective is to comply with the ASHRAE 90.1 Energy Standard. The Architecture 2030 Energy Standard is currently being progressively implemented providing a much higher level of required performance.

B. Sustainability

Minimum Carbon Footprint, Use of Sustainable Materials, Water Conservation, Application of Renewable Energy Sources.

See: \Energy Modeling Introduction.pdf
See: \Measurable Building Performance.mp4
See: \Revit and Rhino.mp4

Performance and Sustainability Notebook:

Using Insight comfort and energy analysis software, evaluate the Schematic Designs energy consumption at the scale and detail of the building massing, orientation, fenestration, shading, insulation, etc.

Experiment with the design and technical parameters at the overall building scale to minimize the annual HVAC electrical consumption, without negatively influencing thermal or visual comfort.

Adjust the software's building envelope variables to approximate the insulation values of all exterior surfaces, glass transparencies and locations, shading devices, etc. your proposed design.

1. Does the proposed design meet the minimum standards for minimum energy consumption?

2. What changes, both design and technical, should be made to the proposed design to further reduce the annual energy consumption?

112

VII. Technical Development

(The Technical Development is for a selected portion of the Design Development 3D Building Section model.)

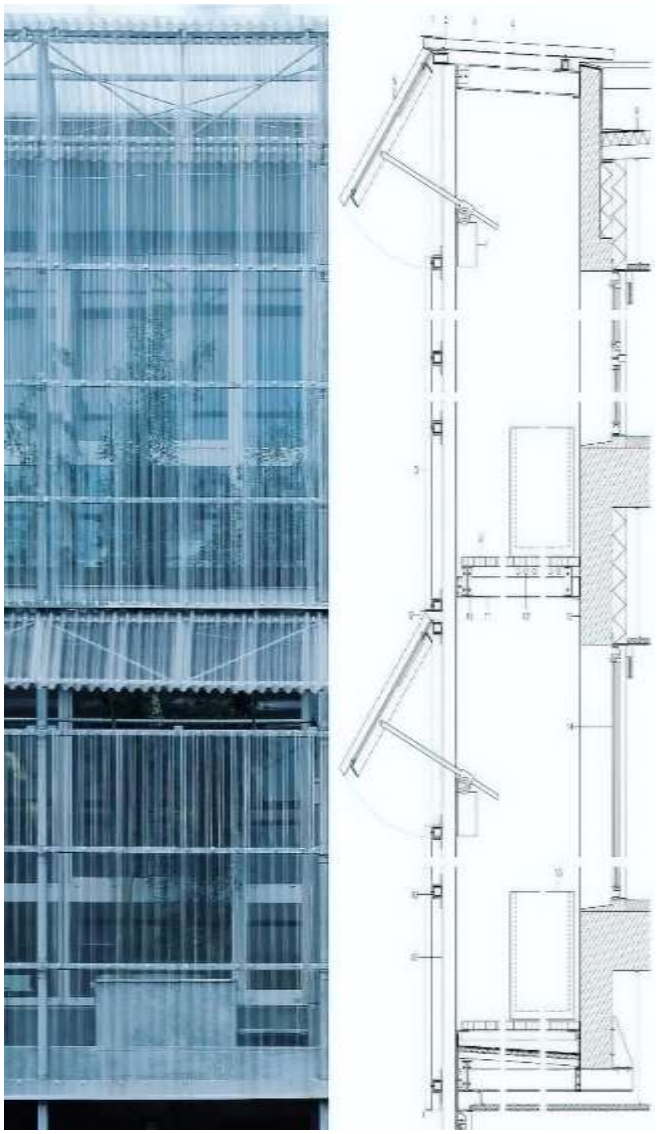
The Technical Development phase of the project will focus upon the architectural design and technical development of the major exterior façades of the proposed building, located within the 3D Building-Wall Section studied in the Design Development phase of the project. The study includes issues of building thermal insulation requirements, sun control and shading, natural ventilation, integration of structural, mechanical systems, waterproofing, building foundations, interior finishes and building facades, construction detailing.

Select more than one structural bay from the Design Development 3D Building Section model, which includes at least one Hot Shop, from “footing to sky,” and a minimum of ten feet into the building and including the adjacent site area.

Its level of technical development will therefore be greater than the other portions of your design. The level of detail is that associated with 1 1/2”= 1’-0” architectural drawings.

As part of the development of this portion of the project, select specific materials and systems, which will be notated on the 2D Technical (a one point perspective) view of the 3D Building-Wall Section model.

See the Studios Google Drive:
“Technical References and Tutorials”



Materials and Systems Notebook:

Develop an annotated notebook of the primary building products, materials and assemblies that you are considering to be part of the development of the project.

Select architectural precedents that are similar to the conceptual and technical aspects of your project.

Notate selected building and wall sections identifying the aspects that apply to your design, including the structural, mechanical and building envelope systems and materials, approximate dimensions, etc.

The notebook should be the basis for the technical development of your design.

1. Studio's Google Drive
2. HCAD Library
3. Detail Magazine
4. Transmaterial 1, 2 and 3
5. https://transmaterial.net/
6. Manufacturer's websites
7. sweets.construction.com
8. materialconnexion.com
9. https://www.thomasnet.com
10. https://www.azom.com\
11. https://transparencycatalog.com
12. https://calrecycle.ca.gov/condemo/products
13. https://www.archdaily.com/641265/introducing-our-new-materials-catalog
14. https://www.arcat.com/catalogs/divs/product_catalogs.shtml

Some of the issues that are relevant to the selection of the materials include:

a. The appropriate thickness for performance, deflection and stability of structural systems, walls, columns, slabs, girders, beams, mullions, etc.

b. How materials and systems are assembled, attached or supported by other systems, and the structural system.

c. Required thermal insulation performance of all exterior surfaces.

d. The requirements for minimum Fire Ratings.

e. The carbon footprint.

f. The drainage of rainwater.

g. Control of sunlight throughout the diurnal and seasonal cycles.

h. The lateral and vertical stability of systems and structure.

i. The continuity of thermal insulation and requirements for thermal breaks.

j. Infiltration and vapor barriers.

k. Integration of the structural, HVAC, electrical lighting, fire protection, building services in the wall, floor, ceiling and roof assemblies

l. Relationship between materials and systems addressing the conceptual and aesthetic characteristics of the project.

m. The relationship between the design of the exterior façade and the surrounding context.

n. The relationship between the design of the exterior façade and the specific interior and exterior functions of the project.

Review 3: Technical Development

A. Comparable Architectural and Building Systems Diagrams:

1. Schematic Site Relationships: Illustrate the Conceptual Design's exterior courtyards and public spaces, pedestrian circulation and entries, pedestrian and boat movement systems and connections, relationships to the architectural and physical context.

2. Schematic Formal Ordering Systems: Illustrate the Conceptual Design's concepts, determinants of form and scale, patterns and organizing principles, linearity characteristics, and relationship to the surrounding context.

3. Schematic Functional Organization: Illustrate the Conceptual Design's primary functions location, size and height and relationship to each other, both interior and exterior, public and service circulation systems.

4. Schematic Environmental Response: Illustrate the Conceptual Design's response to Solar Orientation, Daylighting, changes of season, weather, time of day, etc.

5. Design Development Structural Form: Illustrate the Schematic Design's basic structural form character, heavy or light, frame-grid-load bearing wall, etc.

6. Design Development HVAC Systems: Illustrate the Schematic Design's major HVAC systems and their distribution.

B. Architectural Documentation:

1. Design Development Contextual Plan: Aerial view of building in the context of the surrounding neighborhood and lagoon.

2. Design Development Site Plan: Aerial view of building's ground floor in the context of site and surrounding context.

3. Design Development Floor Plans: Architectural ground level site plan and plans of all other levels of proposed building in the context of surrounding site. Ground level floor plan to be in the context of the surrounding site details and context.

4. Design Development Building-Site Sections: Architectural Longitudinal (one minimum) and Transverse Building-Site Sections (two minimum) in the context of surrounding site.

5. Design Development Building-Site Exterior Elevations: Architectural Exterior Elevations (four) in the context of the surrounding site and context.

6. Design Development Exploded Axonometric of Design in Context: Illustrating architectural concepts, formal ordering systems, building systems, environmental response, etc.

C. Technical Documentation:

1. Design Development 3D Building Section Digital Model:

2.Technical Development 3D Wall Section Model: (a developed portion of the 3D Building Section Model) with a 45 Degree Axonometric View and a 2D One Point *Wall Section: Perspective view: from footing to roof which illustrates relevant relationships between materials, assembly and support, visual characteristics, integration of major building systems, thermal insulation, waterproofing details. Detail associated with 1:8, (1 ½" = 1'-0").

Annotate building materials and products, including notation of building systems, material thicknesses. Include vertical dimensions of floor to floor heights, construction thicknesses etc.

3. Technical Development Partial Exterior and Interior Elevations: A one-point perspective rendered with shadow, of the exterior and interior elevations of the 3D Wall Section model is required.

VIII. Final Presentation

The Pre-Final Review and Final Review are presentations of both printed architectural and technical drawings of all the Final Presentation requirements, and a supplemental series digitally projected single images of design concepts, diagrams, contextual and perceptual images.

The time after the Pre-Final Review is dedicated to the revisions of the Pre-Final Presentation, the creation of the Final Presentation Model and its photography.

The Final Presentation and Final Record tells the "story of your final design," and should maximize the relationship between the architectural and technical drawings, organizing all the information in a logical manner, and be as graphically "clear and simple" as possible. Consider the hierarchy of importance of each image and image type.

Graphically design both the Final Review's multi-sheet printed "wall poster" and companion sequential digital presentation to be logical and graphically simple, dividing the overall presentation into topical areas and reading sequence, interrelating the architectural drawings, giving visual clarity to the most important architectural aspects of the design.

A. Final Presentation Perceptual Images:

1. Serial Views: Develop Serial Views that illustrate moving to and through the proposed design. Carefully select a variety of the most important interior and exterior spaces and create final presentation quality images from exactly eye level and in the context of the surrounding site, from approaching and walking to the building and by walking through all major programmatic interior and exterior spaces. (Eye level photographs must be from exactly 5'-0" off the ground plane or floor. Avoid excessive use or representation of material textures and saturated colors. Use digital 3D people, furnishings, etc. rather than superimposing 2D cutouts or masks.)

2. Contextual Views: Develop images of the proposed design that are superimposed on ***site photographs*** of the project site and surrounding locations to accurately illustrate the relationships between the prosed design and the overall and local context. Carefully match the perspective, horizon line and point of view, shadows, colors and tonality of the original photographs to the rendering.

Using Lumion for renderings requires that actual site photographs from above and eyelevel be the context, not a Lumion abstracted version.

B. Presentation Formats:

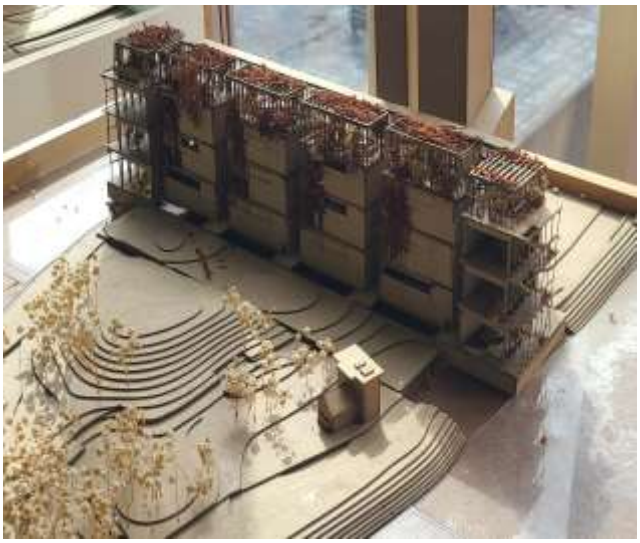
All sections of the Advanced Studio I require a hybrid media Final Review presentation:

1. Wall Poster: 36" x 72" or 36" x 36" Printed Sheets (landscape or portrait), including **ALL** of the listed Final Presentation Requirements, including those shown by the sequential digital display.

The Final Presentation Poster design generally measures between 72" x 180" and 72" x 252". **BUT,** the printed copy for the Final Presentation must be scaled when being printed to fit a maximum 72" wall height and 192" wall width or the available space. There is no minimum size or requirement for color printing of printed Poster.

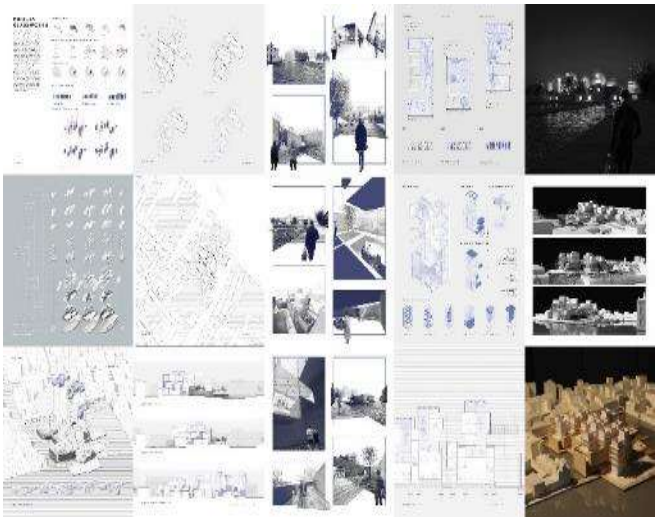
2. Sequential Digital Display: Includes full screen and sequential Final Presentation Requirements: *"A" Design Concept, "B" Comparable Architectural and Building Systems Diagrams, and "E" Perceptual Images.*

3. Final Presentation Physical Model and Photographs: in the context of the studio sections site model.



116

Example of the Final Presentation Wall Poster:



Pre-Final Review:

The Final Presentation Physical Model and its photographs are **not** due for the Pre-Final Review presentation.

1. The Pre-Final Review is intended to be the last design and technical informal review on which you have the opportunity to revise, edit or complete your project based upon the insights and comments of your studio teacher and other critics.

2. The Pre-Final Review is also the time in which the Final Presentation should be graphically designed and mocked-up for review. See the Presentation Types at the end of this document and examples of the Final Presentation poster on the studio's shared Google Drive.

3. The range of scale listed in the Presentation Requirements is to indicate the level of information and detail that is required, and not the size of the printed drawing. In other words, all drawings, diagrams and images are to be scaled to fit the format of the printed presentation.

The size of an image or drawing is a function of readability from a variety of viewing distances, and the relative importance or level of detail required of the specific image.

4. All Architectural Drawings must have a graphic scale, but a specific scale is not required.

5. The ground floor plan, exterior elevations and building sections must be in the context of the site and its surrounding context.

6. The Final Presentation can be printed completely in black and white (grey scale) to completely in color. Or, individual sheets can be printed either in black and white or color.

7. Individual images or drawings can be any size, but spanning more two or more sheets with match lines is not advisable.

Printed Poster and PDF File:

The Final Presentation Poster generally measures between 72" x 108" to 72" x 216" in digital format.

When the PDF file is it is scaled to fit the available wall space.

Approximate cost Black and White Xerox printing:

3 @ 24 x 36" prints @ $6.00

AIASNJIT Print Room cost:

36" x 72"	BW	Bond	$11.00
36" x 72"	Color	Bond	$21.00

Alphagraphics, 40 Commerce Way, Totowa, NJ
973 435 0762

Bernardsville Print Center, 20 Mine Brook Road, Bernardsville, NJ
908 766 4073

Printworx, 30 George Dye Road, Hamilton, NJ
609 586 3006

117

MGM Graphics, 8 East Grand Avenue, Montvale, NJ
201 326 5169

Blue Dog Graphics, 222 River Street, Hackensack, NJ
201 343 3343

Hudson Blue Print, 883 Clinton Avenue, Irvington, NJ
973 372 5200

Blueprints Printing
888 507 1002

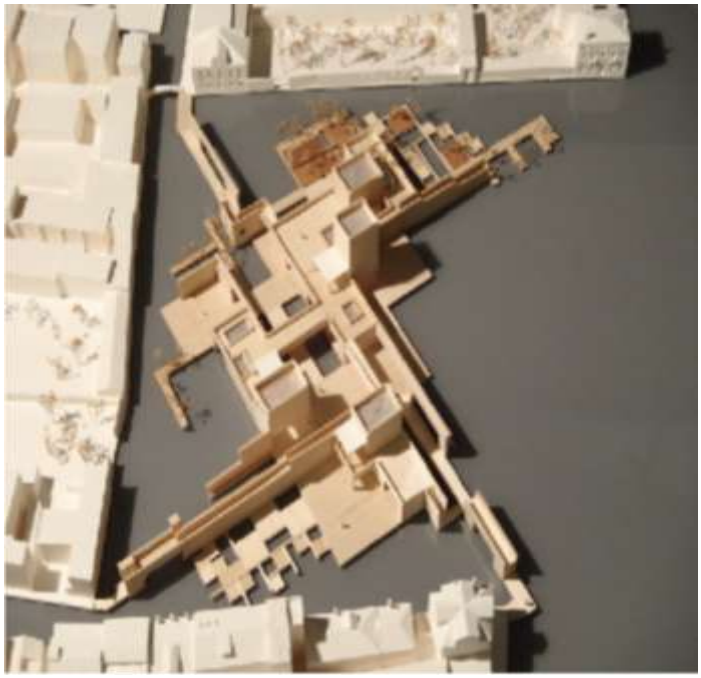
Tutorials and References:

Rhino Camera Matching:
https://www.youtube.com/watch?v=W6RwUZmo79I&t=1234s

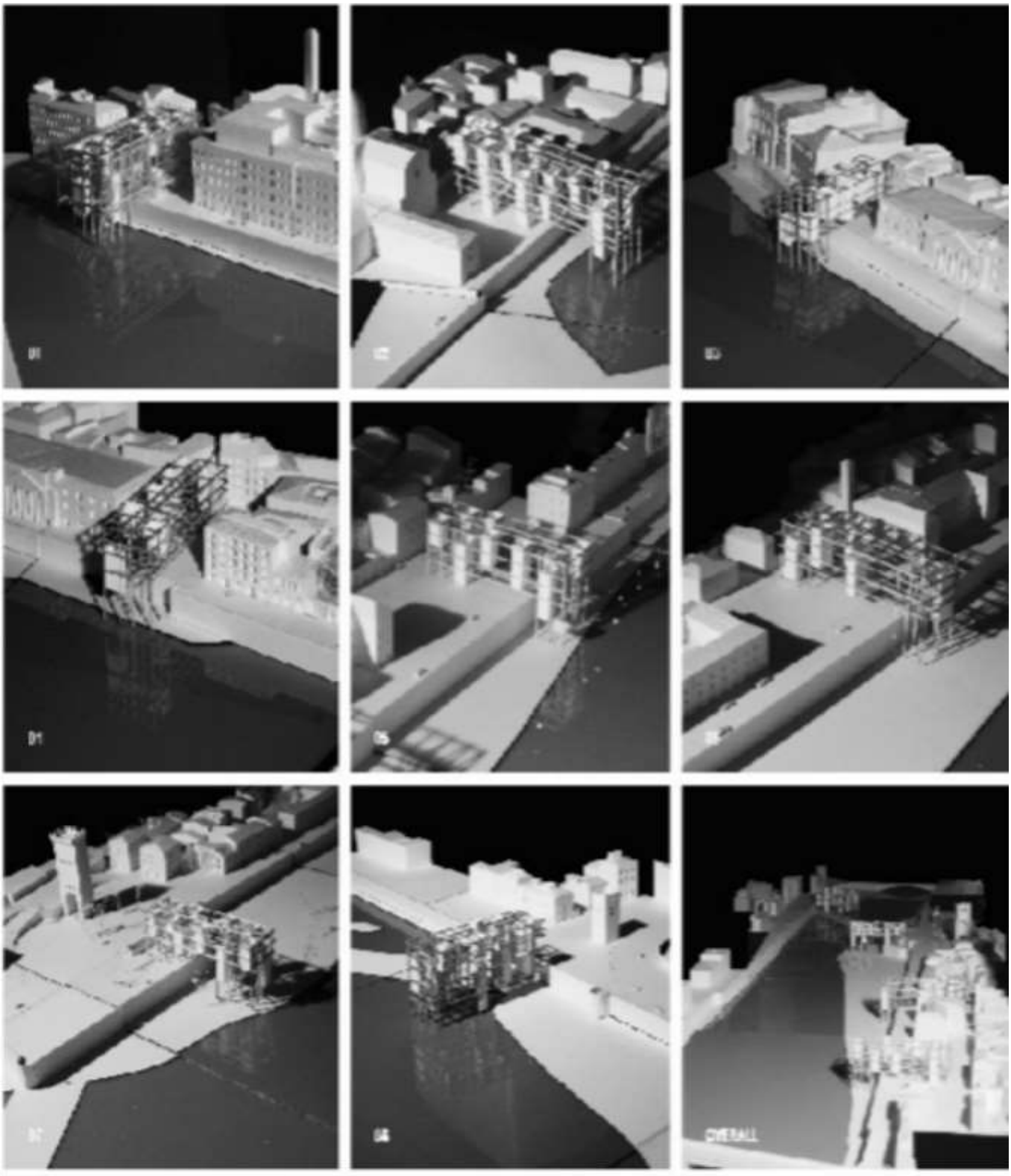
Basics of Model Building, Alexander Schilling
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&isFrbr=true&tab=Everything&docid=alma991359573405196

Final Presentation Model:

Physical Model: Create the Final Presentation Physical Model in the Studio Section's 1:300, 1" = 25' Site Model and its photographs are included as part of the Final Record submission. The model is to include the surrounding context and detail as illustrated below.



118



119

Review 4: Final Presentation

The Final Presentation is a combination of a printed poster and on-screen display as indicated in the Final Presentation requirements.

All Final Presentation Requirements, other than the physical models, must be included in the printed display.

The Final Presentation Model must displayed within the studio section's site model.

Final Presentation Requirements: (A-E)

A. Design Concept:

Explain your design objectives and strategies by answering each of these questions through diagrams and written statement:

1. What is "story" of your design, what is its concept?
2. Explain and illustrate how your design is developed from your synthesis of the following concepts:
    a) Singularity, Linear and Network
    b) Order and Disorder
    c) Contextual and Abstract Urban Form
    d) Singularity, Linear and Network
    e) Order and Disorder
    f) Contextual and Abstract Urban Form
3. Explain why is your design "Architecture?" including conceptual, programmatic and contextual issues.

B. Comparable Architectural and Building Systems 3D Diagrams:

1. Final Site Relationships: Illustrate the Conceptual Design's exterior courtyards and public spaces, pedestrian circulation and entries, pedestrian and boat movement systems and connections, relationships to the architectural and physical context.
2. Final Conceptual, Formal Ordering Systems: Illustrate the Conceptual Design's concepts, determinants of form and scale, patterns and organizing principles, linearity characteristics, and relationship to the surrounding context.
3. Final Functional Organization: Illustrate the Conceptual Design's primary functions location, size and height and relationship to each other, both interior and exterior, public and service circulation systems.
4. Final Environmental Response: Illustrate the Conceptual Design's response to Solar Orientation, Daylighting, changes of season, weather, time of day, etc.
5. Final Structural System: Illustrate the Schematic Design's structural system including foundations and all major structural components. Also, illustrating the lateral stability of the design.
6. Final HVAC Systems: Illustrate the Schematic Design's major HVAC systems and their distribution.

C. Architectural Documentation:

1. Final Contextual Plan: Aerial view of building in the context a areal Google Earth site photograph including the surrounding neighborhood and lagoon
2. Final Site Plan: Aerial view of building's ground floor in the context of site and surrounding context.
3. Final Floor Plans: Architectural ground level site plan and plans of all other levels of proposed building in the context of surrounding site. Ground level floor plan to be in the context of the surrounding site details and context.
4. Final Building-Site Sections: Architectural Longitudinal (one minimum) and Transverse Building-Site Sections (one minimum) in the context of surrounding site.
5. Final Building-Site Exterior Elevations: Architectural Exterior Elevations (four) in the context of the surrounding site and context.
6. Final Exploded Axonometric of Design in Context: Illustrating architectural concepts, formal ordering systems, movement and egress, structural systems, environmental response, etc.

D. Technical Documentation:

1. Design Development's 3D Building Section Digital Model,
2. Technical Development's 3D Wall Section Model: (a developed portion of the 3D Building Section Model) with a 45 Degree Axonometric View and a 2D One Point *Wall Section: Perspective view: from footing to roof which illustrates relevant relationships between materials, assembly and support, visual characteristics, integration of major building systems, thermal insulation, waterproofing details.

Annotate building materials and products, including notation of building systems, material thicknesses. Include vertical dimensions of floor to floor heights, construction thicknesses etc.

3. Technical Development's Partial Exterior and Interior Elevations: A one-point perspective rendered with shadow, of the exterior and interior elevations of the 3D Wall Section model.
4. Technical Development's Wall Section Details: Three Building Wall Section details, enlarged and annotated taken at the 1) ground plain, 2) between two intermediate floors and 3) at the roof taken from the 3D Wall Section model.

E. Perceptual Documentation:

1. Design Research Models: Physical model detail equivalent 1 to 600 (1" = 50'), with photographs.
2. Conceptual Phase Model: Physical model detail equivalent 1 to 600 (1" = 50'), with photographs.

3. Schematic Phase Model: Physical model, detail equivalent 1 to 600 (1" = 50'), with photographs.

4. Final Presentation Model: Physical model, detail equivalent 1 to 300 (1" = 25'). Do not simulate landscape colors or textures. Model is to be monochromatic, include all surrounding context, people to scale, revised topography, accurate massing and detailed facades, openings, fenestration, heavy-light characteristics, and landscaping. Do not use spray paint. Avoid ultra-realistic elements like "green landscape materials, masonry patterns, etc."

5. Final Presentation Serial Views: A sequence twelve (minimum) eye-level Serial View perspectives in context. The sequential views are to illustrate moving to and through the design, as experienced at eye level, and in its surrounding site context, including all major interior and exterior spaces.

6. Final Presentation Contextual Views: A set four (minimum) Contextual Views from eye-level and aerial level, which are photographically accurate renderings of the building superimposed on eye level and aerial site / context photographs, with accurate matching of perspective, size, horizon line, lighting conditions and shadows, color tint and value, (with minimized building surfaces and landscape textures.) Images must be in the context of site photographs, not Lumion or equal environments.

7. Final Presentation Model Photography: The equivalent of at least one 36" x 36" sheet should be devoted to the Final Presentation Model photographs, in the context of the site model including people to scale, accurate facades of surrounding buildings, and landscape and topography, all in a monochromatic color scheme.

Photograph the physical models with a neutral background, without other objects or images of the room appearing in the photograph. The model photography should have distinct shadows simulating the position of the sun.

It is recommended that photographs be taken with a camera on a tri-pod rather than cell phone. And, that lighting be provided by studio lights on stands, or other stable light sources available in the HCAD Library. Generally, one light is used to simulate sunlight and shadows, and two or more indirect lights are used to simulate skylight.

It is recommended that a minimum of two dozen photographs be taken from all directions, eye level, axonometric and from directly above for each physical model, with the best selected for Final Model Photography PDF.

121

IX. Final Record

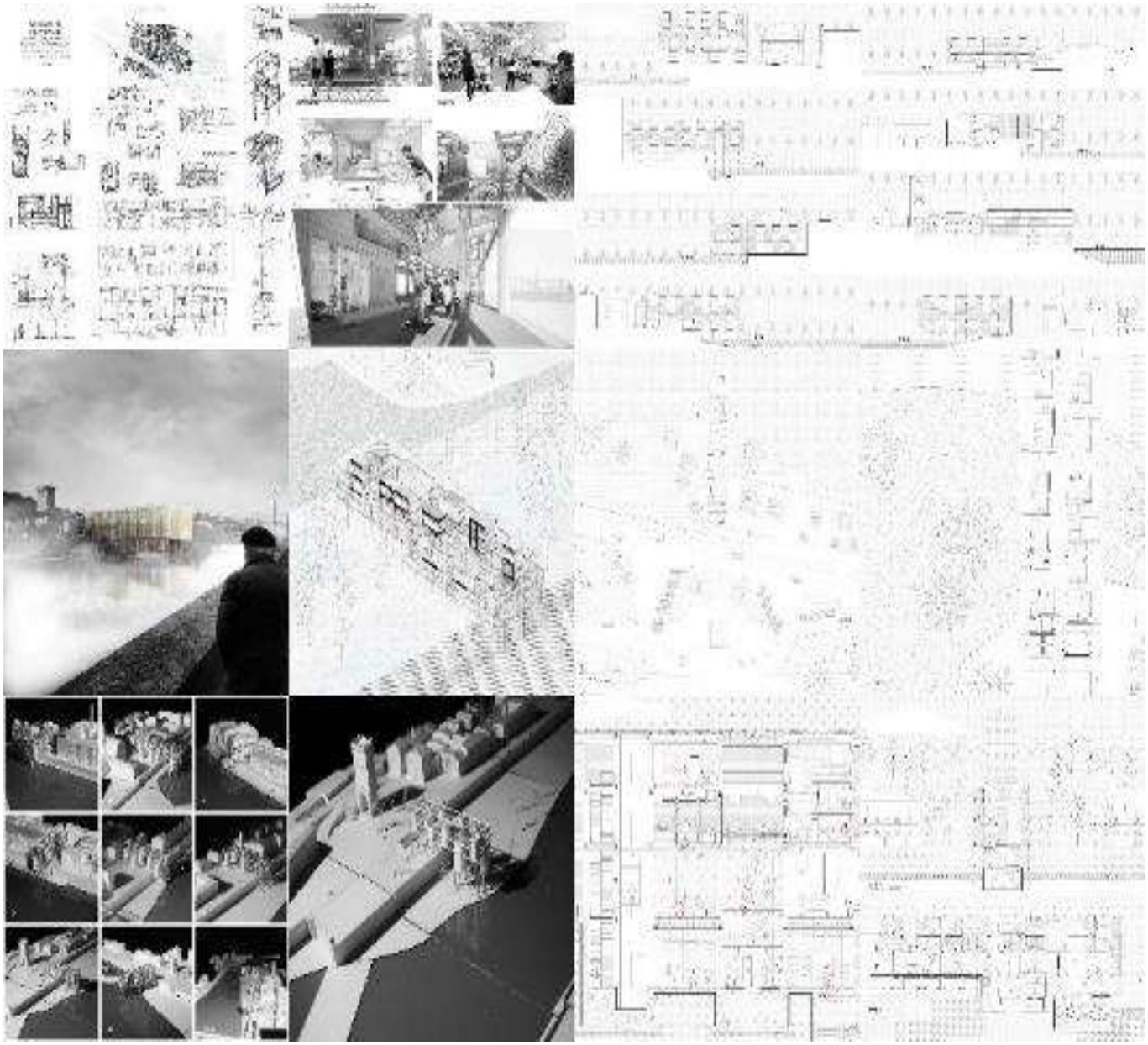
1. Final Record Individual Drawings, Renderings, Diagrams and Photographs:

Final Record includes a folder of *ALL* individual drawings, renderings, diagrams, model photographs, etc. as *single images*, which are part of the Final Record poster, and selected *singles images* of important work illustrating the design process.

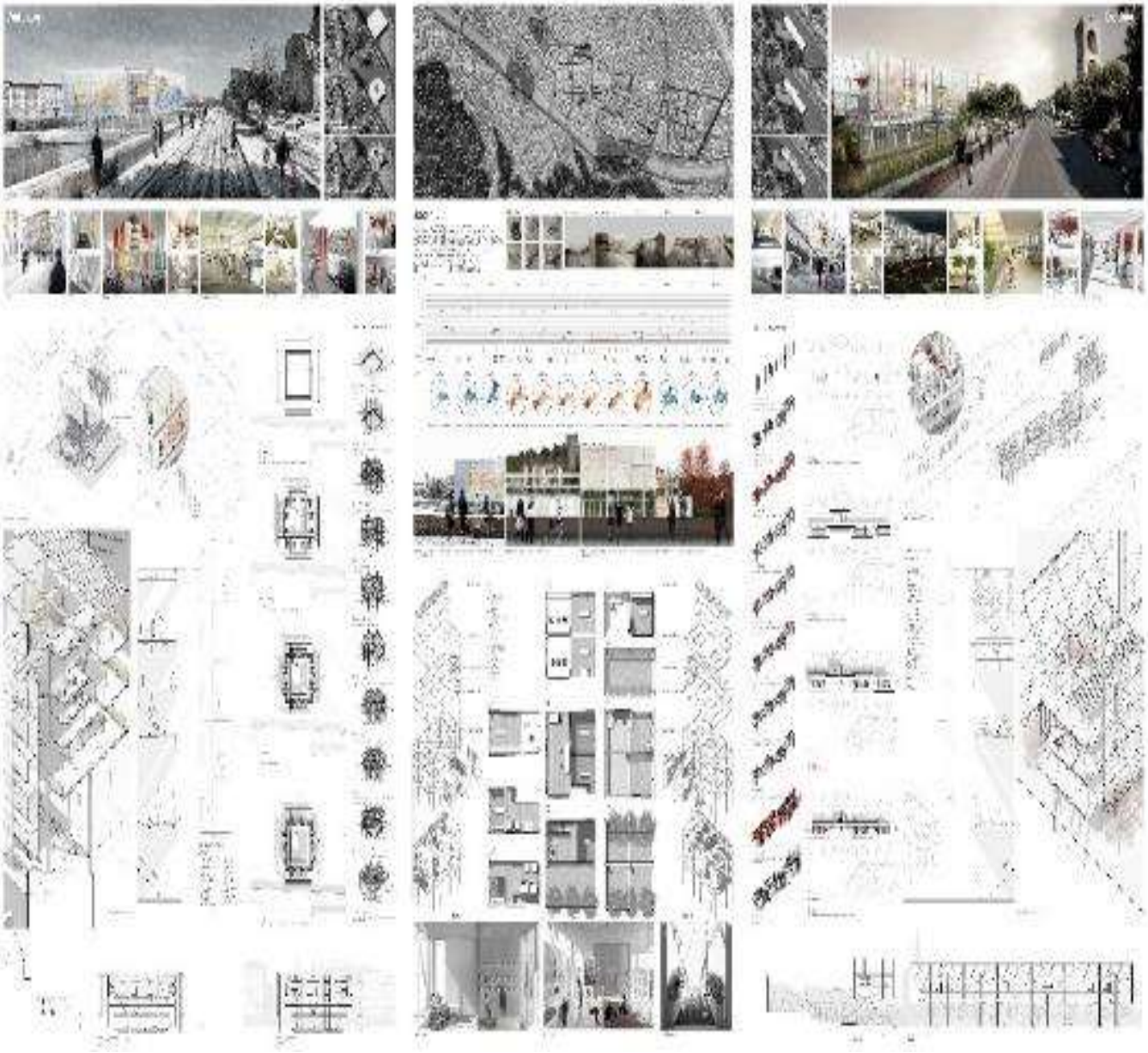
2. Final Record Poster Documentation:

All sections of the Advanced Studio require a single file digital PDF and JPG format poster of the Final Record presentation.

This results in a single PDF and also a JPG file of the entire presentation, see the examples below:



122



123

Final Record Submission Requirements:

As per HCAD / NJIT policy, Final Grades cannot be issued until your work is completely submitted to both Canvas / Kepler and your Studio Section's shared Google Drive:

A. Advanced Studio I on Studio Google Drive:

Studio Google Drive: FALL 2024 GLASSWORKS VENICE / STUDENT WORK / "_____ Studio" / Final Record / "Last First Name" folder.

Due: 11:59 PM, Tuesday, 17 December 2024

Upload must be complete and readable by day and time indicated to receive academic credit.

All submissions must exactly follow requirements listed below:

1. JPG File Type: sized or resized to JPG format in 300 dpi minimum. (JPG file type ONLY)
2. JPG File Naming: "Students Last Name"_"Students First Name"_Image Name and Number, . (i.e. "Jones Sally 001.jpg")
3. Create and upload to the following sub-folders under " Student Work" / "Studio Section Name" / "Final Record" / "Last–First Name" / and in the following "Subfolder" names:

Organized in five Sub-Folders, as Titled:

1. ***Combined Presentation:*** One PDF and one JPG of the combined sheets of the Final Presentation poster, at the maximum resolution possible. In other words, a single PDF and single JPG that shows the Final Presentation, as if it were a "large scale on the wall" presentation.

Individual sheet PDF files can be converted to JPG2000 in Acrobat, adjusting the DPI to accommodate the large page size. It can then combined into one image in Photoshop using the snap edge or grid option. The Photoshop image can be saved as both a single JPG and PDF file, adjusting the DPI as required for maximum size file.

2. ***PDF Sheets:*** Each of the Final Presentation PDFs individual sheets, at the maximum resolution possible.

3. ***JPG Images*****:** All individual drawings, renderings, diagrams, model photographs, etc. as ***single images***, which are part of the Final Presentation poster, and selected ***single images*** of important work illustrating the design process.

Each image should show only one view, without labeling, or borders, etc.

4. ***Model Photographs:*** JPG format high-resolution images of Design Research, Conceptual, Schematic and Final Presentation models in the context of the site model, organized into Design Research, Conceptual, Schematic and Final Presentation subfolders.

5. ***Source Files*****:** All source 3D Digital Model and 2D Drawing files, SketchUp, Revit, Rhino, Photoshop, Illustrator, Insight, etc. used for the Final Presentation.

B. Advanced Studio I on Canvas/NJIT Kepler:

Due: 11:59 PM, Thursday, 19 December 2024

Upload must be complete and readable by day and time indicated to receive academic credit.

Follow the Instructions for Kepler on Canvas uploading

https://njit.service-now.com/sp?id=kb_article_view&sysparm_article=KB0010630&sys_kb_id=1cb35bf41ba319104c82cddf034bcbdb&spa=1

All files must be renamed as indicated below.

File Naming: "Students Last Name"_"Students First Name"_Image Name and Number ("001" etc) (i.e. "Jones Sally 001.jpg")

Upload all the files to Canvas / Kepler folders:

1. *Combined Final Presentation:* One PDF and one JPG of the five to eight ***combined*** Final Presentation PDFs, at the maximum resolution possible. One image of the entire Final Presentation.

2. *Individual Final Presentation:* One PDF and one JPG of each Final Presentation PDFs, at the maximum resolution possible. One image for each "page" of the Final Presentation.

124

Final Grades

Final Grades Due: Sunday, 22 December, 11:59 PM

Final Presentation and Final Record submissions are collectively reviewed by Advanced Studio faculty to establish minimum performance standards, access the accomplishment of the course requirements, review grading parity, and to collectively review marginal and superior work prior to the issuing of Final Grades. A portion of the Final Grade is determined by this review.

The Final Grade of Incomplete can only be issued when the NJIT Office of the Dean of Students has previously received and approved information directly from the student regarding a health or family emergency issue. This approval must be received via email or in writing by the faculty prior to the end of the last day of the Final Exam period. The Faculty cannot override this requirement.

In accordance with NJIT Policy, Final Grades are not official until they have been recorded by the NJIT Office of the Registrar.

Faculty and student communication about Final Grades is unofficial until the grades are posted online by the Register.

Faculty cannot change Final Grades once they have been posted.

The Final Grades are submitted to:

1. NJIT Registrar Final Grade Submission:

Via the NJIT.edu main page under:

MyNJIT Login

“Faculty Services “

“Final Grades”

Scroll to Find the Course, Section and Term

Select “Grading Status” on Left Side

And

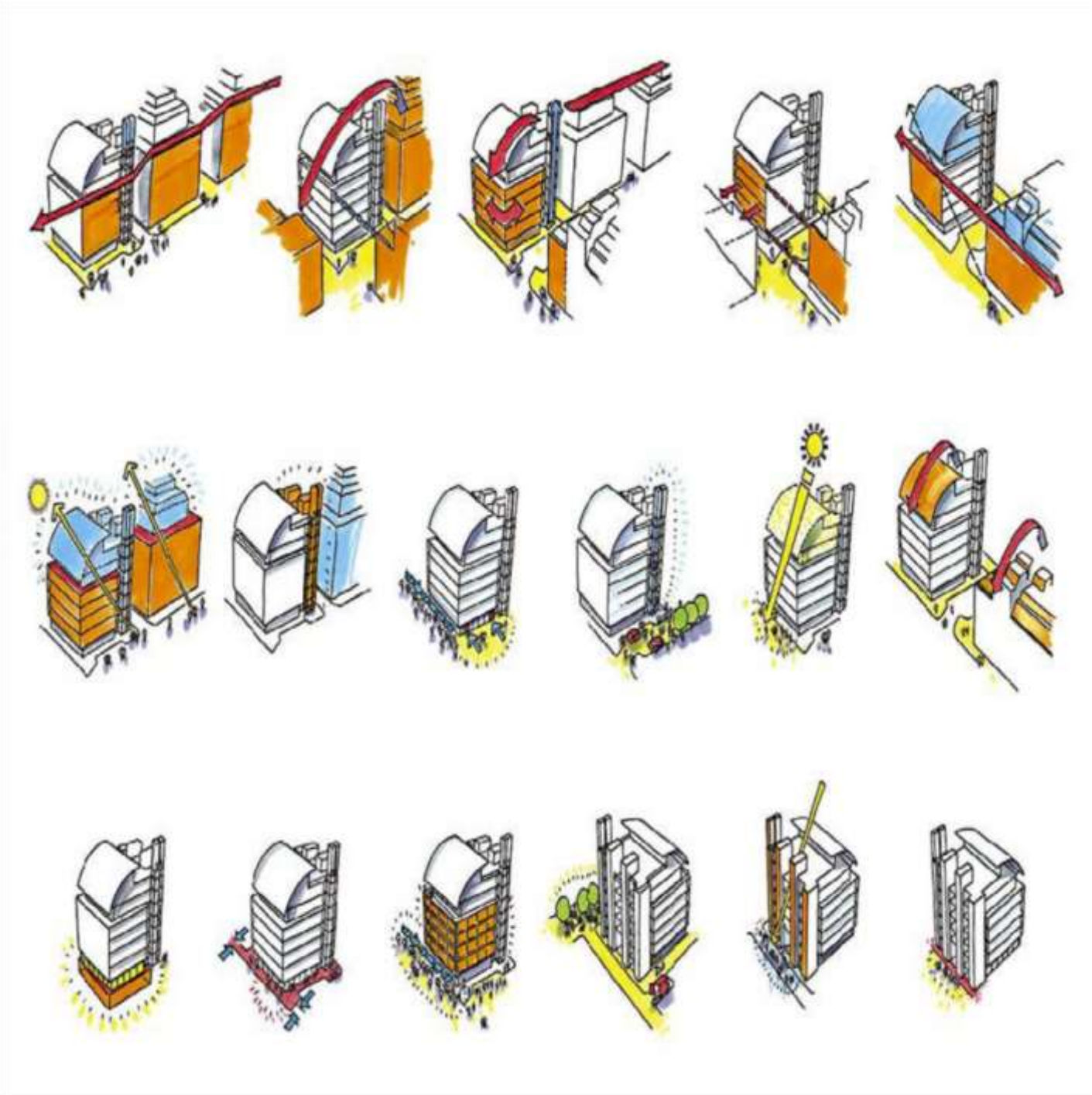
2. NJSOA Record Final Grade Submission:

a. Faculty are also to submit a list of Final Grades organized by student last name and final grade issued.

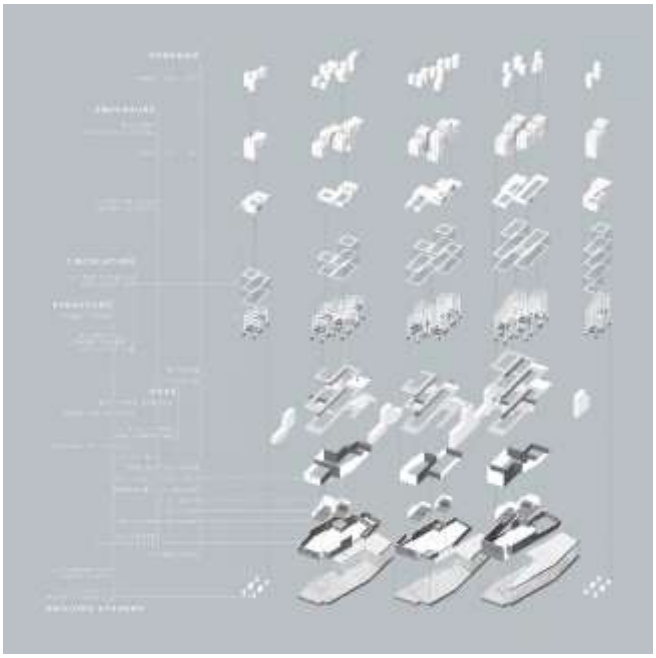
b. Send to Professor Zdepski, via email at zdepski@njit.edu.

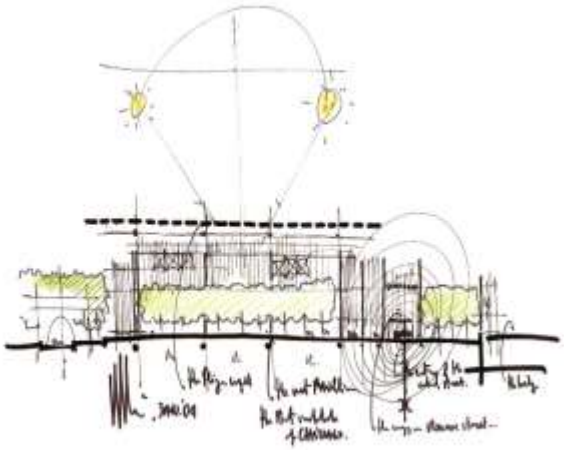
Presentation Types:

A) Design Concept and Explanation; through notated diagrams.

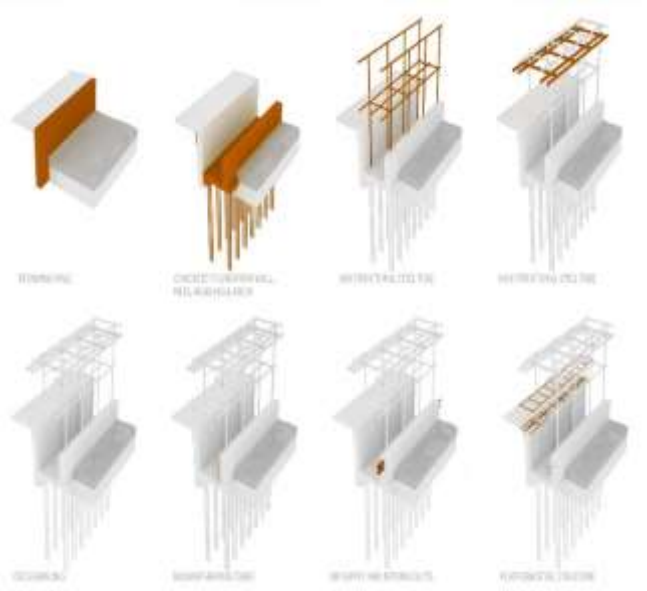


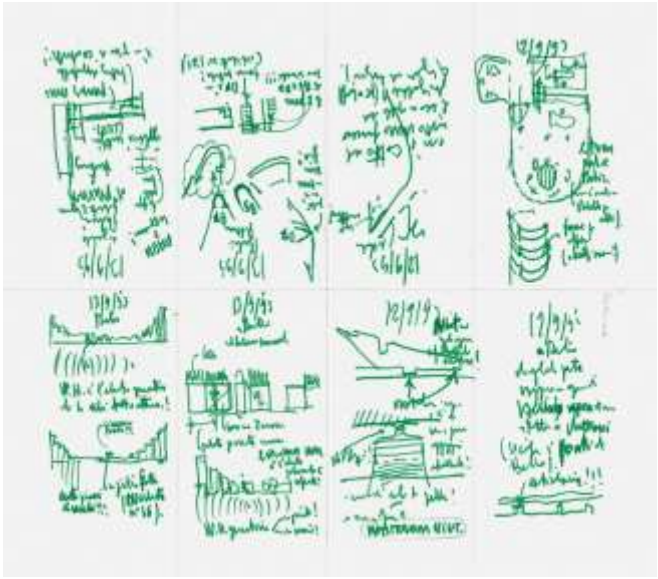
126



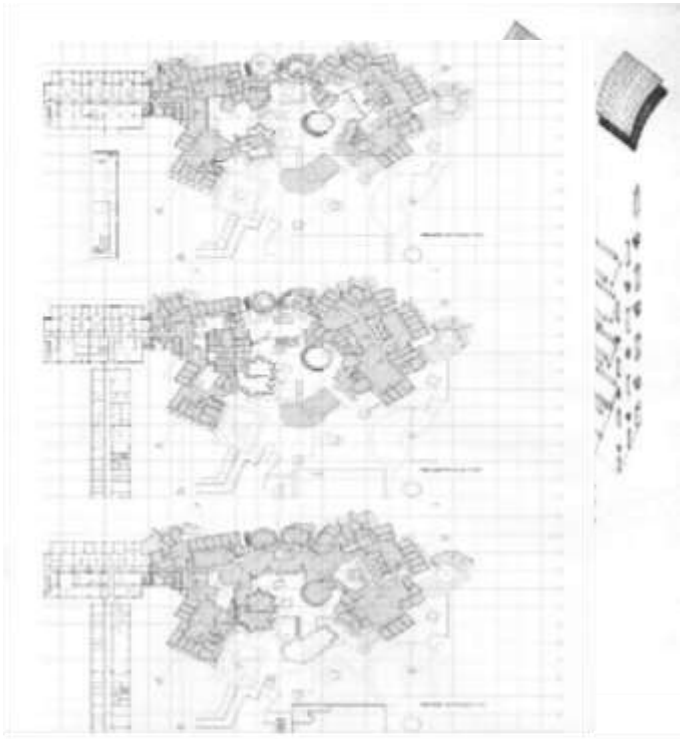


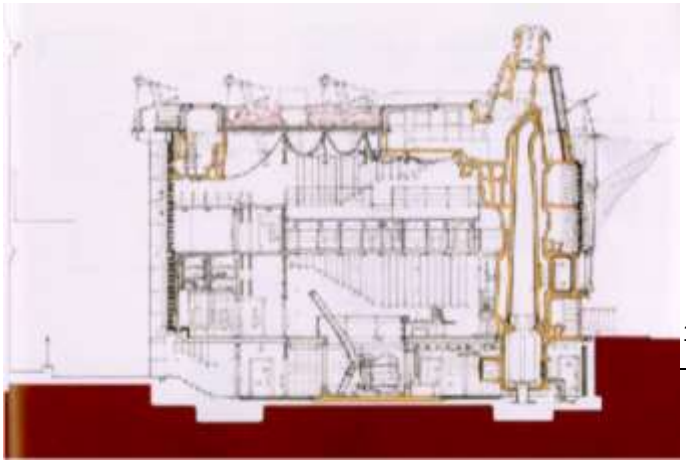
127



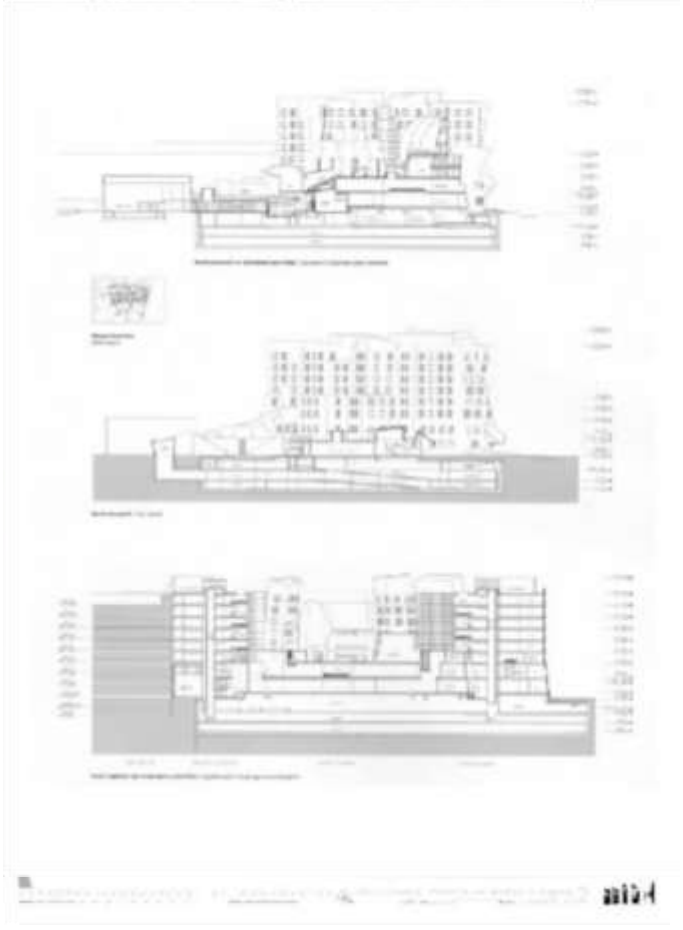


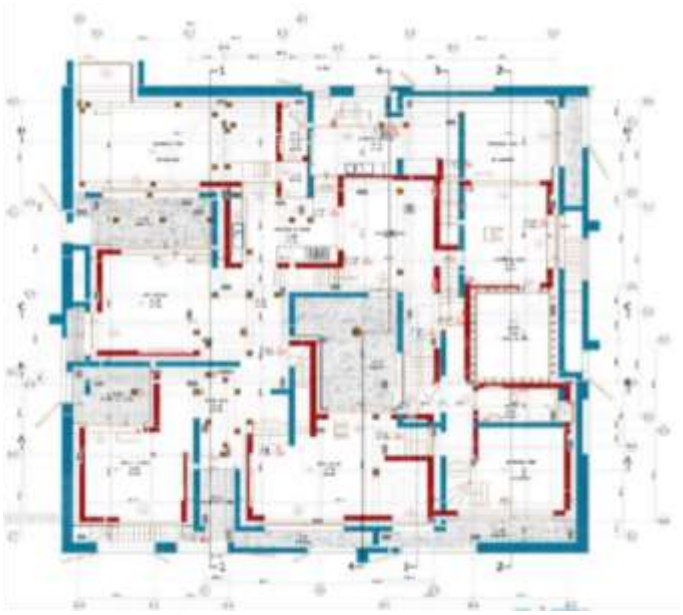
B) Architectural Documentation in 2D:



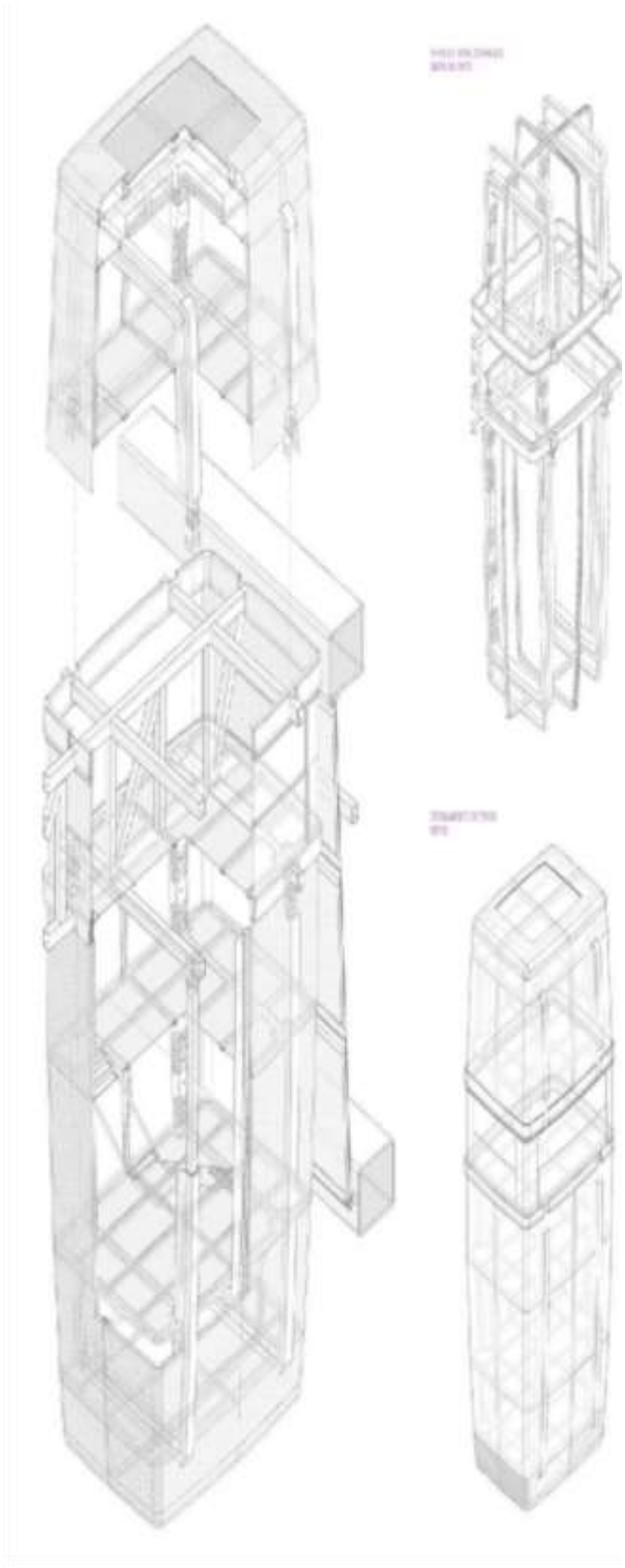


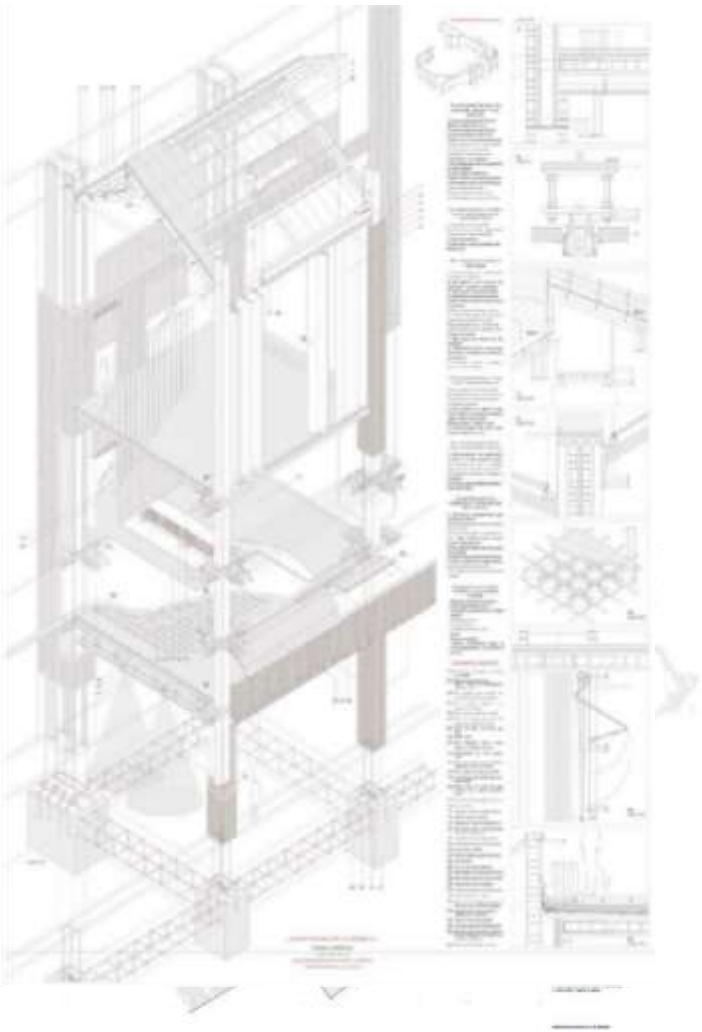
128



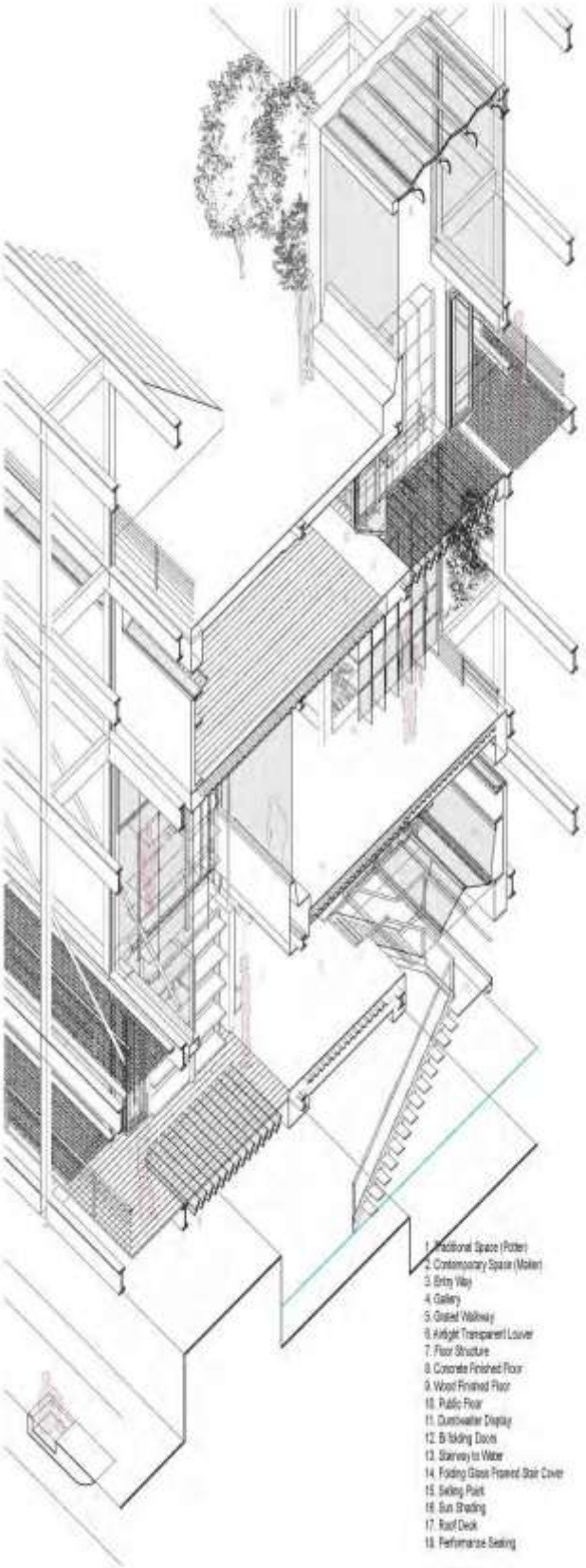


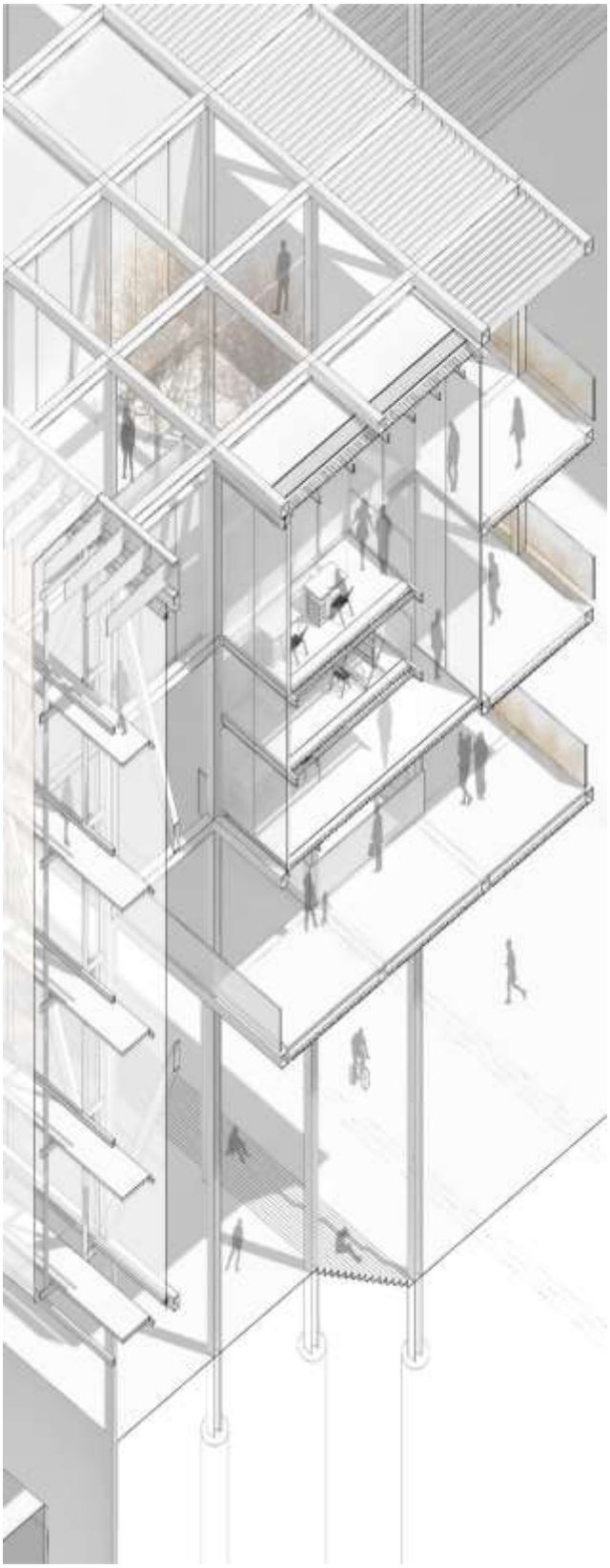
C) Partial Building 3D Section:



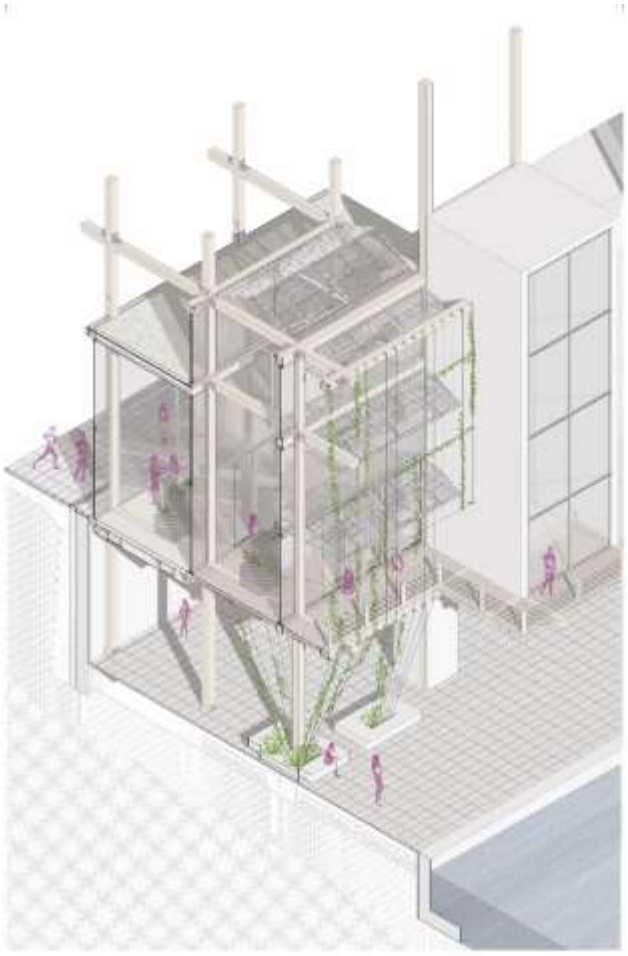


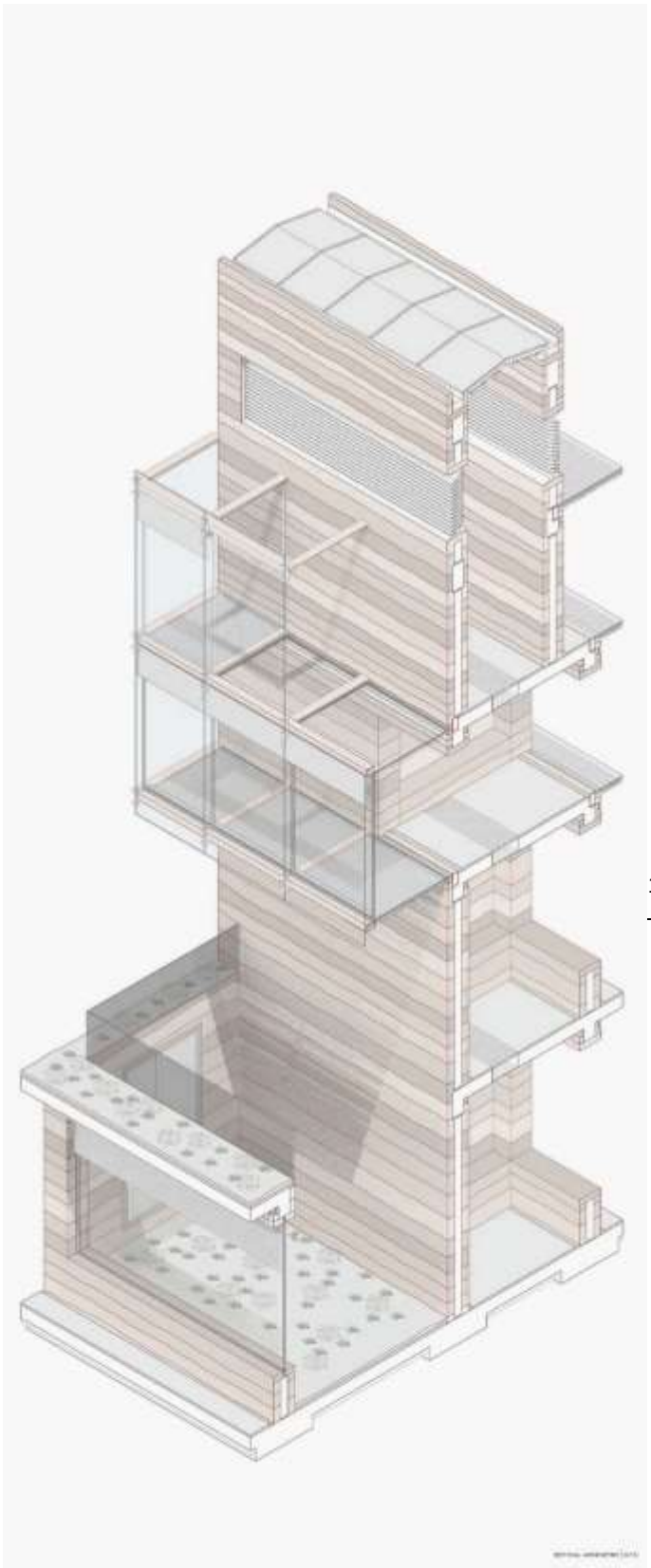
129

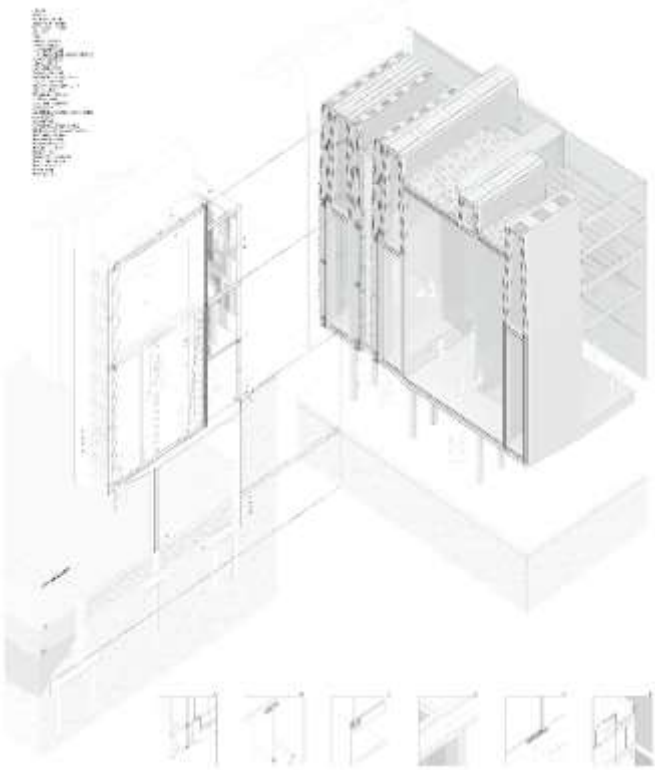

1. Traditional Space (Potter)
2. Contemporary Space (Maker)
3. Entry Way
4. Gallery
5. Gabled Walkway
6. Airtight Transparent Louver
7. Floor Structure
8. Concrete Finished Floor
9. Wood Finished Floor
10. Public Floor
11. Dumbwaiter Display
12. Bi folding Doors
13. Stairway to Water
14. Folding Glass Framed Stair Cover
15. Selling Point
16. Sun Shading
17. Roof Deck
18. Performance Seating



130

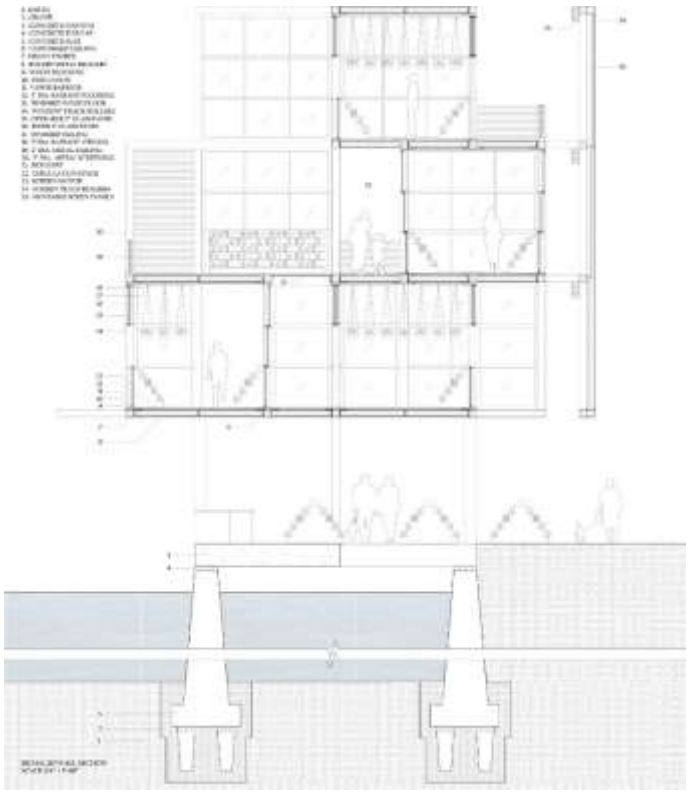


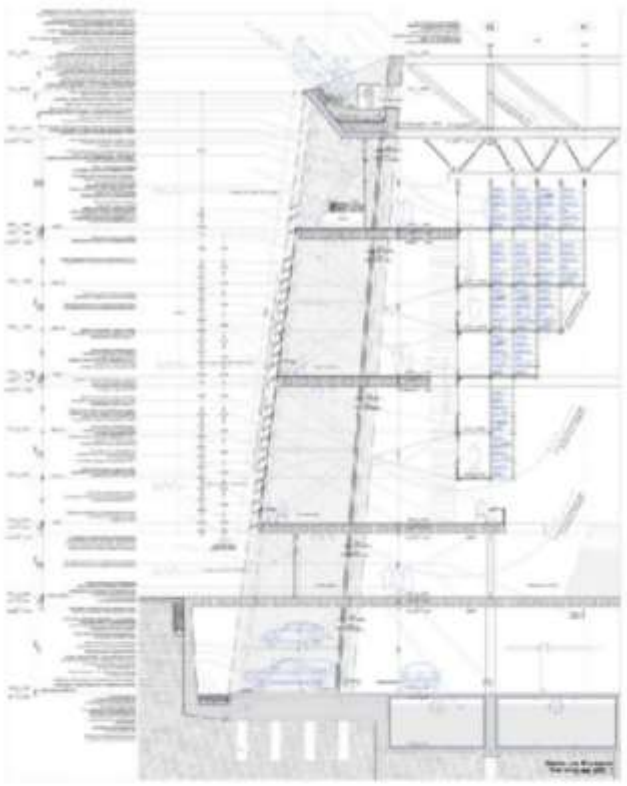


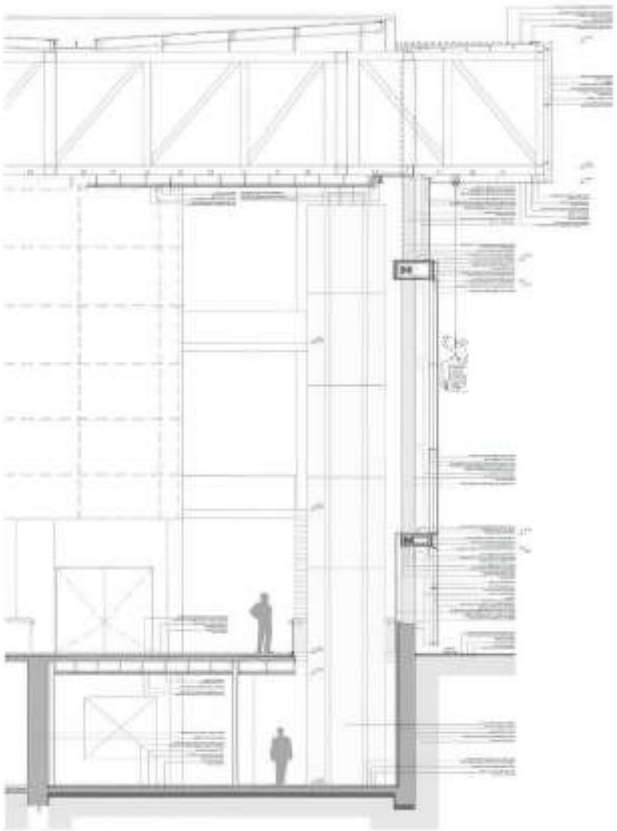


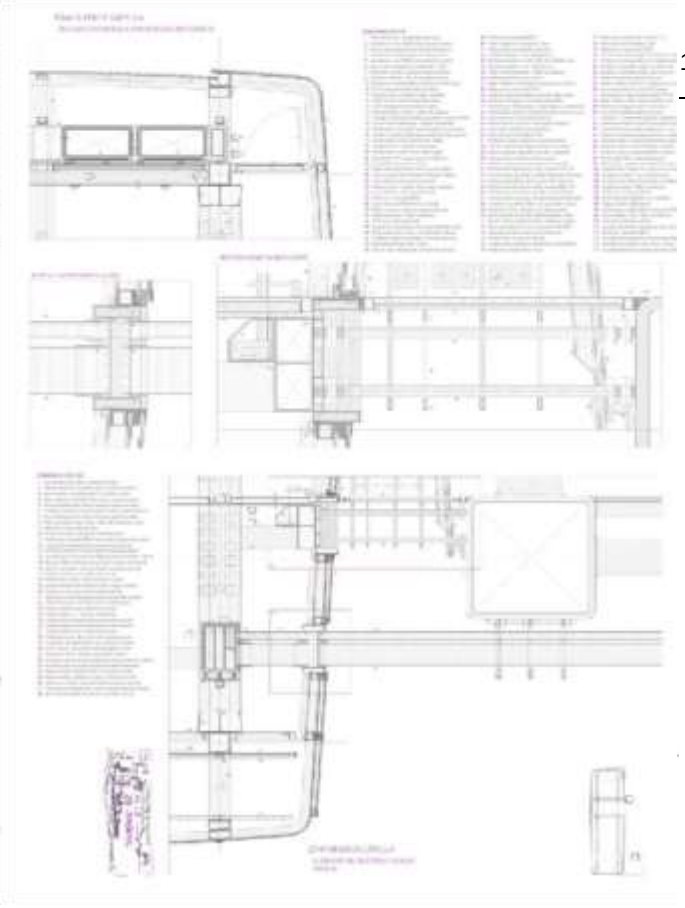
131

D) One Point Perspective Building Wall Section:
(To be a One Point Perspective view of the 3D Wall Section model)

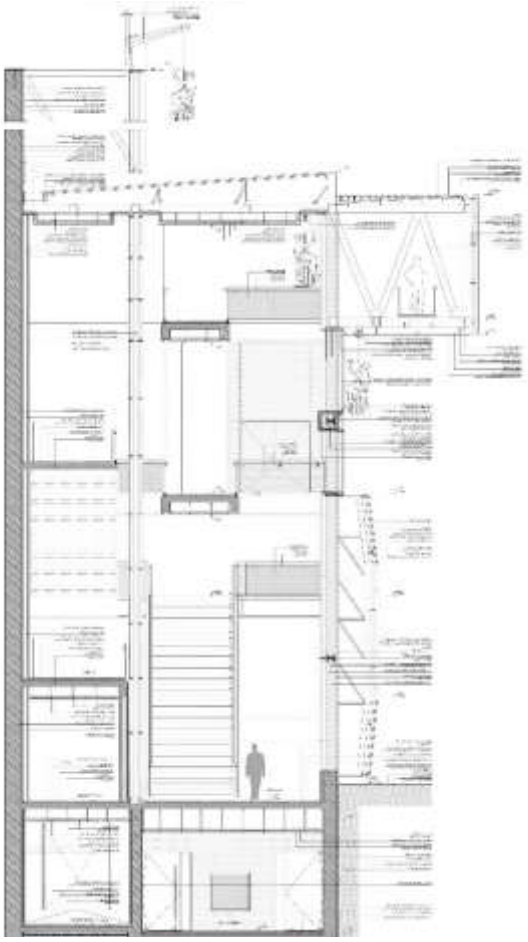


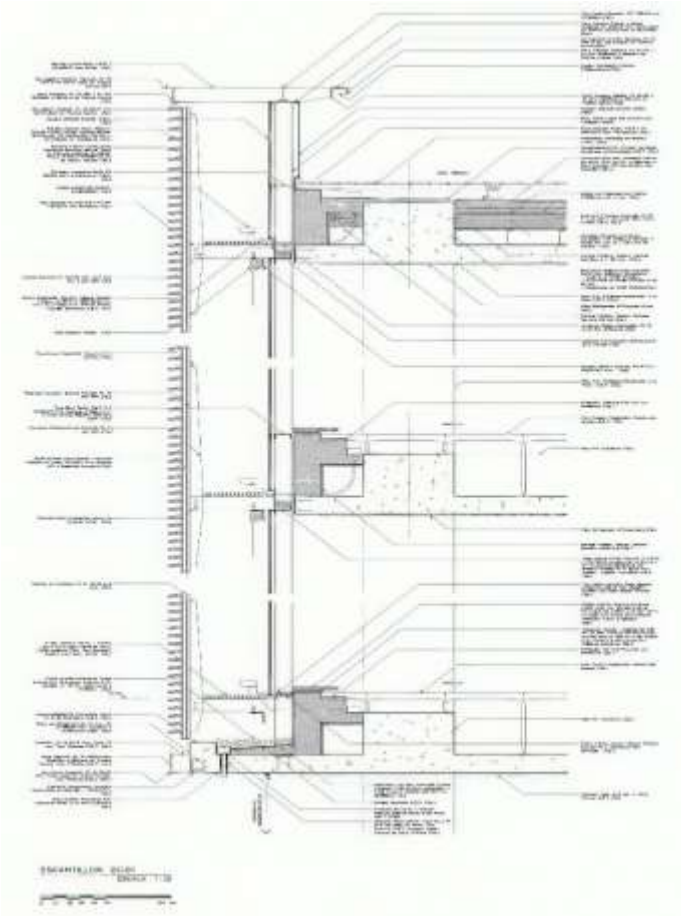




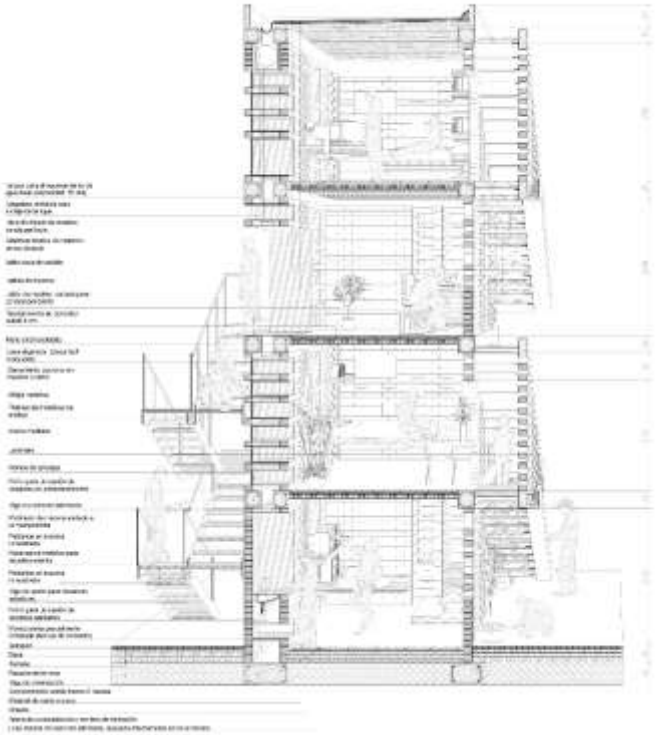


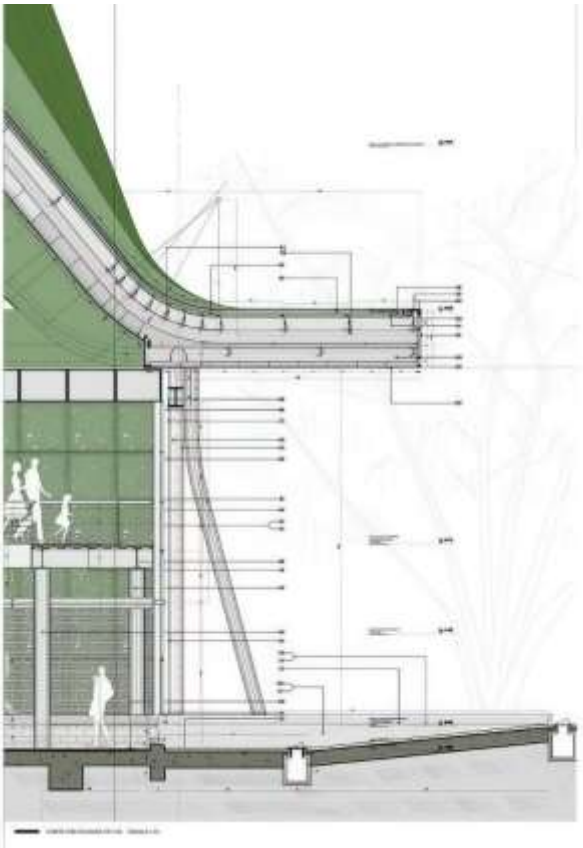
132



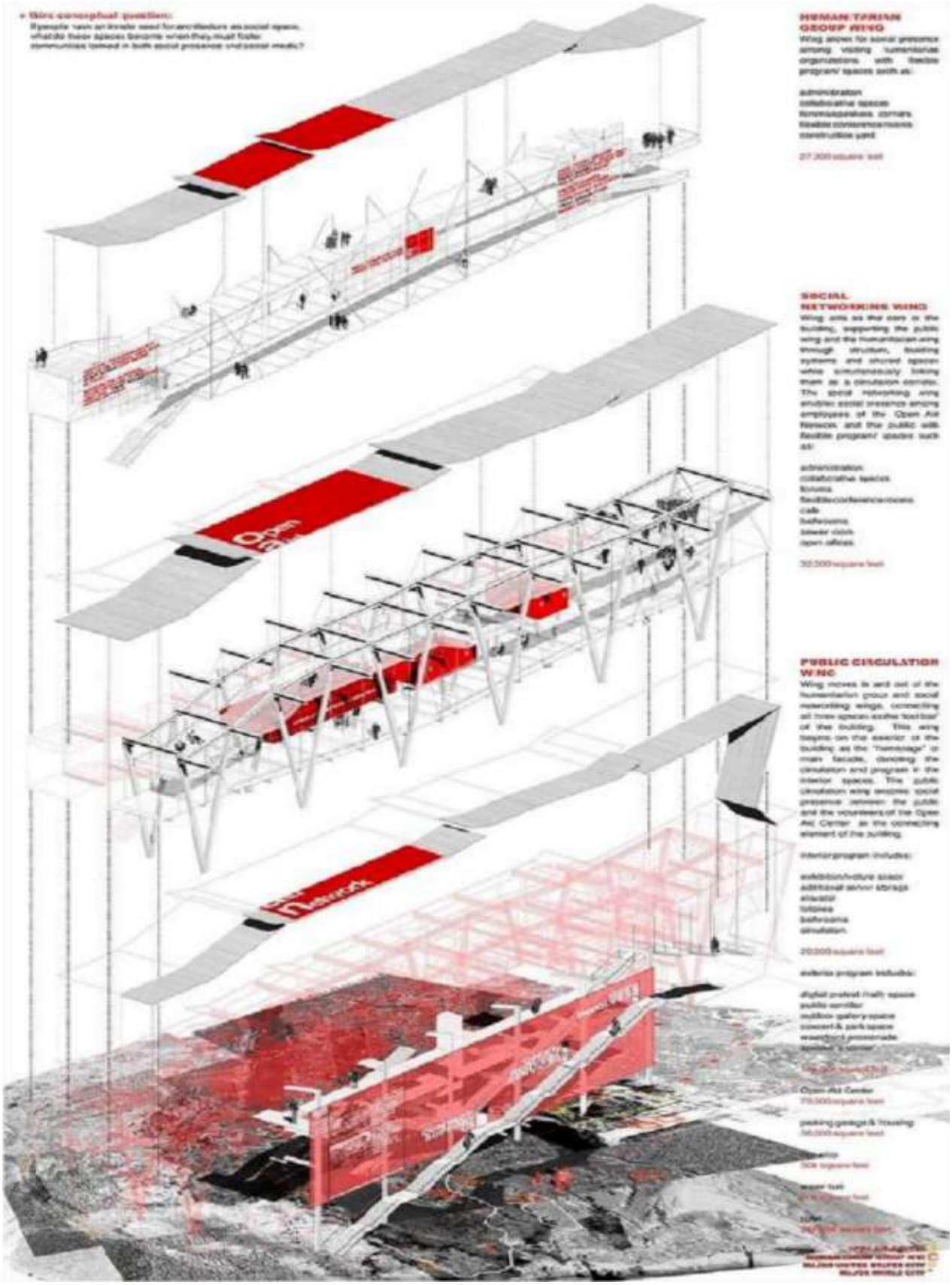


133



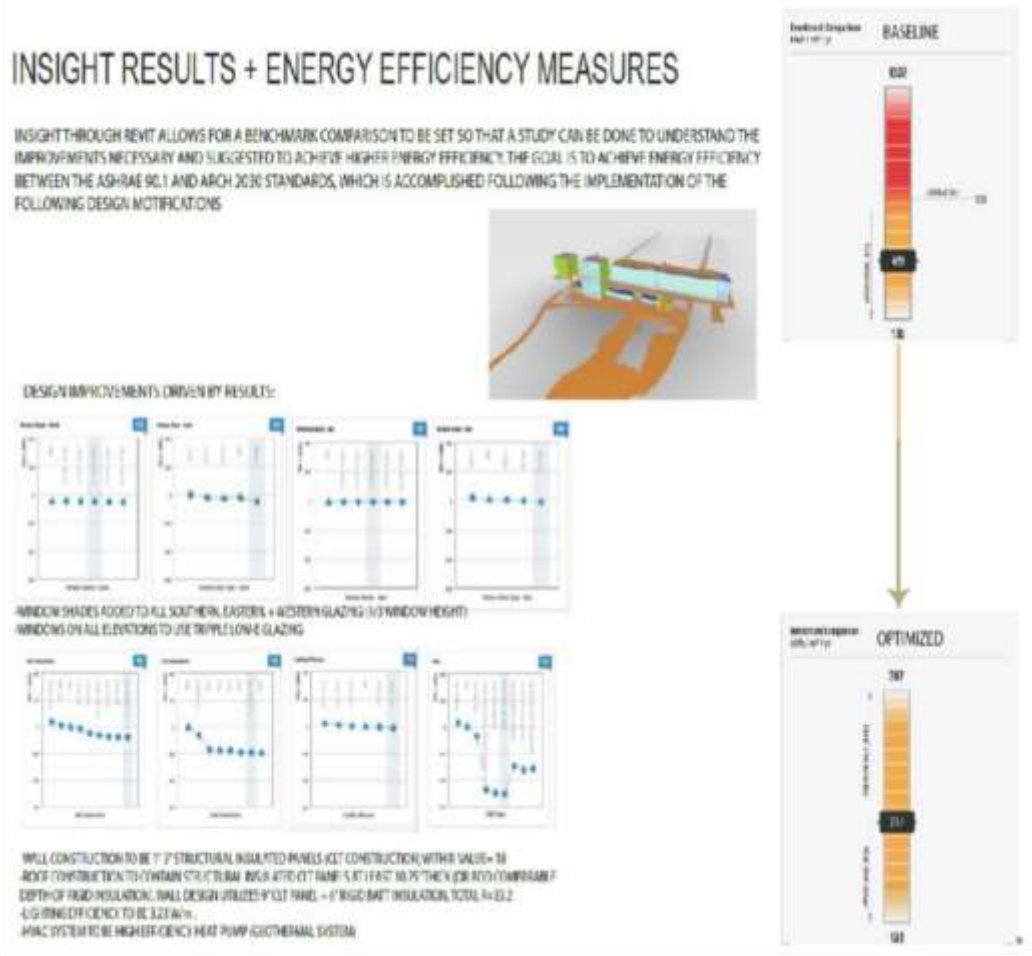


E) Exploded Building / Site Axonometric:

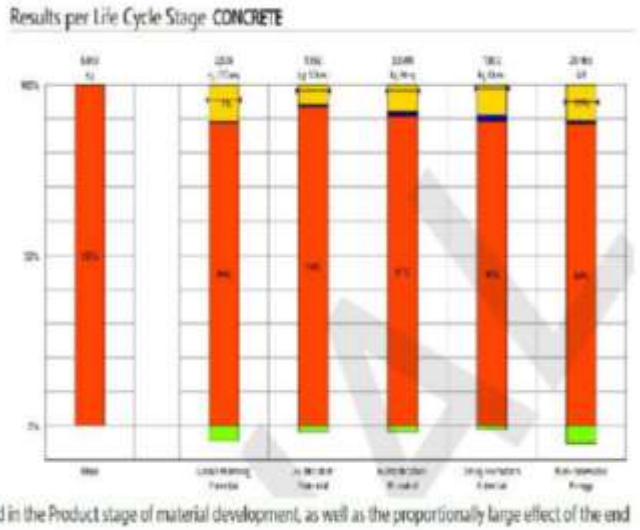


134

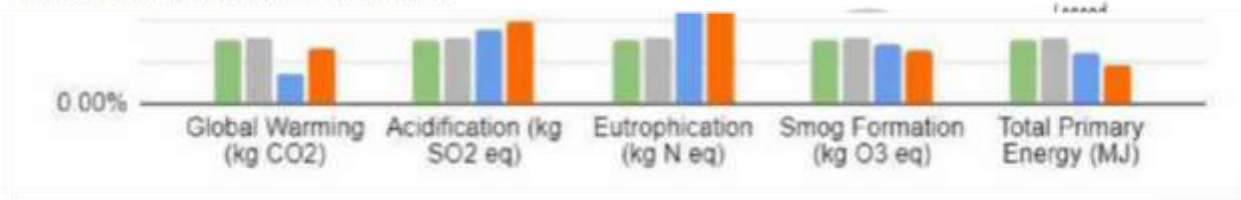
F) Building Performance:



G) Environmental Impact:

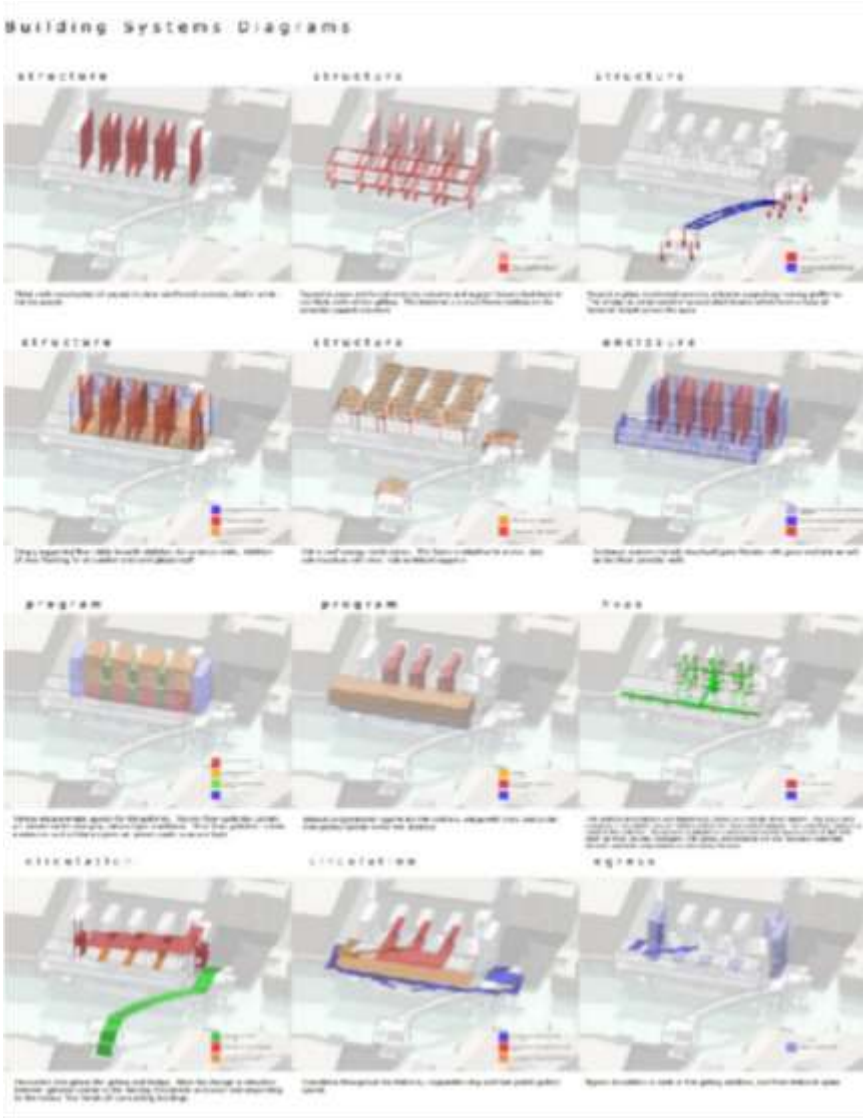


-Life Cycle Analysis comparison between CLT + Concrete shows: the amount of carbon sequestered in the Product stage of material development, as well as the proportionally large effect of the end of life of CLT (it either is burned or decays unless reused or recycled)



136

H) Comparable Architectural and Building Systems 3D Diagrams:



137

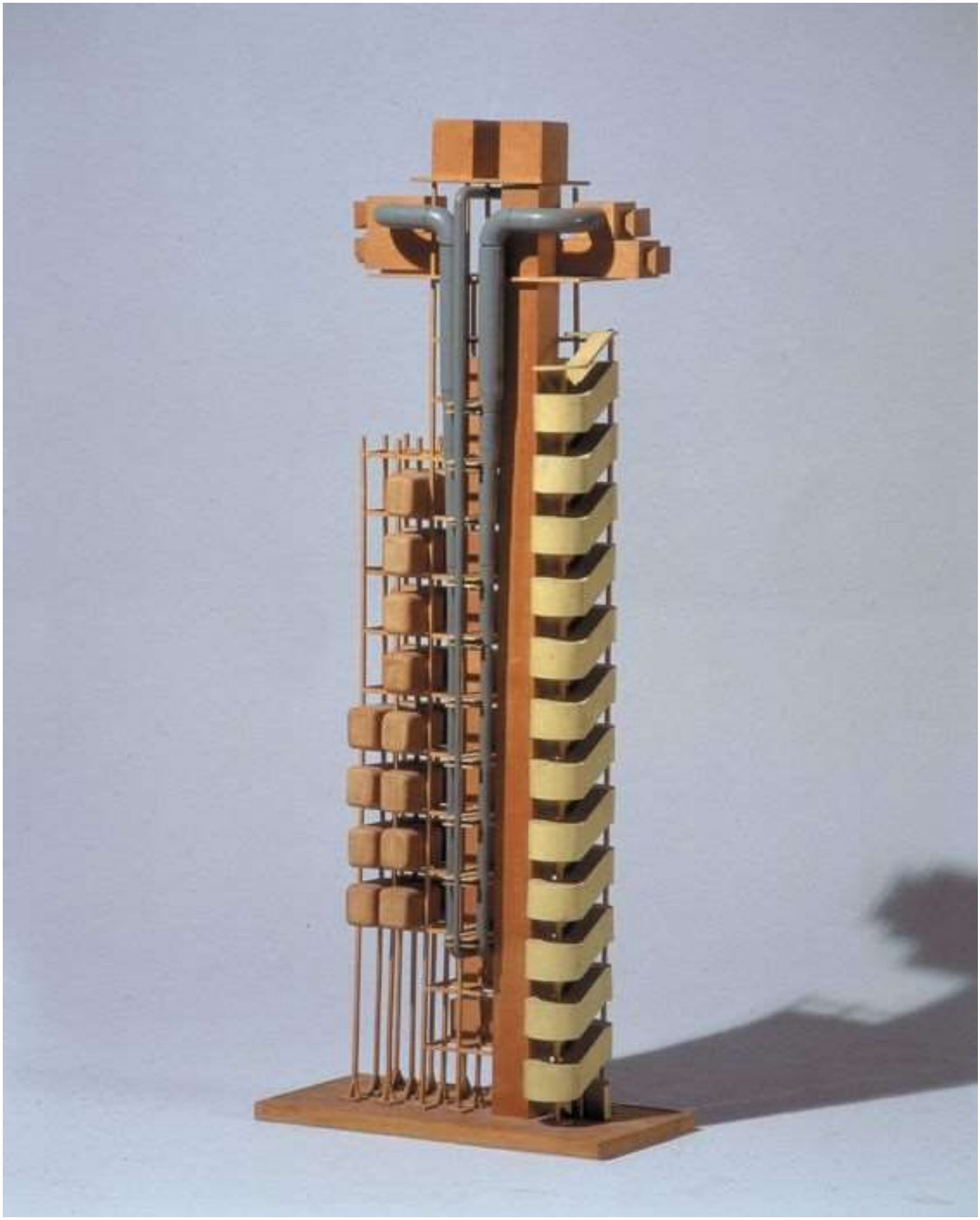
138

Building Systems

HVAC Systems

139

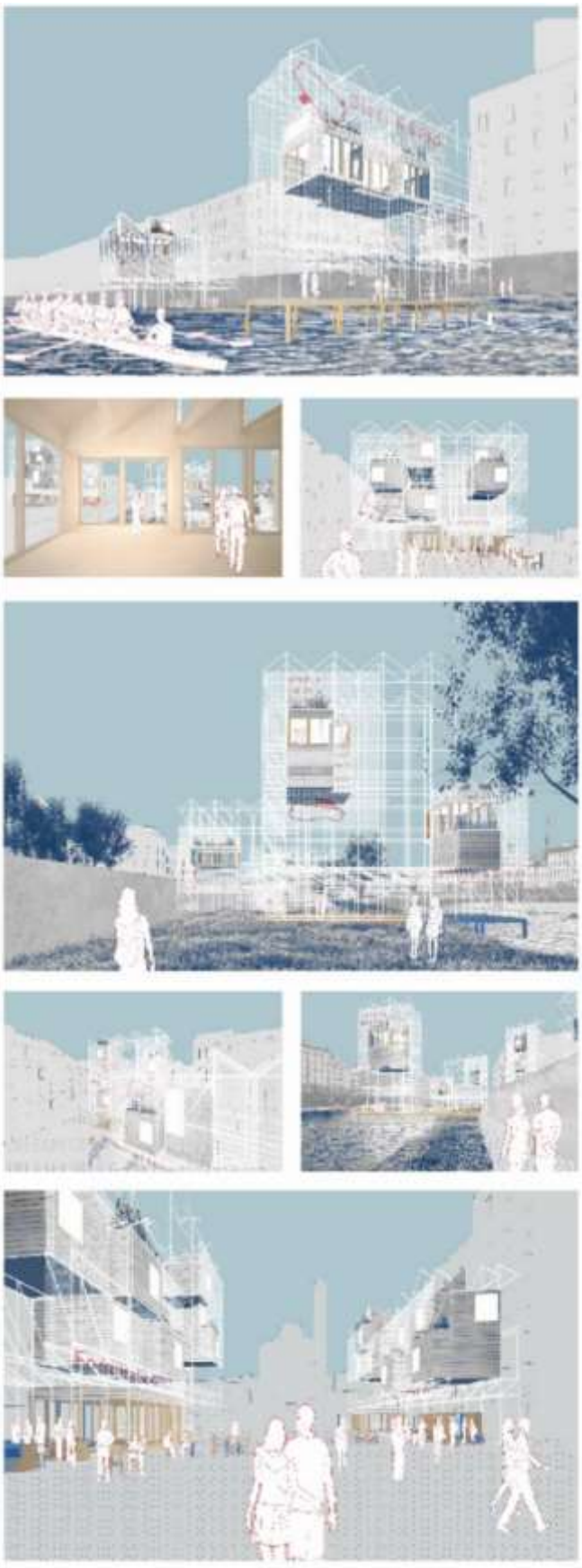
HVAC Systems

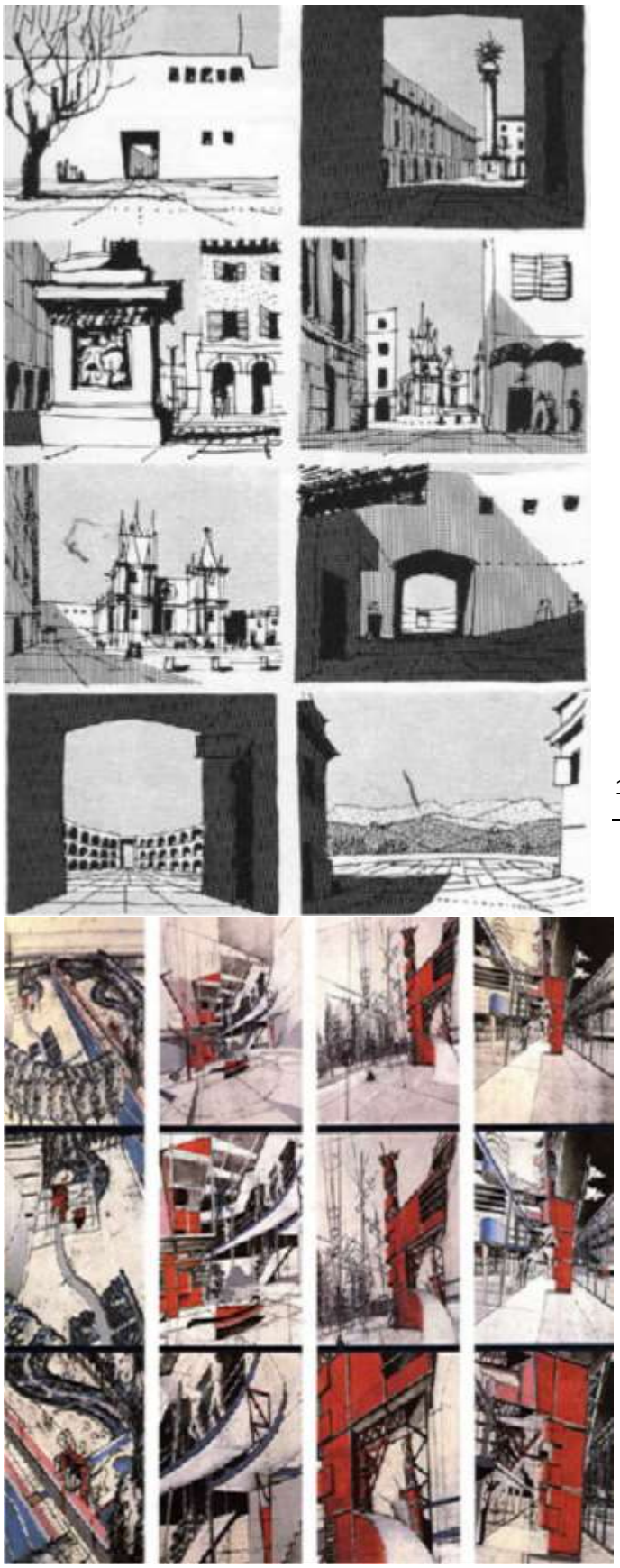


140

Egress, Public Circulation and HVAC Systems

I) Serial Views: Exterior and Interior Sequence taken from eye level.



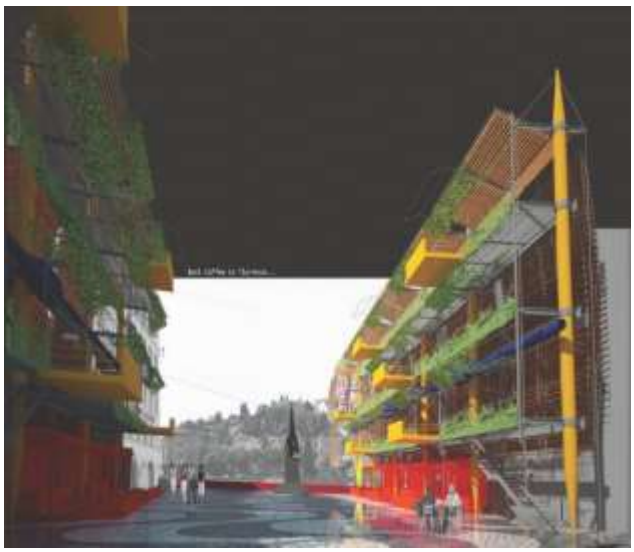


141

J) Contextual Views: Design superimposed on photographs of the context, from eye level and above.

142

\

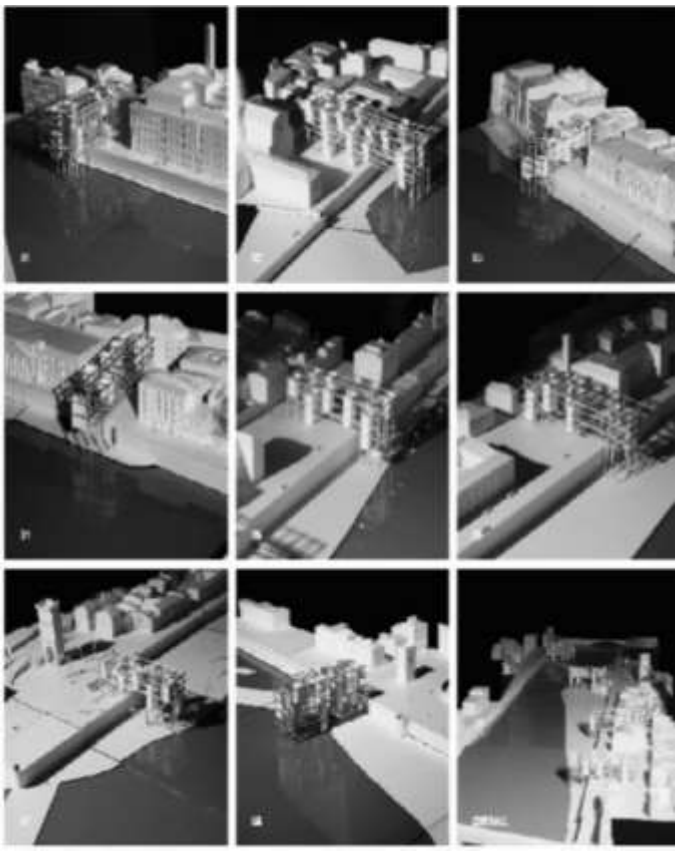


143

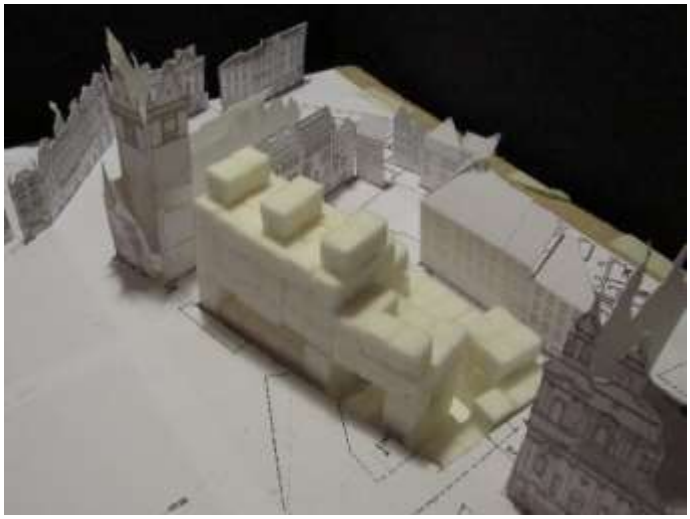
144

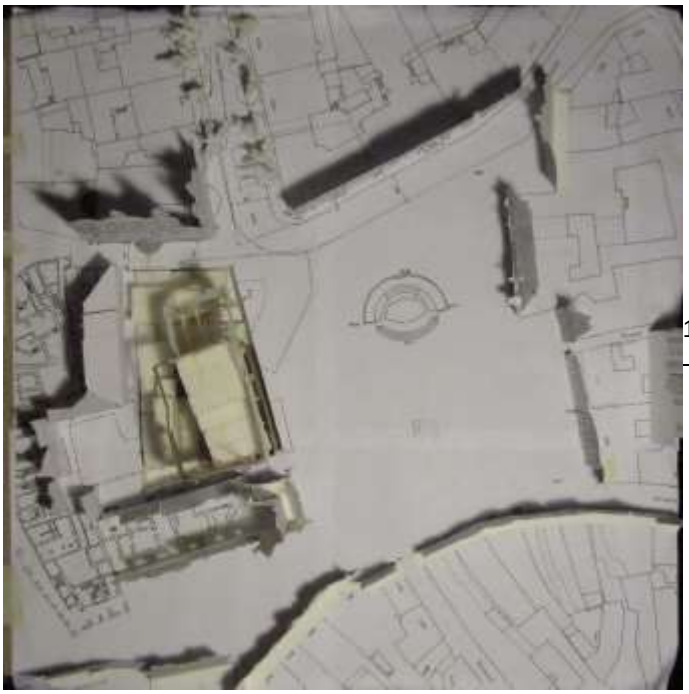
145

K) Physical Models: Design Research, Conceptual, Design Development & Final Presentation

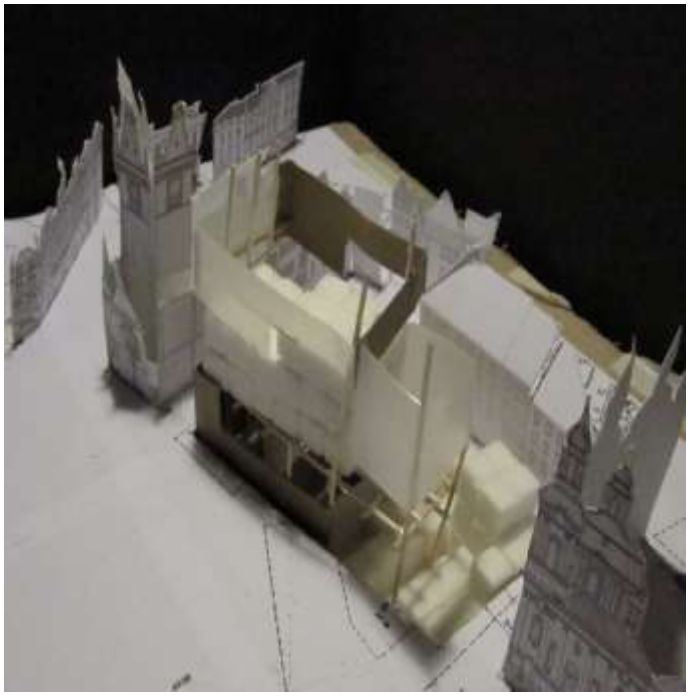


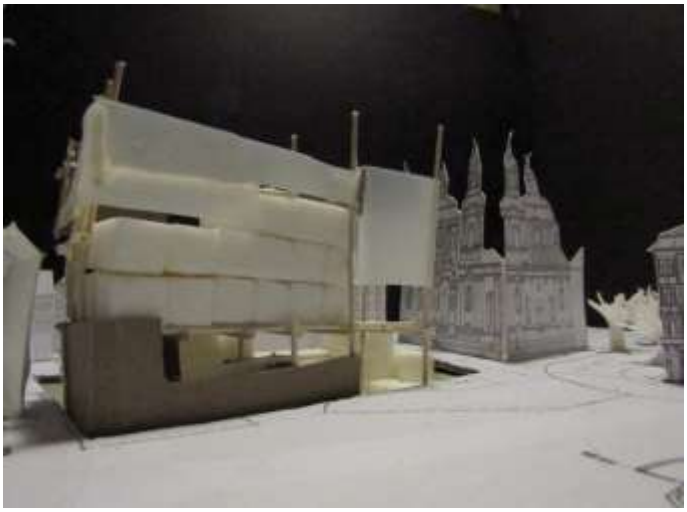
146

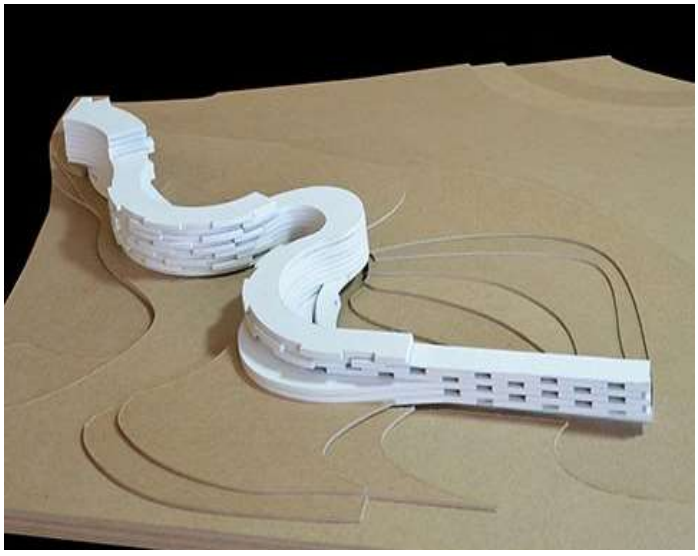


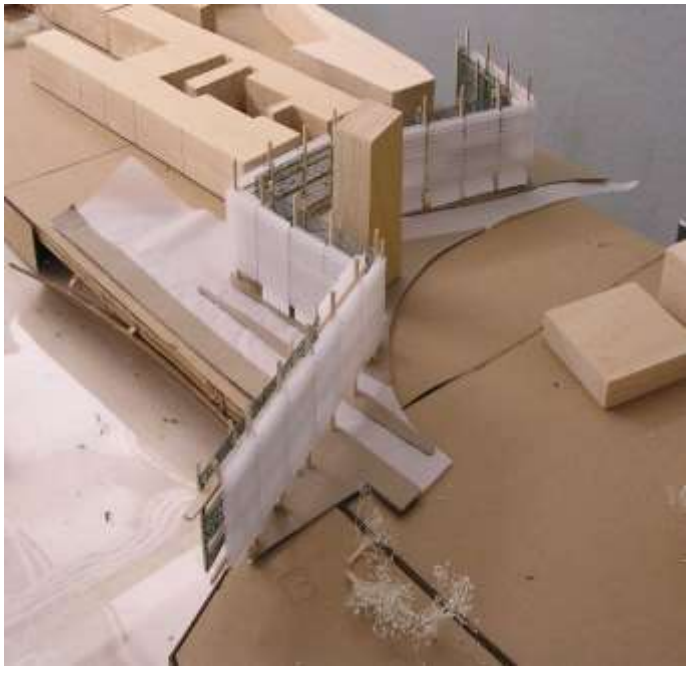


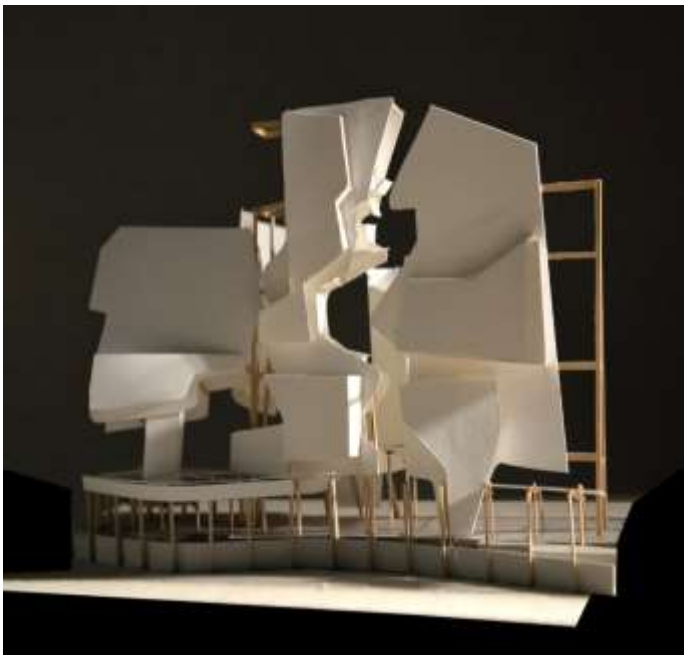
147

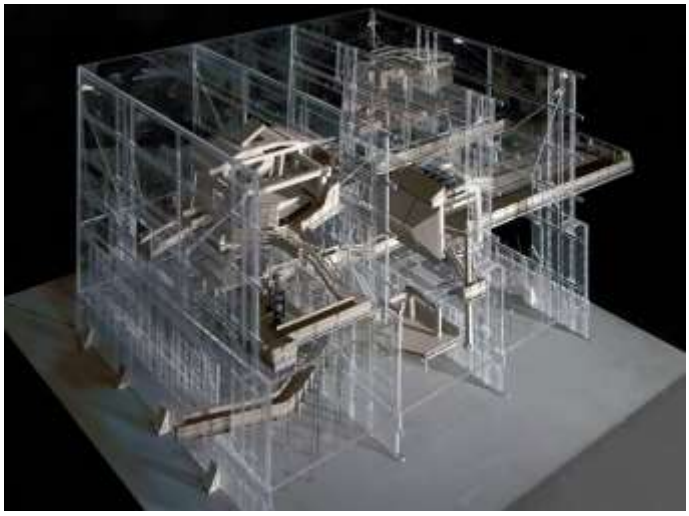


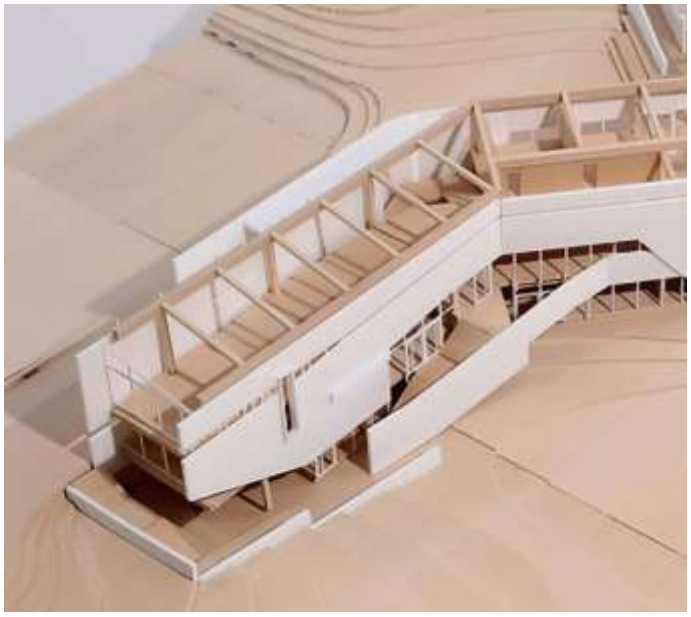


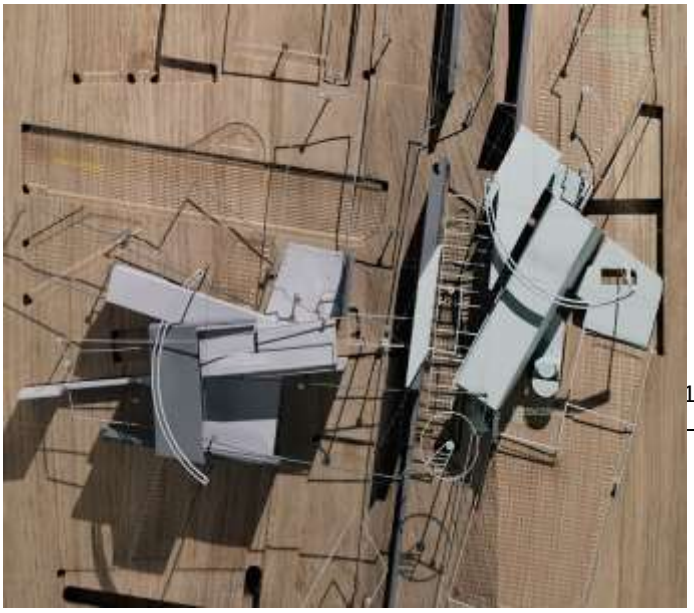




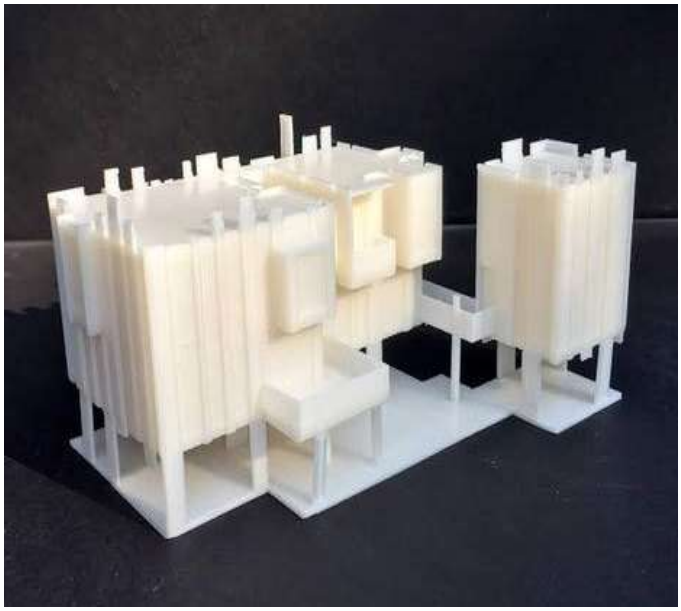


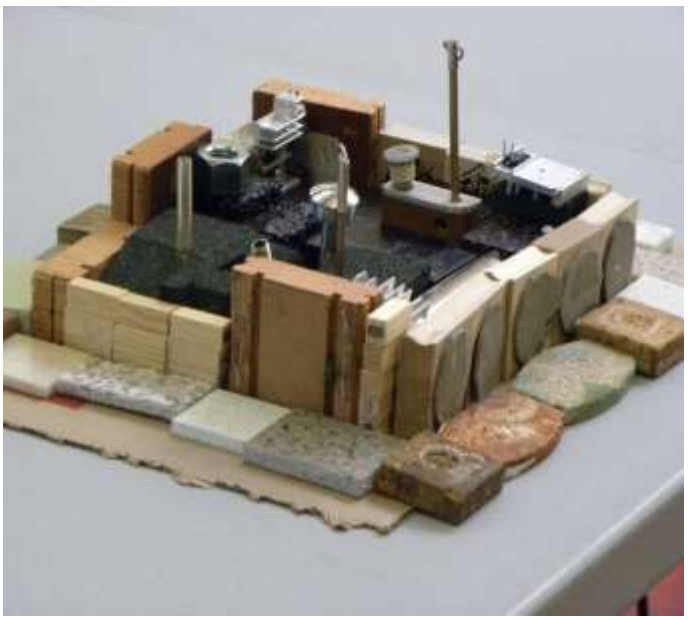


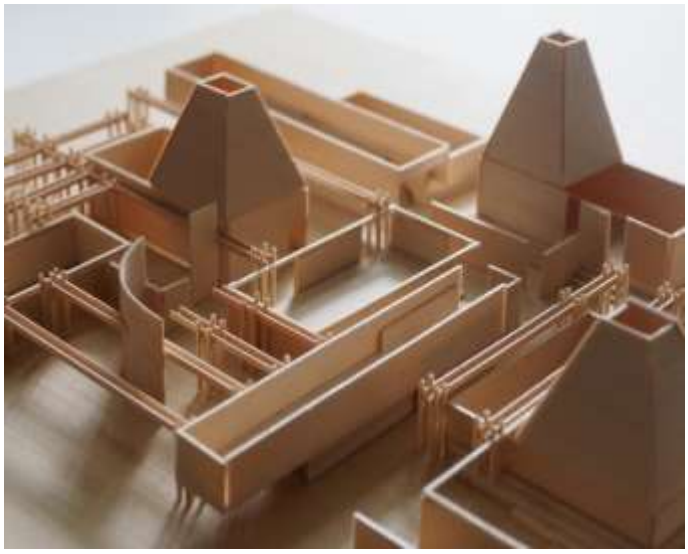




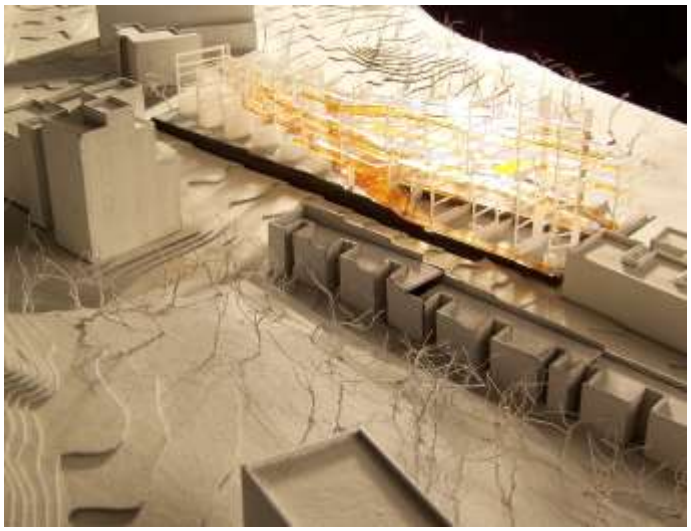
149

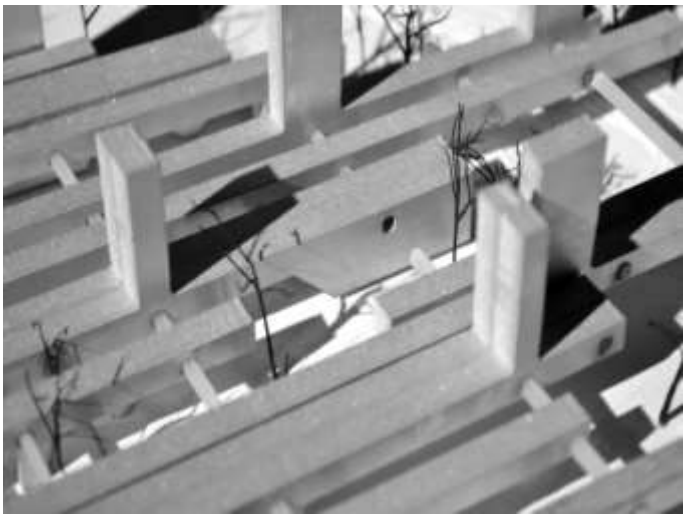




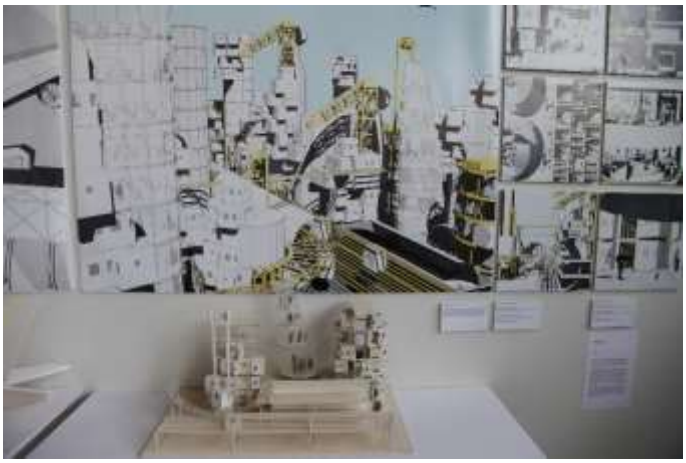


150



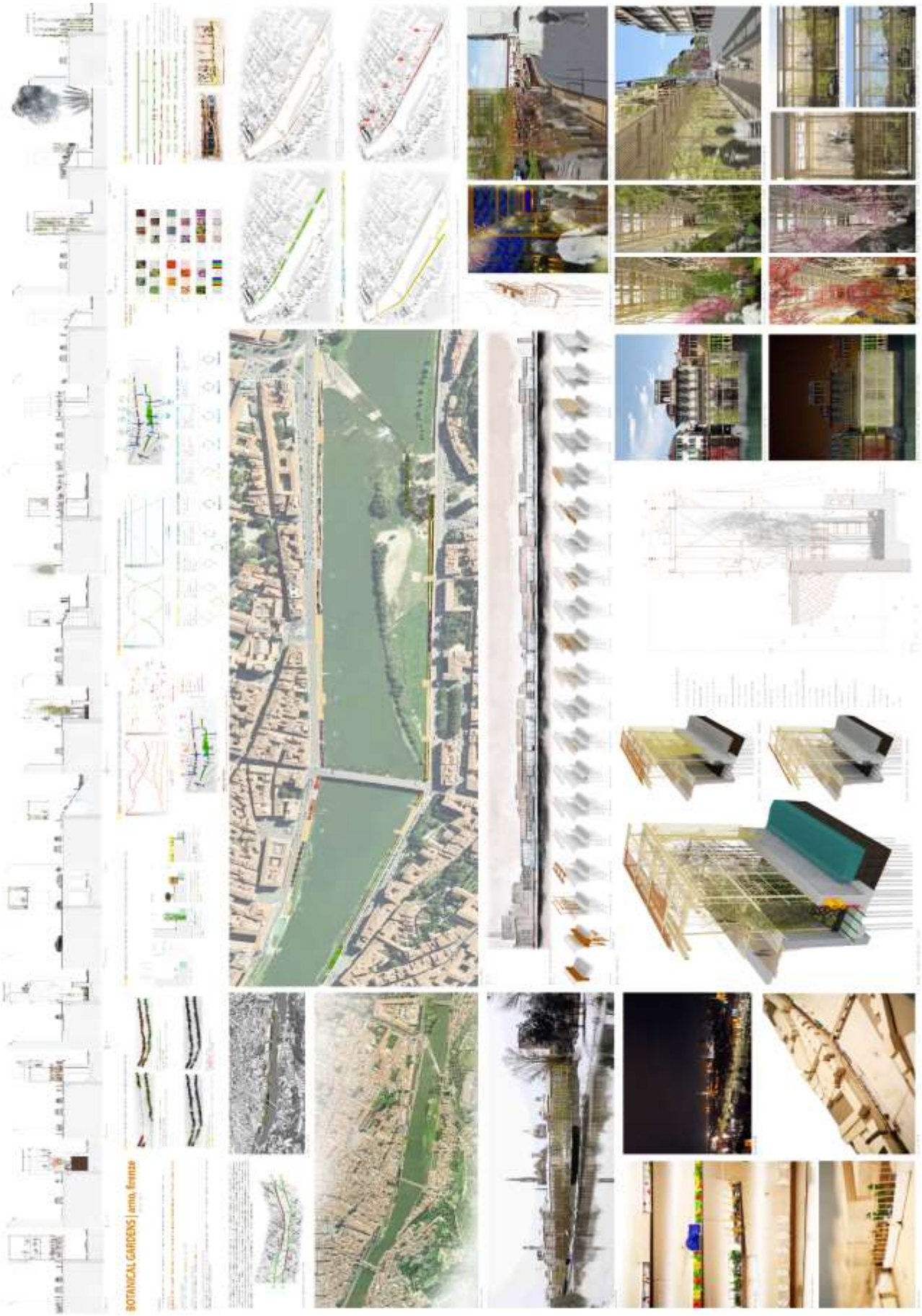


L) Final Presentation: Printed, Digital Display, Models



151

Final Presentation Poster: **Note that the e**xamples do not include all the Advanced Studio requirements.



152

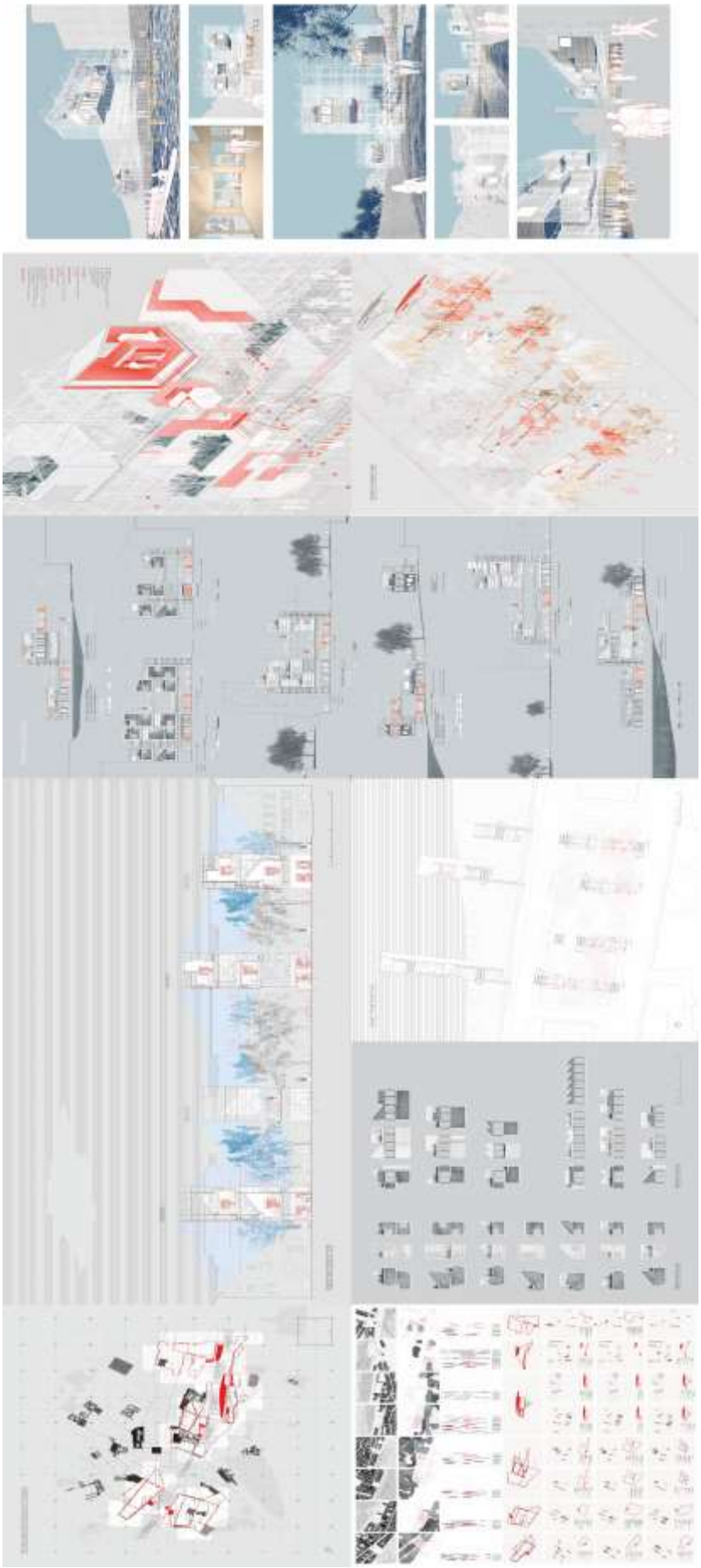
153

154

155

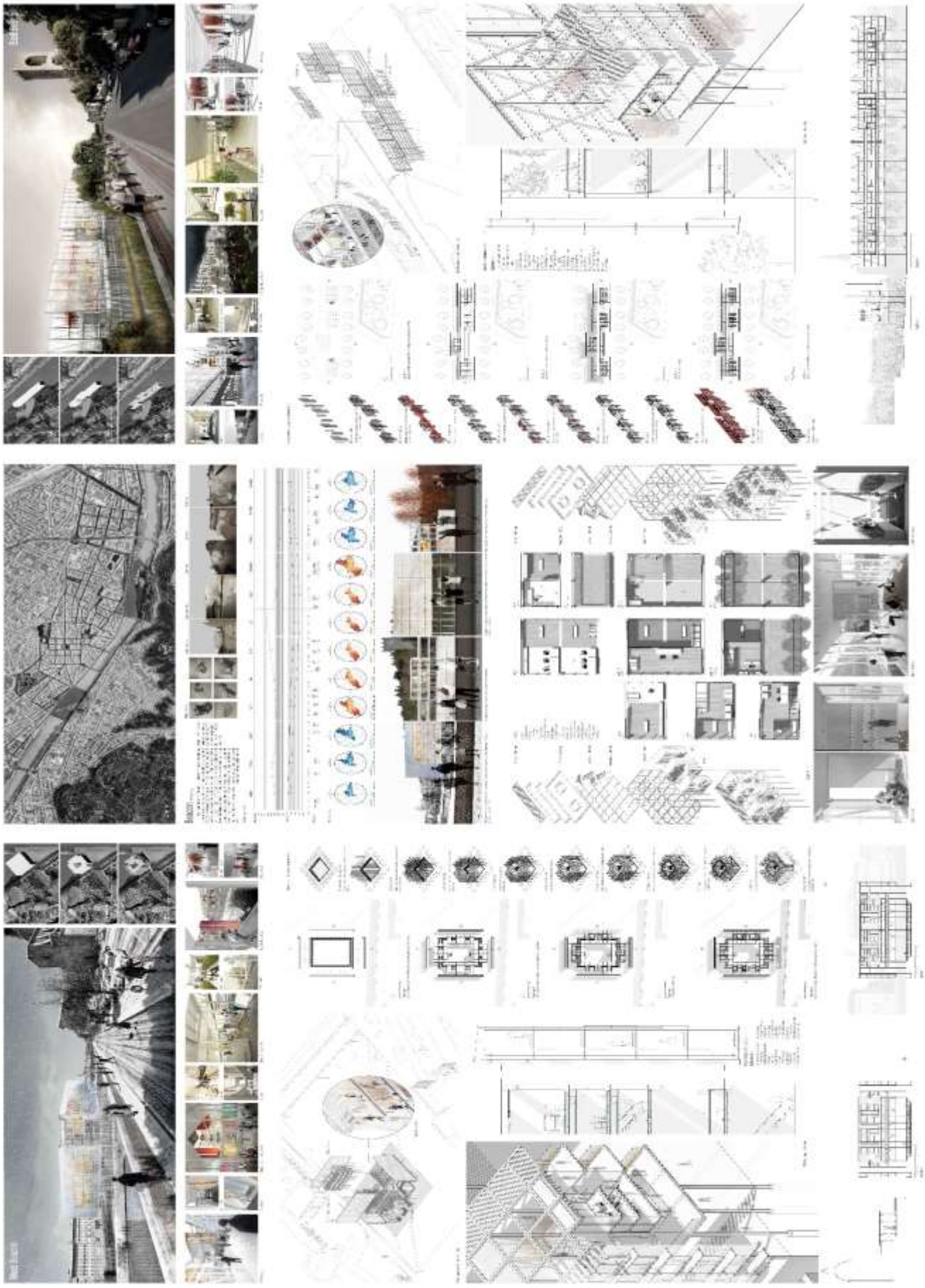
156

157

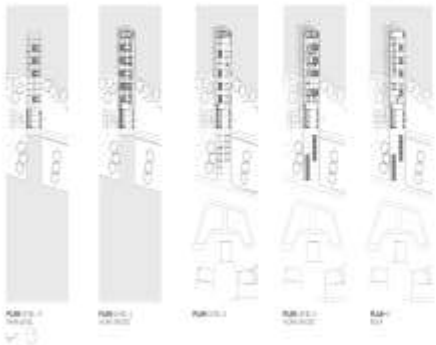


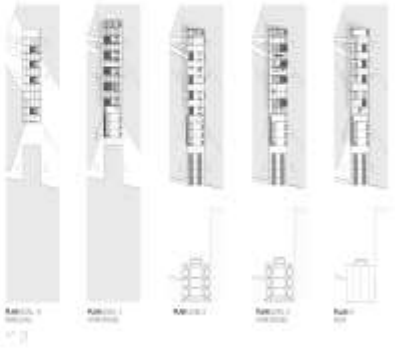
158

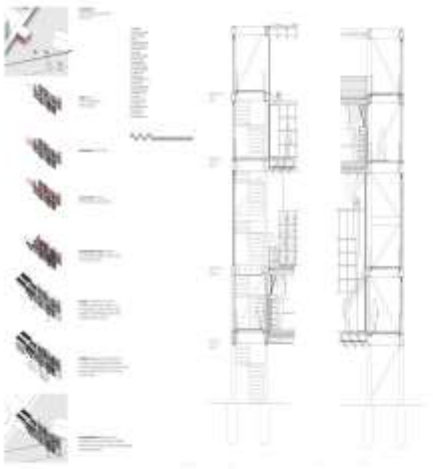
159



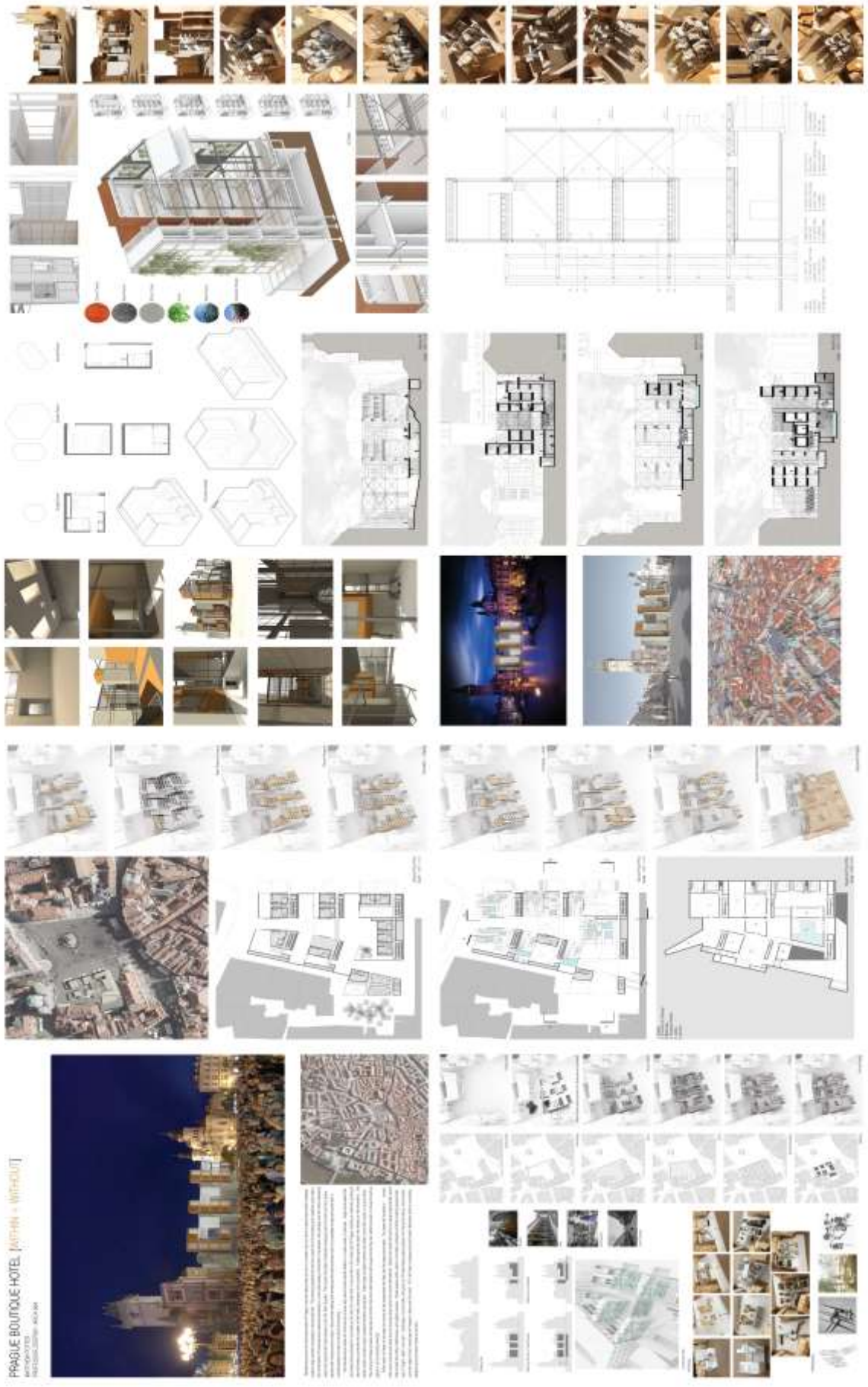
160



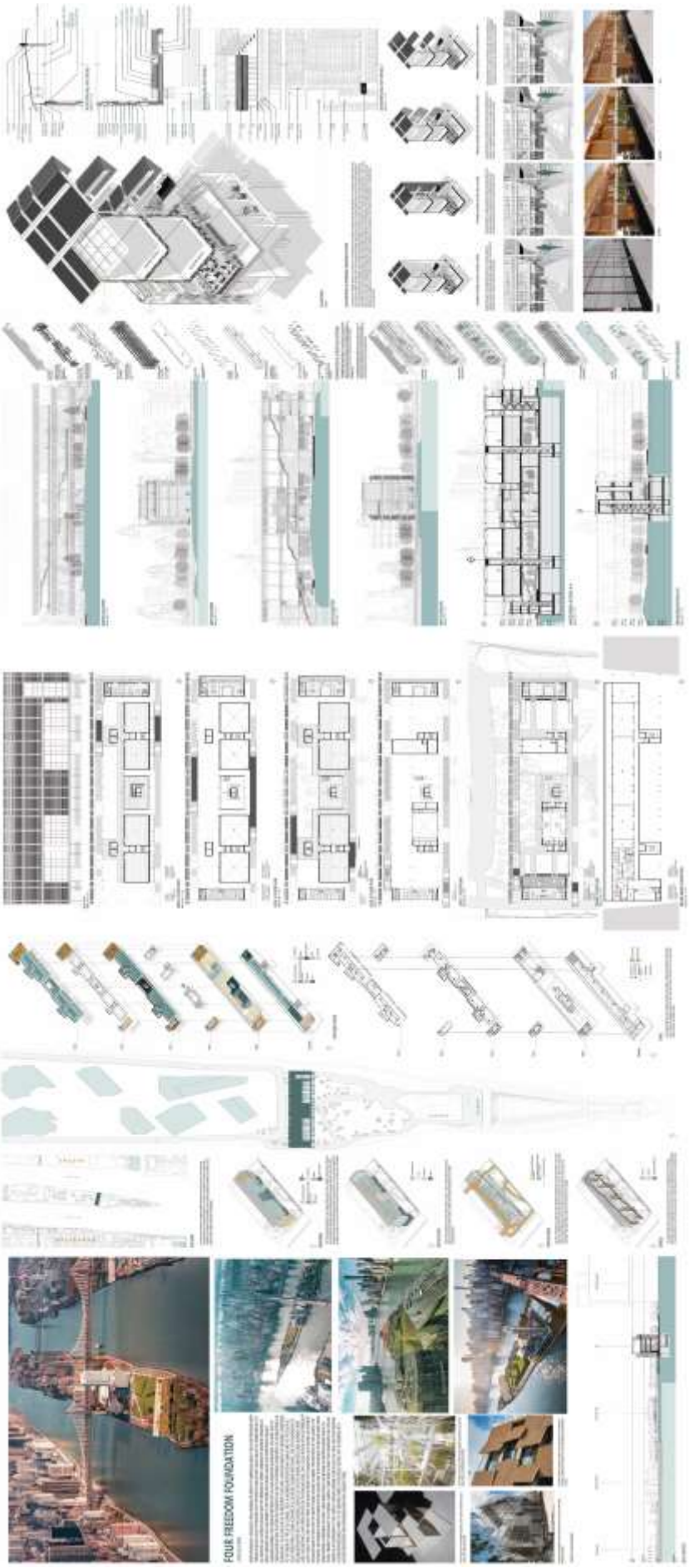




CROSSING THE ARNO EAST
CROSSING THE ARNO WEST

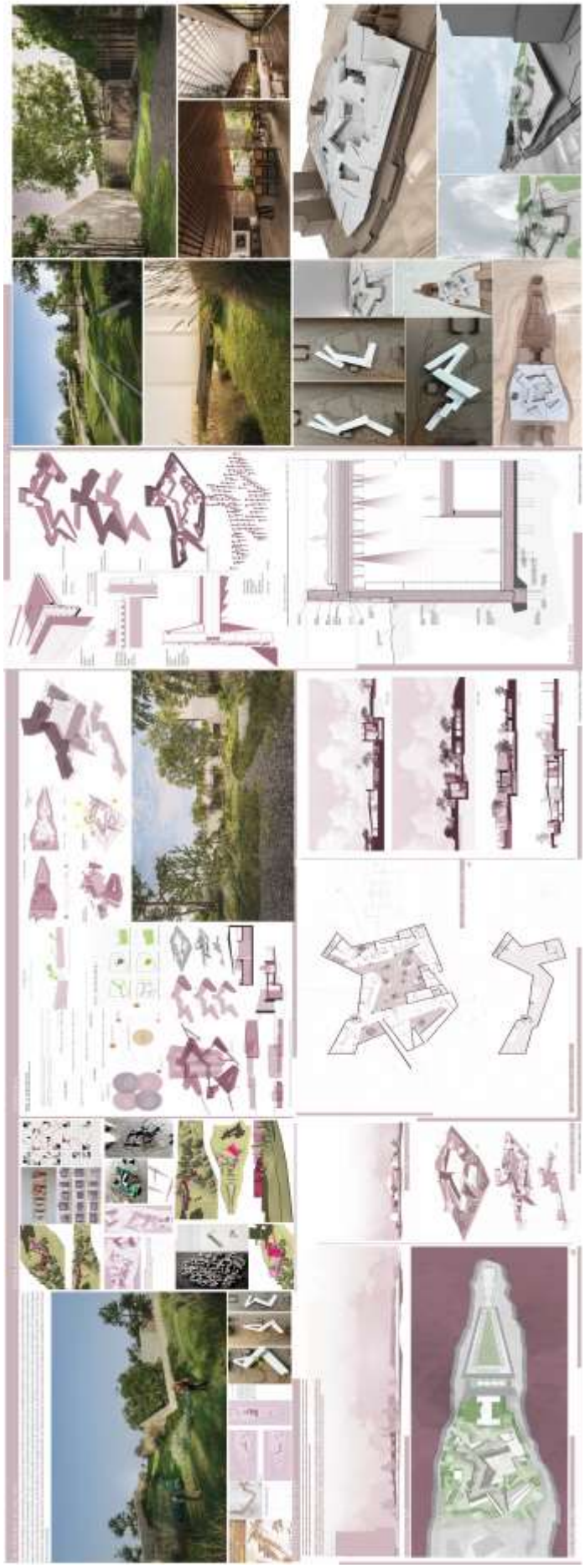


162

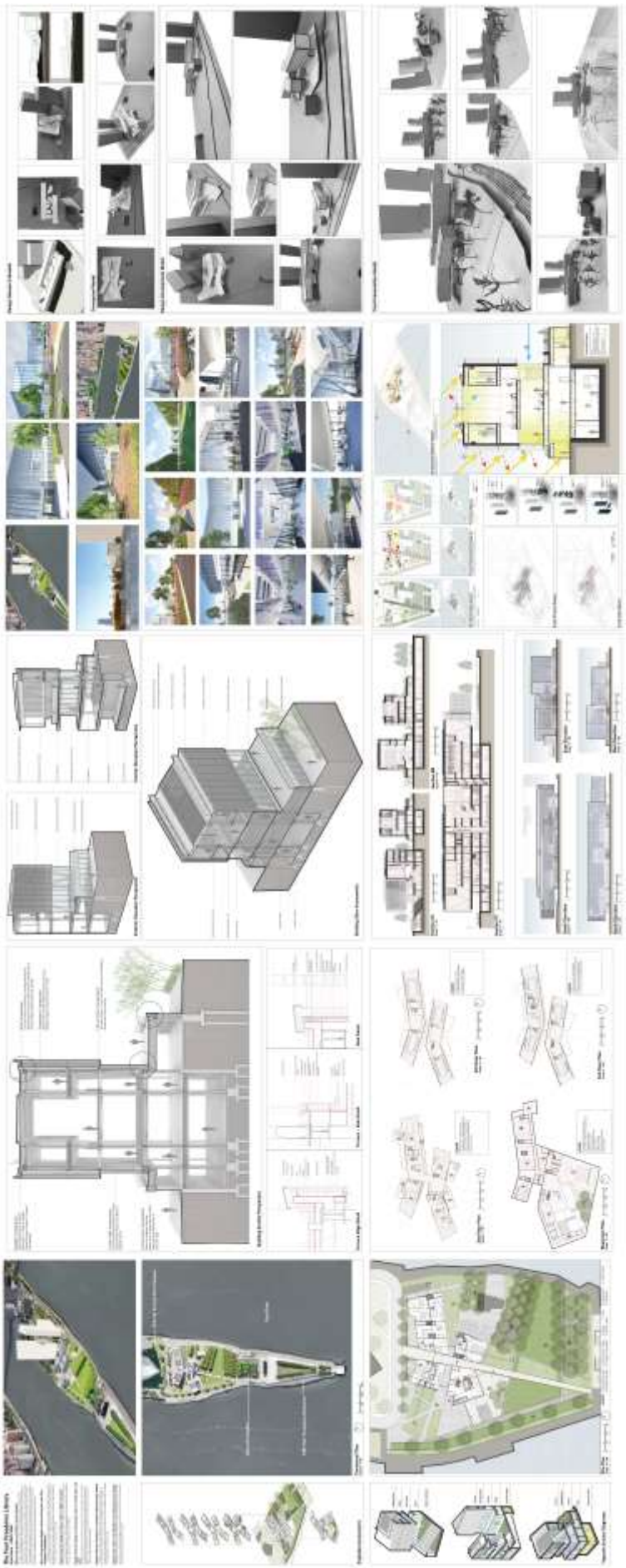


163

164



165



166

Advanced Architectural Studio Criteria:

1. Architectural History and Theory:

a. How architecturally sophisticated and significant are the conceptual and theoretical intentions of the proposed design?
b. How difficult, (i.e. how much risk) does the design concept engage?
c. How does the design's concept and technical development relate to contemporary architectural thought and praxis? In what ways is the proposed design an extension of contemporary architectural theory(s)?
d. Overall, does the design, and its relationships between concept, context, program and technology, illustrate a level of sophistication and rigor appropriate to "capstone" Advanced Studio within a professional degree in architecture?
e. How does the design illustrate the development of contemporary architecture which appropriately responds the dynamics of architecture including; seasonal variation, changes in weather and time of day, and enhancing, completing and relating to the unique characteristics of its specific site and context?
f. How does the design illustrate the development of contemporary architecture, which appropriately responds to the specific details, and characteristics of the functional program, both the interior and exterior spaces?
g. How does the design illustrate the development of contemporary architecture, which appropriately integrates and synthesizes building technologies and systems, energy and sustainability performance, and materials / products selections?
h. How does the design illustrate the development of contemporary architecture whose aesthetic and experiential characteristics relate to the visual context, environmental performance, and are aesthetically sophisticated?
i. Will the proposed architecture be valued over time and representing Architecture within its time and place?

2. Aesthetics and Architectural Design:

a. Is there a consensus that the proposed design is "Architecture?"
b. Is the design process and proposed project intend clearly legible, and illustrating rigorous conceptual thinking?
c. Is the design well-proportioned to its program and context, sophisticated in its selection and use of materials and colors?
d. Does the design illustrate and apply a sensitive understanding of human and contextual scale?
e. Does the design illustrate appropriate architectural ordering systems, beyond simply functional relationships or abstract geometric forms, such as Heavy-Light, Mono-Multi-Type, Linearity-Network, Order-Disorder, Picturesque, Formal, Node, Combined?
f. Does the proposed design express the nature of its materials?
g. Does it illustrate a purposeful set of visual experiences including natural light and shadow, variations in mood or settings?

167

3. Process and Representation:

a. Has the Design Research and Conceptual Design phases of the process developed a series of designs which successfully related the specific characteristics of the project (site, program, etc.) and the topics of the design studies?
b. Has the Design Research and Conceptual Design studies positively influenced the development of the proposed design throughout the semester, including design attributes such as: Heavy-Light, Mono-Multi-Type, Linearity-Network, Order-Disorder, Picturesque, Formal, Node and Combined?
c. Has there been rigorous design inquiry, including the development of alternative design strategies related to a well-formulated design concept and set of architectural values?
d. Does the Final Presentation fully and accurately illustrate the conceptual, contextual, programmatic, aesthetic and technical aspects of the design proposal?
e. Does the Final Presentation include the required range of architectural drawings, images, diagrams, statements to illustrate and explain the proposed design in its surrounding context, technically, as experienced by its occupants, and illustrated at many scales?
f. Is the Final Presentation designed to tell the "story" of the design, why it has taken the form and architectural characteristics that distinguishes it from other design proposals?
g. Is the Final Presentation well designed and organized maximizing the relationships between drawings and the varied elements of the presentation?
h. Does the Final Presentation accurately illustrate the architectural characteristics of the proposed design, through the control of modeling and rendering systems?
i. Is the Final Presentation complete and graphically clear, including accurate, professional quality 2D plans, building-site sections, and building-site elevations?
j. Is the Final Record a complete and graphically sophisticated single large-scale multi-sheet poster interrelating the various elements of the Final Presentation?

National Architectural Accrediting Board Criteria:

4. Site Conditions:

Pedestrian and Vehicular Movement, Topographic Conditions including Steep Slopes, Protection of Environmentally Critical Areas, Integration of Surrounding Architectural, Urban and Landscape Contexts, Integration with Functions of Adjoining Neighborhoods, Historical and Cultural Context, Responding to Specific Seasonal Conditions, Diurnal Variation, Variations in Weather, and Solar Access and Control.

Municipal Zoning Regulations: Yard Setbacks, Maximum Impervious Coverage, Maximum Building Coverage, Maximum Floor Area Ratios, Maximum Building Height and Stories, etc., Protection of Wetlands and Water Courses, Land Use and Planning Policy and Historical District Requirements.

a. Does the design comply with zoning and land use policies such as setbacks, maximum height, maximum floor area ratios, maximum lot coverage, maximum impervious coverage, etc.?

b. How does the design respond to the character of the surrounding physical contexts including: relationship to existing buildings architectural characteristics and functions, topography, natural landscape, principal views, scale, pedestrian and vehicular movement systems, etc.?

c. How does the design respond to environmental conditions of the site including solar orientation, seasonal variation, variations in weather, sunlight, exterior temperature and humidity, wind, precipitation, etc.?

d. In what ways does the proposed design respond to differences in orientation, relationship to urban and/or natural landscapes, sunrise-sunset, significant views and panoramas, below grade, at grade, above grade and rooftop activities and characteristics, pedestrian paths and access? And, are the exterior facades of the proposed architectural designed to respond to these differences?

e. Overall, is the proposed design an appropriate and skillful addition to the existing landscape and/or urban context?

5. Environmental Impact:

Minimum Carbon Footprint, Use of Sustainable Materials, Water Conservation, Application of Renewable Energy Sources.

168

a. Does the proposed design demonstrate an understanding of sustainability in its selection and use of materials and systems?

b. Does the design have an overall positive effect on the natural and built environment?

c. Based upon a measurable analysis of the exterior envelope of the design, illustrate and prove: the design and technical improvements to comparable global warning impact, ozone depletion effect, smog formation contribution, non-renewable verses renewable energy demand for the building enclosure systems?

6. User Requirements:

Appropriate Relationships of Functions, both interior and exterior, Accommodation Building Services, Clarity of Way-Finding, Accomplishing Specific Requirements of Each Functional Type, and for the needs of a Diverse Range of Occupants including variation in age, needs for privacy and overall comfort.

a. Does the design accomplish the functional needs of the client, and various groups of users?

b. Are the rooms and spaces designed to include finish materials, interior design elements such as furnishings, and designed for the technical and architectural characteristics for each of the specified functions?

c. Does the design include service spaces, mechanical spaces, service access required for the functioning of the building?

d. Are public areas and the circulation systems logical, clearly understood by the occupants, and overall part of the architectural concept and form?

e. Are the rooms and spaces appropriately sized and proportioned, fitting the needs of the functional program, and overall part of the architectural concept and form?

f. Are the various interior and exterior functions of the building appropriately related, interconnected, or isolated?

g. Is the design successful in accommodating the needs of various users such as: visitor, employee, owner, neighbor, child, senior citizen, or passersby?

7. Regulatory Requirements:

International Building Code 2021: Occupancy Classification, Mixed Use Requirements, Required Type of Construction, Allowable Maximum Floor Areas, Maximum Building Height and Number of Stories, Site Determined Building Area Modifications, Building Separations, Atrium Requirements, Fire and Smoke Barriers, Prescriptive Fire Ratings of Building Construction, Fire Smoke and Sprinkler System Requirements, Restroom Requirements and Stair Design.

a. Has the design addressed the requirements of various occupancy types, construction types, and limitations to building dimensions, number of stories and floor areas?
b. Do mezzanine spaces meet the requirements of the IBC?
c. Does the design accommodate fire safety, including fire rated materials based upon the function class, maximum floor areas, heights and number of stories of the proposed design?
d. Are the various portions of the building appropriately fireproofed?
e. Are the various exterior elements of the building appropriately thermally insulated, and acoustically designed for sound transmission?
f. Does each room or space have natural light as required by the IBC?
g. Does the daylighting design enhance each functional space under all solar conditions and functional uses?
h. Does each room or space have natural ventilation or fresh air as required, and as is appropriate to each function?

8. Accessible Design:

2010 ADA Standards for Accessible Design: Ramp Slopes and Safety Areas, Wheel Chair Access, Turning Circles and Maneuvering Clearances, Doors and Doorways Requirements, Refuge Area Requirements, Restroom Design, Elevator and Platform Lift Design, Accessible Roots, Equivalency of Design and Accessibility.

a. Does the circulation system (path of travel) within the building meet general ADA requirements including ramps widths, maximum ramp pitches and landings, access to elevators, stair, exit stair, elevator refuge areas, accessible seating and toilet room facilities, wheel chair accessibility?
b. Are restrooms designed to meet the IBC and ADA requirements?
e. Does the design provide the required accessible routes?

9. Life Safety Systems:

169

International Building Code 2021: Exit Access, Exit Access Maximum Travel Distances, Aisle Minimum Widths and Combined Widths (Corridors & Stairs), Min and Max Separation of Exits within a space, Maximum Dead Ended Exit Distances, Number of Required Exits, Maximum Common Exit Path Distances, Means of Egress Minimum Widths and Minimum Widths by Capacity, Corridor Continuity, Horizontal Exits, Exit Discharge, Egress Court and Exit Lobby Restrictions, Required Door Widths and Swing Directions, Direct Exit Paths, Elevator and Escalators

a. Illustrate and prove by measurement in the final proposed design all primary life safety requirements, listed above.
b. Does the building ensure safe egress to exit discharge from all occupied interior and exterior portions of the building?

10. Structural Systems:

Criteria for selection and design of Foundations, Primary and Secondary Structural Systems, Load Bearing Walls and Columns, Girders and Beams, Floor Slab Design, Lateral Stability, Deflection Limitations of Structural Elements, Maximum Slenderness Ratios of Structural Members, Accommodation of Required Live and Dead Loads, Continuity of Load Paths to Subsoil.

a. Does the structural system serve the design intent and concept?
b. What are the requirement minimum Live, Dead and Wind Loads for the various functions?
c. What are the required maximum deflections of all structural components?
d. Illustrate how the design provides lateral stability for the structure in all directions?
e. Is the choice of the structural form and materials consistent with other characteristics of the architecture?
f. Do structural system elements working logically as a system?
g. Is the structural performance of the building proven through one of the following?
1) calculation of typical elements including foundations, load bearing walls, columns, girders, beams, slabs, frames while assuring maximum deflection and lateral stability.
2) by detailed comparison to similar structural precedents, explain the logic of your structural systems behavior?
h. Are the structural systems and members appropriately proportioned to all structural forces and spans?
i. Are the structural systems and member design consistent with the performance of the specific materials selected, (wood, steel, concrete, etc.)?
j. Is the structural system integrated with mechanical and other building systems?
k. Does the structural system support and is integrated with the building enclosure system?

l. Are the vertical and lateral structural forces (loads) of the building effectively transferred to foundations and subgrade, through logical load paths?

m. Does the design adequately address lateral foundation forces and subsoil conditions?

11. Environmental Control Systems:

Criteria for selection and design of Heating, Cooling and Ventilation Systems: System Type and Distribution Systems, Ventilation, Solar Control.

a. In what way does the mechanical systems enhance the design intent and concept?

b. Are all spaces appropriately natural and artificially lit, heated, cooled and ventilated by natural and/or artificial means?

c. Are the selection and general design of the mechanical systems appropriate to the function, architectural concept and form?

d. Are the mechanical systems integral to the design concept including lighting, heating, cooling, and ventilation?

e. Illustrate the distribution and functioning of the various mechanical systems logical, and integrated into each occupied space.

f. Are design and technology strategies integrated to create a sustainable proposal, including passive and active systems?

12. Building Envelope Systems and Assemblies:

Selection and Design of Building Envelope Systems, Thermal Insulation and Bridging Standards, Material and Product Specification, Fire Rating of Assemblies, Water and Moisture Protection, Sound Transmission and Acoustics, Integration of Mechanical Systems.

a. Does the building envelope illustrate the design concept and form, visually enhancing the design intent?

b. Is the building envelope appropriate to its context, including the surrounding buildings and natural landscape?

c. Is the building envelope appropriate to its climate, seasonal variation, weather conditions, solar access and shading?

d. Is the building envelope system waterproofed, appropriately insulated and fireproofed to meet the basic IBC requirements?

e. Is the building envelope logical, functional and stable?

f. Is building envelope illustrated with specific and appropriate materials, assemblies and systems, at level of detail associated with the scale 1 1/2” = 1’-0”, including vertical dimensions, materials specifications, from foundation to sky?

170

g. Does the building design and detailing illustrate a basic knowledge of the construction assembly process?

h. Does the design illustrate the selection of specific construction materials, products and assemblies that are consistent to and enhance the design’s performance, concept and intent?

i. Does the design illustrate a knowledge and suitable development of technical and design precedents?

j. Overall, is the enclosure system sophisticated in concept, function, and relationship to the physical and environmental context, esthetics and construction?

13. Building Performance:

Performance of Energy Consumption, Day-lighting, Solar Protection, Natural Ventilation, Natural Cooling, Building Insulation-Thermal Mass, Building Form and Orientation, Climate, Weather and Diurnal Response, Solar Access, Alternative Energy Sources.

a. Does the proposed design illustrate and analytically prove using measurable analysis, design and technical modifications to minimize the energy consumption of the project, while maintain thermal and visual comfort?

b. How does the annual building energy use compare to the average energy use of a similar building functions and locations?

c. Does the design minimize the use of energy consuming systems through the accurate design of solar control devices by orientation, use of natural ventilation, design of day lighting and use of alternative energy sources, as may be appropriate to each building function and in relationship to the design intent and form?

d. Are the non-critical environmentally controlled spaces cooled through natural ventilation?

e. Does the design comply with the ASHRAE 90.1 maximum annual energy use standard?

f. How closely does the design comply with the Architecture 2030 Energy Standard?

g. Which aspects of the architectural design are most and least efficient in terms of annual energy consumption?

h. What design and technical changes where most influential in accomplishing minimum energy consumption?

i. Does the design provide sufficient levels and uniformity of daylight in the selected portion of the project?

j. Does the design prevent inappropriate levels of visual glare in the selected portion of the project?

k. Compare the preliminary and final energy analysis data, illustrating relative importance of the design and technical changes of the design?

Advanced Architectural Studio References:

Architectural Design:

A Language of Contemporary Architecture: An Index of Topology and Typology, Luna and Yim, Routledge
An Architecture Notebook, Simon Unwin Spon Press
Analyzing Architecture, Simon Unwin; Spon Press
Analyzing: The Universal Language of Place-Making: Simon Unwin, Routledge
Anchoring, Steven Holl
Architectural Composition; Rob Krier, Rizzoli
Architecture Principia: Borden and Andrews, Pearson
Atmospheres, Zumthor
Compositions in Architecture: Don Hanlon, Wiley,
Design and Analysis, Bernard Leupen; Christoph Grafe;
Form and Centering: Moffett, Emerald Publishing
Informal (Architecture) Cecil Balmond, Prestel Publishing
Language of Space and Form: James Eckler, Wiley
Material Precedent; Gail Peter Borden, Wiley
Points and Lines: Diagrams and Projects for the City, Stan Allen
Precedents in Architecture: Roger H. Clark; Wiley Paperback
S M L XL, OMA / Rem Koolhaas
Studies in Tectonic Culture, Kenneth Frampton
Ten Canonical Buildings 1950-2000; Peter Eisenman, Rizzoli
The Architecture of Diagrams: Andrew Chaplin
Threshold Spaces: Till Berger
The Eyes of the Skin, Juhani Pallasmaa
The Poetics of Space, Gaston Bachelard
Theoretical Anxiety and Design Strategies, Rafael Moneo
Theories and Manifestoes of Contemporary Architecture, Charles Jencks and Karl Kropf (eds.)
Threshold Spaces, Boettger

171

The Language of Architecture, Simitch and Warke
https://ebookcentral-proquest-com.libdb.njit.edu:8443/lib/njit/detail.action?docID=3399961

Twenty Buildings Every Architect Should Understand, Simon Unwin
https://ebookcentral-proquest-com.libdb.njit.edu:8443/lib/njit/detail.action?docID=488050

Thinking Architecture, Peter Zumthor
https://archive.org/details/peter-zumthor-thinking-architecture-birkhauser-architecture-2006

The Structural Basis of Architecture, Sandaker, Eggen and Cruvellier
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&isFrbr=true&tab=Everything&docid=alma995077961405196

Process and Representation:

An Architecture Notebook, Simon Unwin Spon Press
Diagramming the Big Idea: Balmer and Swisher
Precedents in Architecture: Roger H. Clark; Wiley Paperback
The Architecture of Diagrams: Andrew Chaplin
Threshold Spaces: Till Berger

Basics of Model Building, Alexander Schilling
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&isFrbr=true&tab=Everything&docid=alma991359573405196

Drawing from the Model, Frank Melendez

https://primo-njit-edu.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&tab=Everything&docid=alma995097068505196

Architectural Representation: Greenstreet and Shields Architectural Drawing, David Dernie
https://primo-njit-edu.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&isFrbr=true&tab=Everything&docid=alma995065852005196

Site Conditions:

Architecture Site Analysis Guide - Data Collection to Presentation (firstinarchitecture.co.uk)
Design of Cities: Edmond Bacon
Design with Nature, Ian McHarg
Great Public Squares: Gatje, Norton
Site Analysis, Edward T. White, Architectural Media Site Planning; Kevin Lynch, MIT
Squares: Urban Spaces in Europe: Sophie Wolfrum, Birkhauser
Sun, Wind & Light: Brown & DeKay
Urban Design: Street and Square, Architectural Press https://archive.org/details/designwithnature00mcha/mode/2up
Urban Space: Rob Krier, Rizzoli
Climate Consultant 6 Software https://www.sbse.org/resources/climate-consultant
ClimateStudio v1.9 Installer https://drive.google.com/file/d/1UhIKKHrbwIQWpYLiME5KMHo0oOKtMkIr/view?usp=sharing

Environmental Impact:

An Environmental Life Cycle Approach to Design; John Cays, Springer.
Athena Impact Estimator for Buildings https://calculatelca.com/software/impact-estimator/overview/
https://www.buildingtransparency.org/en/ http://www.buildcarbonneutral.org/
Kaleidoscope https://www.payette.com/kaleidoscope/
RHINO AND REVIT: https://www.cove.tools/education-resources
RHINO: https://www.solemma.com/climatestudio License: EDU_NJIT:1x769y3pwwihixtr
REVIT: Tally for Revit https://kierantimberlake.com/page/tally
https://choosetally.com/download/
https://choosetally.com/tutorials/
One Click LCA https://academy.oneclicklca.com/courses/building-life-cycle-assessment-onboarding-edu-users

172

User Requirements:

A Pattern Language, Christopher Alexander
Neufert Architects' Data, Ernst and Peter Neufert. Wiley-Blackwell, 2012. ISBN-13: 978- 1405192538
Problem Seeking. An Architectural Programming Primer, William M. Pena and Steven A. Parshall (HOK). Wiley, 2012.
Timesaver Standards for Architectural Design Data, Donald Watson
Timesaver Standards for Building Types, Joseph De Chiara

Architectural Graphic Standards, AIA, Dennis Gall, Nina M Giglio
https://primo-njit-edu.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&isFrbr=true&tab=Everything&docid=alma994901881405196

The Architectural Studio Companion, Edward Allen & Joseph Ianohttps://primo-njit-edu.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInstitution&tab=LibraryCatalog&docid=alma995065821405196

Regulatory Requirements:

IBC 2021: https://codes.iccsafe.org/content/IBC2021P1

Applying the Building Code: Step-By-Step Guidance for Design and Building Professionals, Geren, Wiley Pub. http://ebookcentral.proquest.com.libdb.njit.edu:8888/lib/njit/detail.action?docID=6790678

2021 Building Codes Illustrated, Francis Ching

http://ebookcentral.proquest.com.libdb.njit.edu:8888/lib/njit/detail.action?docID=6790678

2021 International Building Code Illustrated Handbook: Douglas Thornburg, McGraw Hill.
https://www-accessengineeringlibrary-com.libdb.njit.edu:8443/content/book/9781264270118

https://www.buildingcode.blog/

IBC Occupant Load Calculator 2021
https://www.buildingcode.blog/ibc-occupant-load-calculator.html

Plumbing Fixture Calculator
https://www.buildingcode.blog/plumbing-fixture-calculator.html

High Rise Requirements
https://www.buildingcode.blog/uploads/1/2/9/9/129929641/building_code_blog_-_high_rise_cheatsheet.pdf

2024 IBC Fire and Smoke Damper Requirements
https://www.buildingcode.blog/uploads/1/2/9/9/129929641/2024_ibc_fire_and_smoke_damper_cheatsheet_rev_2-8-2024.pdf

IBC Fire Wall / Exterior Wall Intersection Tool
https://www.buildingcode.blog/fire-wall-exterior-wall-intersection-tool.html

IBC Allowable Height and Area Calculator
https://www.buildingcode.blog/allowable-height-area-calculator-non-separated-mixed-occupancy-37216.html

IBC Calculated Fire Resistance for Wood Walls
https://www.buildingcode.blog/calculated-fire-resistance-for-wood-walls-37216.html

Average Grade Plane Calculator
https://www.buildingcode.blog/averagegradeplanecalculator.html
See Google Drive tutorial videos.

Accessible Design:

173

2010 ADA Standards for Accessible Design
ADA In Details: Janis Kent, Wiley

2021 Building Codes Illustrated, Francis Ching
http://ebookcentral.proquest.com.libdb.njit.edu:8888/lib/njit/detail.action?docID=6790678

2021 International Building Code Illustrated Handbook: Douglas Thornburg, McGraw Hill.
https://www-accessengineeringlibrary-com.libdb.njit.edu:8443/content/book/9781264270118

https://www.access-board.gov/ada/guides/
https://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/guide-to-the-ada-standards
See Google Drive tutorial videos.

Life Safety Systems:

2021 Building Codes Illustrated, Francis Ching
http://ebookcentral.proquest.com.libdb.njit.edu:8888/lib/njit/detail.action?docID=6790678

2021 International Building Code Illustrated Handbook: Douglas Thornburg, McGraw Hill.
https://www-accessengineeringlibrary-com.libdb.njit.edu:8443/content/book/9781264270118

Revit:Travel Path Tool:
https://blogs.autodesk.com/revit/2020/02/18/revits-path-of-travel-tool-makes-for-quick-and-easy-egress/ IBC 2021;
https://codes.iccsafe.org/content/document/759

See Google Drive tutorial videos.

Structural Systems:

Manual of Structural Design, Eberhard Moller, Edition Detail, 2022.
Model Perspectives: Cruvellier, Sandaker and Dimcheff
Structure in Nature is a Strategy for Design: Peter Pearce
Structure Systems, Heino Engel,

The Architectural Studio Companion: Edward Allen & Joseph Iano
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInstitution&tab=LibraryCatalog&docid=alma995065821405196

The Structural Basis of Architecture: Sandaker, Eggen and Cruvellier
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&isFrbr=true&tab=Everything&docid=alma995077961405196

DartmouthX-The engineering of Structures Around Us
https://www.youtube.com/channel/UCTzQ-ZNy1DrKhchVBmPwU-Q
https://www.masterseries.com/products/powerpad-student-edition#tab-4

STRUCALC https://strucalc.com/
Email the sales@thevitruviusproject.com with your current student ID and request a student license.

StruCalc 2.7.5
https://strucalc.s3.us-west-2.amazonaws.com/StruCalc-Setup.exe

email: archstudent@njit.edu
password: strucalc

Environmental Control Systems:

Studies in Tectonic Culture, Kenneth Frampton
Introducing Architectural Tectonics: Edward Ford
Modern Construction Envelopes, Andrew Watts

174

Mechanical and Electrical Equipment for Buildings: Grondzik, Kwok, Stein, Reynolds
https://ebookcentral-proquest-com.libdb.njit.edu:8443/lib/njit/detail.action?docID=468540
https://www.engineeringtoolbox.com/duct-velocity-d_928.html

The Architectural Studio Companion, Edward Allen & Joseph Iano
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInstitution&tab=LibraryCatalog&docid=alma995065821405196

Constructing Architecture, Deplazes
https://archive.org/details/DeplazesConstructingArchitecture/page/n1/mode/2up

Modern Construction Case Studies, Andrew Watts
https://primo.njit.edu/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=DN_and_CI&isFrbr=true&tab=Everyth ing&docid=alma995070973505196

Modern Construction Handbook, Andrew Watts
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=PC&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&tab=Everything&docid=pq_ebook_centralEBC1575519

Geothermal Heat Pump: https://www.nordicghp.com/commercial-heat-pumps/ (81 ton)

Detail Magazine / Detail Inspiration via HCAD Library website
https://archive.org/details/studiesintectoni0000fram
https://transmaterial.net/

Building Envelope Systems and Assemblies:

Detail Magazine / Detail Inspiration via HCAD Library website/

The Architectural Studio Companion, Edward Allen & Joseph Iano
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=MyInstitution&tab=LibraryCatalog&docid=alma995065821405196

Constructing Architecture, Deplazes
https://archive.org/details/DeplazesConstructingArchitecture/page/n1/mode/2up

Studies in Tectonic Culture, Kenneth Frampton https://archive.org/details/studiesintectoni0000fram

Modern Construction Case Studies, Andrew Watts
https://primo.njit.edu/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_scope=DN_and_CI&isFrbr=true&tab=Everyth ing&docid=alma995070973505196

Modern Construction Handbook, Andrew Watts
https://primo-njit-du.libdb.njit.edu:8443/discovery/fulldisplay?context=PC&vid=01NJIT_INST:NJIT&search_scope=MyInst_and_CI&tab=Everything&docid=pq_ebook_centralEBC1575519

Introducing Architectural Tectonics: Edward Ford Modern Construction Envelopes, Andrew Watts https://transmaterial.net/

Rhino Inside Revit:
https://www.rhino3d.com/inside/revit/1.0/
https://www.youtube.com/watch?v=x_MU3vO1_II
https://www.youtube.com/watch?v=DVzsSyxTQS0
https://www.youtube.com/@balkanarchitect

Building Performance:

Sun, Wind & Light: Brown & DeKay
https://primo-njit-edu.libdb.njit.edu:8443/discovery/fulldisplay?context=L&vid=01NJIT_INST:NJIT&search_Sustainable

175

Rhinoceros / Honeybee: https://www.ladybug.tools/honeybee.html
Sketchup or Rhino / Sefaira: https://www.sketchup.com/products/sefaira
Rhino & Revit / Cove Tools: https://www.cove.tools/education-resources
Revit / Insight: https://www.autodesk.com/products/insight/overview
https://blogs.autodesk.com/revit/2021/07/06/autodesk-insight-webinar-series/
2030 Palette: http://www.2030palette.org/building/
Zero Tool: https://www.zerotool.org/zerotool/
Zero Code: https://www.zero-code.org/energy-calculator/
CBECS: https://www.eia.gov/consumption/commercial/data/2018/
Photovoltaic Energy Systems: PVWatts - NREL
www.wbdg.org/design-objectives/sustainable

Typologies of Daylighting: https://www.archdaily.com/787734/10-typologies-of-daylighting-from-expressive-dynamic-patterns-to-diffuse-light

Climate Scout: https://www.callisonrtkl.com/climate-scout-intro/
https://www.sbse.org/resources/climate-consultant
Climate Studio

Climate Studio v1.9 Installer: https://urldefense.com/v3/__https://solemma.us14.list-manage.com/track/click?u=0bb7072dcf582b174e27a4181&id=dd44b65097&e=74f8f9f642__;!!DLa72PTfQgg!JhHiz7UlxiZowjorTQqoWxmIjDJoWNw9xpINithpYAI35bVC_prWAukaW5soq-yyirjZudmyntXIHTSlzu0xj80$

Climate Studio: License Key: EDU_NJIT1:UAHQU10EIQVU:94

Climate Studio Software Documentation: https://urldefense.com/v3/__https://solemma.us14.list-manage.com/track/click?u=0bb7072dcf582b174e27a4181&id=4ba6cc32d4&e=74f8f9f642__;!!DLa72PTfQgg!JhHiz7UlxiZowjorTQqoWxmIjDJoWNw9xpINithpYAI35bVC_prWAukaW5soq-yyirjZudmyntXIHTSlMbfgdfo$

Learn Climate Studio: https://urldefense.com/v3/__https://solemma.us14.list-manage.com/track/click?u=0bb7072dcf582b174e27a4181&id=1e2bd4ad75&e=74f8f9f642__;!!DLa72PTfQgg!JhHiz7UlxiZowjorTQqoWxmIjDJoWNw9xpINithpYAI35bVC_prWAukaW5soq-yyirjZudmyntXIHTSlY5b4vJ0$

NJSOA / HCAD / NJIT Academic Policies:

1. Advanced Studio Policies:

a. The use of cell phones for texting, emailing in the studio is not permitted. Emergency calls should be taken outside of the studio environment. Entertainment including movies, and games within and during studio hours is prohibited.

b. The studio section will be divided into discussion groups. Each group may engage in project research, evaluation of alternative design strategies, and design reviews. However, each student is required to complete a unique and separate project for the Advanced Studios.

c. It is the responsibility of each student to seek architectural criticism, references and general guidance throughout the entire semester from their studio critic, other members of the NJSOA faculty, guest critics, HCAD library, and the studio's shared Google Drive resources.

d. The courses shared Google Drive includes extensive project reference materials, course Syllabi, examples of Presentation Types and Final Presentations, Architectural Precedents, Required Readings, Site Data and Photographs, Technical References, Tutorials. It is the responsibility of each student to be familiar and study the provided materials.

e. The submissions of late work, non-participation in studio or class discussions, and absence from interim critiques or formal presentations can be the sole basis for not passing the course.

f. In fairness to all students and following Institute Policy, unless there is cause due to bereavement, medical conditions, military activity, legal obligations, or university-sponsored events, justification for the submission of late work and / or the issuing of the final grade of "Incomplete" must be approved by the Dean of Students Office within fourteen days of assignment's due date.

Without this approval by the Dean of Students assignments uploaded or submitted late will be reduced in grade as follows: up to 24 hours = 15% reduction, 24 to 48 hours = 30% reduction, after 48 hours = no academic credit for the assignment.

g. Without the approval by the Dean of Students Office, not attending or presenting at a Review will result in a reduction in the grade for that Phase of the semester's assignments. Presentation to studio teachers and guest critics is a fundamental aspect of professional Architectural Studio education.

Not participating or not presenting work will result in a 15% reduction in the grade of that Phase of the work, if the work is uploaded on time to the appropriate Student Work folder. Work not submitted on time is subject to an additional late penalty as described above.

h. It is important to note that solely meeting the individual Advanced Studio Criteria is not, in itself, a basis for passing the Studio or in determining the final studio grade. The synthesis of the many criteria into a significant work of architecture is result in the sum being greater than its constituent parts. Additionally, the architectural design process is not linear, as it requires reconsideration or revision throughout the semester to create a significant work of architecture, which is both technically and artistically complete.

i. The list Advanced Studio and NAAB Criteria categories and their questions indicate the specific topics to be addressed, without suggesting that the thirteen topics have equal value.

j. Point Value and Collective Review Grading System: The point values for each Phase of the semester are provided to give a general appraisal of the quality and rigor of the work, but whose summation may not predict the Final Course Grade, which is primarily determined by the Final Presentation and Final Record submissions.

Architectural design involves the synthesis and integration of multiple issues, both in a linear/progressive and reflective/reconsideration process. As a result, it is impossible to measure or predict the quality of final architectural design work solely by the summation of individual assignments or reviews during the semester.

176

Each Phase of the semester has an advisory point value assigned. The evaluation can range from zero to the maximum point value. For example, a letter grade equivalent for a 20 point Phase would be:

A	90 %	18.0 to 20.0 Points
B+	85%	17.0 to 18.0 Points
B	80%	16.0 to 17.0 Points
C+	75%	15.0 to 16.0 Points
C	70%	14.0 to 15.0 Points
D	60%	12.0 to 14.0 Points
F	< 60%	0 to 12.0 Points

k. Final course grades are determined by:

1) The written definitions of letter grades listed below.

2) The level of architectural sophistication, rigor and quality illustrated by the proposed design.

4) By the opinions of guest critics,

5) By review of the studio section's teacher throughout the semester,

6) By the collective review of the teachers of the Advanced Studio during and at the end in the semester.

l. The Advanced Studio faculty collectively review the Final Record documentation to determine grading parity among studio sections, minimum standards of performance and the determination of unacceptable, poor, excellent or superb projects. A portion of the Final Grade is determined by this collective faculty review.

The overall completeness, sophistication, design quality, technical development and performance of the proposed design is evaluated based upon that of an upper level accredited professional education in architecture.

2. Course Accreditation Criteria:

The National Architectural Accrediting Board (NAAB) accredits NJIT's architecture programs. The NAAB criteria must be covered by any architectural curriculum to attain their approval. This course directly addresses the following, as outlined in the 2020 NAAB Conditions for Accreditation:

PC.2 Design—How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.

PC.4 History and Theory—How the program ensures that students understand the histories and theories of architecture and urbanism, framed by diverse social, cultural, economic, and political forces, nationally and globally.

SC.5 Design Synthesis—How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating synthesis of: 1) user requirements, 2) regulatory requirements, 3) site conditions, 4) accessible design, and consideration of 5) the measurable environmental impacts of their design decisions. See the "Advanced Studio Criteria List" list for their topics and questions.

SC.6 Building Integration—How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating: 1) integration of building envelope systems and assemblies, 2) structural systems, 3) environmental control systems, 4) life safety systems, and 5) the measurable outcomes of building performance. See the "Advanced Studio Criteria List" list for their topics and questions.

3. Course Pre-Requisites:

The Advanced Studio I course has the following requirements:

A. Bachelor of Architecture:

1. Grade of "D" or higher in Architectural Studio, Arch 396.
2. Grade of "D" or higher in Structures I & II, Construction I & II, ECS I & II and Landscape and Urbanism.

B. Master of Architecture:

1. Grade of "C" or higher for Architectural Studio, Arch. 504G.
2. Grade of "C" of higher in Structures I & II, Construction I & II, ECS I & II and Landscape and Urbanism.
3. Arch 503G and Arch 504G average grade of "B" or higher (3.0).
4. An average grade of "B" or higher (3.0) for Arch 505G and 506G is required for the awarding of the Master of Architecture degree.

4. Advanced Architectural Studio Course Outcomes as listed in the 2020 HCAD/NJIT NAAB Documents:

This course requires that all students achieve the following competencies:

a. Explore and analyze various modes of discourse related Architectural Design. These include site documentation, architectural precedents, verbal presentations, informational diagrams, technical drawings, and analysis of technical requirements.

b. Respond critically to discussions of readings, research and the development of alternative architectural designs as they pertain to the architectural project, its site and program, contextual and environmental conditions, and technical requirements.,

c. Synthesize multiple design variables and architectural objectives into an independent architectural design proposal.

d. Formally present an integrated architectural project including:

1) Design Intent Diagrams and Statements
2) Architectural Drawings
3) Perspective and Axonometric Building Wall Sections
4) Perceptual Views in Photographic Context
5) Architectural and Building Systems Diagrams
6) Exterior and Interior Serial Views
7) Conceptual through Final Physical Models
8) Building Performance: Energy Consumption and Daylighting Performance
9) Environmental Impact: Sustainability
10) Life Safety, Accessibility and IBC Regulatory Requirements

177

See the NJIT Website for the general course description.

5. NJIT / HCAD / NJSOA Academic Policies:

A. Studio Culture:

Design studio is an intense experience. Learning takes place continuously alone at the desk, in individual discussion with the critic, and most critically in dialogue with a larger group. Students must complete all assignments on time, and be must be present and fully engaged in studio work during all class sessions.

Assignments are given as minimum requirements. It is expected that Superb and Excellent work will exceed the expectations of the assignment. Design work is graded according to many factors; quality, invention, and development of the design proposal are essential to superior work. Neither attendance nor completion of assignment(s) guarantees a passing grade.

The studio is an academic environment; it is a place that allows the exchange of information and knowledge. The majority of class time will be spent discussing your work in a group. It is required that you participate in group discussions

and reviews, and that you actively participate in the review of your classmate's work. Although there may be individual one-on-one critique, much of the studio time will be group discussions where work will be presented collectively to class, and in small discussion groups. For this format to be effective, everyone must participate. Absence from studio will also significantly affect your ability to achieve the desired educational outcomes.

Attendance and participation for the duration of any class Review or Presentation is mandatory.

Students should not expect that they would be able to work on their project during studio time; as many of these sessions will be dedicated exclusively to group critique, discussions, seminars, etc.

All students are required to review the HCAD Studio Culture Policy at the start of the semester in order to facilitate communications and clarify expectations between students and instructors.

In addition to the values and ethics of the university, the New Jersey School of Architecture is dedicated to diversity, professional conduct, constructive evaluation and instruction, a collaborative community, health and wellbeing, time management, school-life balance, respectful stewardship and space management, and well-rounded academic enrichment. The pedagogy of architecture and design is as complex as it is rewarding, and as dynamically evolving as the people who learn and teach it. This understanding resides at the core of the NJSOA.

B. Academic Integrity:

Academic integrity and honesty are of paramount importance. Cheating and plagiarism will not be tolerated. The NJIT Honor Code will be upheld, and any violations will be brought to the attention of the Dean of Students. All students are responsible for upholding the integrity of NJIT by reporting any violation of academic integrity to the Office of the Dean of Students. The identity of the student filing the report will remain anonymous. All students are expected to adhere to the University Code on Academic Integrity and to the Code of Student Conduct.

Please note that it is the teacher's professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing, or using any illegal software will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu.

Dean of Students: www.njit.edu/doss Code of Academic

Integrity:
https://www.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf

Code of Student Conduct:
https://www.njit.edu/doss/policies/conductcode/index.ph p

C. Plagiarism:

It is extremely important that students familiarize themselves with a proper way to cite visual and intellectual sources. Plagiarism whether deliberate or inadvertent is not tolerated. Plagiarism is the use of visual or intellectual material created by others without proper attribution. The use of one's own material for more than one assignment can be considered plagiarism. Students should not do so without the expressed written consent of all instructors involved.

Students are particularly cautioned that the use of artificial intelligence software or systems requires the proper citation regarding the origin and outcome of any A.I. generated written, graphic or other output. Without proper and complete citation of the origin of the AI material, AI generate submissions or submissions of edited AI generate work is considered plagiarism. The source of AI generated or Internet accessed materials can be evaluated through attribution software analysis systems.

The HCAD Librarian, Dr. Maya Gervits has assembled excellent resources on copyright, plagiarism citing, and avoiding plagiarism:

http://researchguides.njit.edu/c.php?g=671665&p=4727920

D. Students with Disabilities:

It is the school's moral, ethical, and legal obligation to provide appropriate accommodations for all students with physical and/or learning disabilities. If students need an accommodation related to disabilities, all official documentation must be filed with the Dean of Students and the Disability Support Service Office. It is the responsibility of the student to notify the instructor at the beginning of the semester if accommodations have been applied for.

178

Dean of Students: https://www.njit.edu/doss/ Disability

Support Service:
http://www.njit.edu/studentsuccess/disability-support-services-0/

E. Students Rights and Responsibilities:

http://catalog.njit.edu/undergraduate/academic-policies-procedures/student-rights-responsibilities/

F. NJIT Undergraduate Grading Definitions:

Final course grades are determined by the following standards as defined by NJIT, and as collectively reviewed by the studio faculty:

A	90 Points	Superb
B+	85 Points	Excellent
B	80 Points	Very Good
C+	75 Points	Good
C	70 Points	Acceptable
D	60 Points	Minimum (Meeting all Course Criteria)
F	< 60 Poiints	Failure

I Incomplete (Pre-Approved by Dean of Students)

A (Superior) Architectural design proposal demonstrates advanced understanding of learning objectives and a high level of achievement. Work is reflective of an intensive process of conceptual and technical development. Work illustrates a well-defined connection to and development of contemporary architectural theories, objectives and values. Presentations demonstrate a very high level of sophistication, craft, attention to detail, contextual, programmatic and technical accuracy. The architectural proposal artistically and technically incorporates the all the specific design issues which are outlined in the course documents to create a significant work of architecture.

B+ (Excellent) / B (Very Good) Architectural design proposal demonstrates good understanding of learning objectives and a good level of production abilities. Work is reflective of a complete process of conceptual and technical development. Work illustrates a connection to and development of contemporary architectural theories, objectives and values. Presentations demonstrate a high level of sophistication, craft, attention to detail, contextual, programmatic and technical accuracy. Work illustrates a connection and development of contemporary architectural theories, objectives and values. The architectural proposal incorporates all the specific design issues that are outlined in the course documents to create a work of architecture.

C+ (Good) / C (Acceptable) Architectural design proposal fulfills the requirements in terms of conceptual understanding and technical ability. Work has some engagement with an iterative design process. Presentations demonstrate an average level of sophistication, craft, attention to detail, contextual, programmatic and technical accuracy. Work demonstrates basic level of independent initiative. Work illustrates an understanding contemporary architectural theories, objectives and values. The architectural proposal incorporates all the design issues that are outlined in the course documents to create a satisfactory work of architecture.

D (Minimum) Work fulfills the requirements of each exercise in terms of conceptual understanding and technical ability. Presentations are complete but demonstrate poor development of craft, attention to detail, understanding and integration of architectural concepts and theories, contextual, programmatic and technical accuracy. Work illustrates an awareness of contemporary architectural theories, objectives and values. The architectural proposal incorporates all the design issues that are outlined in the course documents to create a complete building illustrated in its context and accomplishing the functional needs of the program.

F (Failing) Work is incomplete or does not demonstrate an understanding of the course content or abilities related to required skills. Work does not illustrate an awareness of contemporary architectural theories, objectives and values. The architectural proposal does not incorporate design issues that are outlined in the course documents to create a work of architecture.

Faculty teaching the Advanced Studio courses collectively review the Final Record submissions to coordinate the quality and rigor of the submitted work in relationship to the NJIT grading scale among the sections.

Historically the average grade of all students for the undergraduate Advanced Architectural Studio I has been between "C+ and B." (Good to Very Good)

G. NJIT Graduate Grading Definitions:

Final course grades are determined by the following standards as defined by NJIT, and as collectively reviewed by the studio faculty:

A	90 Points	Excellent
B+	85 Points	Good
B	80 Points	Acceptable
C+	75 Points	Marginal
C	70 Points	Minimum (Meeting all Course Criteria)
F	< 60 Points	Failure
I	Incomplete	(Pre-Approved by Dean of Students)

A (Excellent) Architectural design proposal demonstrates advanced understanding of learning objectives and a high level of achievement. Work is reflective of an intensive process of conceptual and technical development. Work illustrates a well-defined connection to and development of contemporary architectural theories, objectives and values. Presentations demonstrate a very high level of sophistication, craft, attention to detail, contextual, programmatic and technical accuracy. The architectural proposal artistically and technically incorporates the all the specific design issues which are outlined in the course documents to create a significant work of architecture.

B+ (Good) / B (Acceptable) Architectural design proposal demonstrates good understanding of learning objectives and a good level of production abilities. Work is reflective of a complete process of conceptual and technical development. Work illustrates a connection to and development of contemporary architectural theories, objectives and values. Presentations demonstrate a high level of sophistication, craft, attention to detail, contextual, programmatic and technical accuracy. Work illustrates a connection and development of contemporary architectural theories, objectives and values. The architectural proposal incorporates all the specific design issues that are outlined in the course documents to create a work of architecture.

179

C+ (Marginal) Architectural design proposal fulfills the requirements in terms of conceptual understanding and technical ability. Work has some engagement with an iterative design process. Presentations demonstrate an average level of sophistication, craft, attention to detail, contextual, programmatic and technical accuracy. Work demonstrates basic level of independent initiative. Work illustrates an understanding contemporary architectural theories, objectives and values. The architectural proposal incorporates all the design issues that are outlined in the course documents to create a satisfactory work of architecture.

C (Minimum, Passing) Work fulfills the requirements of each exercise in terms of conceptual understanding and technical ability. Presentations are complete but demonstrate poor development of craft, attention to detail, understanding and integration of architectural concepts and theories, contextual, programmatic and technical accuracy. Work illustrates an awareness of contemporary architectural theories, objectives and values. The architectural proposal incorporates all the design issues that are outlined in the course documents to create a complete building illustrated

in its context and accomplishing the functional needs of the program.

F (Failing) Work is incomplete or does not demonstrate an understanding of the course content or abilities related to required skills. Work does not illustrate an awareness of contemporary architectural theories, objectives and values. The architectural proposal does not incorporate design issues that are outlined in the course documents to create a work of architecture.

Faculty teaching the Advanced Studio courses collectively review the Final Record submissions to coordinate the quality and rigor of the submitted work in relationship to the NJIT grading scale among the sections.

Historically the average grade of all students for the Graduate Advanced Architectural Studio I has been between "B and B+." (Acceptable to Good).

"B" average overall GPA, for all courses, is required to qualify for the awarding of the Master of Architecture degree.

"B" is average is required for the Advanced Studio I & II to qualify for the awarding of the Master of Architecture degree.

H. Faculty Office Hours:

All faculty teaching Advanced Studios are available by appointment for either in person, email or online conferencing. Contact your instructor to determine their availability and to make an appointment, if you wish to meet outside of regularly schedule class times.

I. Course Documentation:

1. GOOGLE DRIVE: This course will use the studio's shared Google Drive as the repository for each phase of the semester's assignments including for the Final Record.

All Phases of student work must be uploaded in the appropriate assignment folders.

Course Final Record: Student work must be uploaded to the studio's shared Google Drive as listed and described in the course Syllabus.

2. CANVAS / KEPLER: Final Record: Kepler on CANVAS

The Canvas / Kepler system will be used only for the NJSOA Final Record documentation for the course.

All course materials will be available only on the Studio's shared Google Drive.

To access CANVAS, you must have a UCID account with NJIT. KEPLER: Students must upload copies of their assignments to the new KEPLER 5 system found under the KEPLER tab in CANVAS "Modules".

CANVAS Final Record folder is automatically ported to KEPLER, although students need to initiate a separate KEPLER upload.

Pdfs and .jpegs format files are required ensure view ability. KEPLER no longer has individual student folders.

J. Rights and Conditions:

1. All student work, both digital and physical, may be retained by the New Jersey School of Architecture, HCAD, NJIT, teacher or faculty member, for accreditation purposes, academic reference, design competitions, conferences, papers, institute publications, and / or public display, whether in print and online.

NJSoA/HCAD/NJIT retains the right to a copy of all academic material prepared by students in conjunction with all courses and research. Student work includes preliminary and final academic work including physical models, digital images, prints, drawings, writings and their digital source files.

2. All reference materials provided on-line, via electronic communication or as part of classroom instruction, (including but not limited to videos, music, sounds, books, e-book links, journal and magazine articles, online images, links to any other publication, tutorials, images, models, articles, writings, diagrams, drawings) are to be used in conjunction with this academic course's assignments only, and cannot be retained, copied, distributed or used for any other purpose, person or at any other location.

180

3. All educational and reference materials are to be deleted completely, including from all public or private storage devices, no later than the end of the last exam day of the semester. They are not to be shared nor retained for any other purpose, nor in any form, beyond the direct use for academic assignments during this semester.

4. Academic presentations, reviews, discussions, notes, recordings or other materials and references, which are part of the course materials and references, are not to be transmitted, shared, posted online, made publically accessible, or to be used by any person not enrolled in the course, or other third party without the written permission of the course Coordinator.

5. All in-class or online discussions, formal and informal reviews, which are part of this course, are not to be screen captured, recorded, transmitted, shared, posted online, made accessible or made public at any time or in any manner without the express **written** permission of the instructor and all attending guest critics.

6. Students, whether on or off campus, attending class, participating in field trips, engaged in model making, construction or any academic activity are responsible for their own safety and well-being. Faculty, teachers, guests and critics accept no responsibility, directly or implied, for the safety, health, actions or inactions of any student or group of students regardless of their age or the circumstance.

7. The course Syllabus is the minimum outline of project issues and requirements, review and presentation requirements and overall course standards. Each studio section may add to the design research, project references, design methods, presentation requirements, assignments

and reviews as appropriate.

Registering for this course, accessing any course material or attending any meeting of this course, in person or remotely, confirms your acceptance of all the listed "Rights and Conditions," without exceptions or modifications.

181

182

Google Earth Aerial Photograph with marina removed, Lagoon to Grand Canal.

Physical Model Instructions:

A. Conceptual Phase Site Models:

a. Each student is to construct a physical site model at 1 to 600 (1" = 50') to the extents of the square Site Plan.

b. See the studio's Google Drive folder "Misericordia Site" subfolder "Fall 2023 Site Model / Venice 3D Model" folder for Dwg, 3dm and Skp models and drawings of the site and buildings.

c. The base of the model must be the Google Earth aerial view, with the marina removed, printed accurately to the 1 to 600 scale.

d. The model should have "stage set" facades on "blocks" which match the 3D size of the surrounding buildings, on all three sides that enclose the site, extending along the Fundamenta, and adjoining canals. Or, the models of the building may be 3D printed from the provided Dwg, 3DM and Laser files.

e. The extent of the model is that of the entire Site Plan rectangle.

183

B. Studio Section Site Model:

a. Physical model at 1 to 300 (1" = 25'), to the extents of the Site Plan.

b. The studio section's Schematic Design and Final Presentation site model includes the surrounding buildings, landscaping, reflective lagoon and canal surfaces, and people in and around the site, all in monochromatic colors. (Site model illustrated above was 3D printed from the provided Dwg, 3DM and Laser files.)

Who Is Really Making 'Chihuly Art'?

The New York Times
By Kirk Johnson
Aug. 21, 2017

SEATTLE — More than 40 years later, Jeffrey Beers still vividly remembers what it felt like to have Dale Chihuly call up to convene a pre-dawn glassblowing session. You felt flattered and inspired, he said, jazzed by Mr. Chihuly's caffeinated freight train of energy and the idea of making art with him while most of the world slept in.

"'We're starting at 5. I'll have Egg McMuffins for everybody,'" Mr. Beers said, describing a typical Chihuly invitation and the instant creation of a team of art student acolytes. "There would be eight or 10 of us, ready to go," added Mr. Beers, now 60 and an architect in New York.

Mr. Chihuly was never the lonely artist toiling in his garret. Making art in a crowd, with a crowd, was the Chihuly way, according to people who have known and worked with him over the decades. The pattern only deepened with time and success, as he gained global recognition for the prolific output of expressive glass works, sculptures and paintings that bear his name and can sell into the millions of dollars.

"The more I worked, the more I sold work, the more people I could hire," Mr. Chihuly said in an interview in his 34,000-square-foot studio complex here in Seattle, near where he was born and raised.

But now, at 75, with mental health issues and old physical injuries that have forced a retreat from hands-on work, Mr. Chihuly is facing a hard-edge court battle — and a potential cloud over his life and art — around the question of what those teams do. A former contractor has sued him and his wife, Leslie, who is the president and chief executive of Chihuly Studio, seeking compensation for millions of dollars of paintings that the contractor says he created or inspired, but for which he said he was never properly credited or compensated.

These are painful days for Dale Chihuly, as he winds down a long career facing a challenge that stabs at the heart of any artist: his originality. Mr. Chihuly emblazoned his signature on the world by working and rethinking the vocabulary of glass as art. Physical challenges and scars compounded the difficulty of that path. He lost vision in an eye in a 1976 car crash that also permanently injured an ankle and a foot. A shoulder injury from a bodysurfing accident made glass blowing, with its heavy weights of pipes and glass, impossible to do. He suffers from bipolar disorder, marked by sweeping swings of elation and depression. And with greater dependence on others, he said, has come greater vulnerability to claims that his work is not his own.

"Yeah, I would say it probably made it easier to attack me," he said. "I absolutely need my teams."

The Chihulys, in their own countersuit in Federal District Court in Seattle, have dismissed the claim by the former vendor, Michael Moi, as an act of greed and jealousy. They said that Mr. Chihuly's vision still defines and shapes all art that leaves his studio.

"He was a handyman," Ms. Chihuly said of Mr. Moi's role in the company, which employs about 100 people in several locations in the Seattle area.

Mr. Moi's lawsuit says that exploitation and uncredited work were built into the Chihuly team system, and that the mental swings of working under a bipolar artist — manic bouts of energy followed by crashes of depression and paranoia — were part of the unpredictable dynamic of how and when work got done, and who did it. Mr. Moi, through his lawyer, declined a request for an interview.

"Up-and-down manic cycles were a constant," the suit says.

Certainly, workshops for art, overseen by an artist with a famous name, are nothing new. Painters from Peter Paul Rubens to Rembrandt created elaborate systems of production, as have modern artists like Jeff Koons and Andy Warhol, who famously declared his art to be a factory-produced commodity.

184

And legal experts said that claims of inadequate credit by an underling generally have faced a tough road because courts require proof that the person who filed for a work's copyright, Mr. Chihuly in this case, intended to share credit of authorship.

"I think no one would have even assumed that Chihuly did all his own work, first of all, because there's too much of it," said Christine Steiner, a lawyer in Los Angeles who represents galleries, artists and museums, but does no work for Chihuly.

In both law and art value assessment, she said, works that go out the door of an artist's studio, however they are produced, are generally deemed to be a product of that artist's vision. Because of that, she said she sees little effect on Chihuly art-market values no matter what happens in the case.

But the Chihuly case also opens up what many artists say is an uncomfortable and complicated debate about age, infirmity and the foibles of human nature where one person is in control, egos are large, and vast fortunes are being made.

"Any artist is going to suck up all the energy in the room," said Toots Zynsky, a glass artist who studied with Mr. Chihuly in the 1970s and remains friends with him. "So the more you admire someone, the less you should work for them."

Ms. Zynsky trained at the Rhode Island School of Design in the early '70s, as did Mr. Beers, the architect, when Mr.

Chihuly was teaching in the school's famous glass program. She said she decided early in her career that assistants should never become long-term employees — three years and out became her rule — because she feared she might stunt their style and growth or take too much from them in creating her own art.

Another artist who has known Mr. Chihuly for many years said he believes Mr. Chihuly is still making "Chihuly art," even if others are constructing and finishing it.

"As long as Dale can put it down on paper, right to the very end I think he'll be able to keep going," said Benjamin Moore, a glass artist in Seattle. But Mr. Moore said he has also been saddened by the attacks on his friend, and the decline in Mr. Chihuly's vitality over the last decade.

"He was such a whirlwind of energy and excitement and enthusiasm, he was like a magnet, drawing the most talented young people around him just to be in his presence to learn," Mr. Moore said. "But he's a shell of the man that he was — it breaks my heart."

In the lawsuit, where pretrial motions are underway, Mr. Moi said the level of Mr. Chihuly's disabilities were never disclosed to art buyers or the public and that Chihuly Studio often intimated that Mr. Chihuly's paintings were entirely by his own hand. Other legal cases in recent years involving Mr. Chihuly and his former employees — him suing them or vice versa — were settled out of court, but those disputes could be dredged up again in depositions or testimony as the case goes forward.

"For years Leslie Chihuly and Chihuly Studio have undertaken efforts to hide Dale's struggles with mental health and his inability to work on a daily basis, not to protect him, but to ensure that the cash cow known as 'Chihuly' continued to moo," Mr. Moi's suit says.

Mr. Chihuly, who said he now rarely paints for more than an hour or two at a time, perhaps three days a week, was working on a recent morning, surrounded by four assistants. One handed him a brush, then held the paint container at his elbow as he stood over a horizontal glass sheet, partly painted already with specially formulated enamel, composed of ground glass suspended in liquid.

"Do you want one over the other, or do you want it side by side?" Mr. Chihuly turned to ask an assistant, Jodie Nelson, referring to the blotched paint dobs that he was about to apply.

Ms. Nelson's response was immediate: "I want what you want."

Mr. Chihuly then proceeded to paint, in sweeping, fast brush strokes as a Bob Dylan song played in the background. The goal, he said, was to approximate, but not fully duplicate, two other glass painted images that would then be put together, fired and then lit for display, creating an illusion of three dimensions, called "Glass on Glass." The design is still new — only displayed for the first time recently at Crystal Bridges Museum of American Art in Bentonville, Arkansas. During a pause, he gestured to one of the glass layer paintings hanging on back wall. "I rejected that one this morning," he said. "I don't like the way it looks."

There's no question Mr. Chihuly has become an institution and created a bridge between decorative and fine arts that some art scholars have compared to Louis Comfort Tiffany. Chihuly Studio creates some 30 site-specific pieces a year, ranging in price from $200,000 to millions of dollars, and has done commissions for collectors like Bill Gates and Bill Clinton. Mr. Chihuly's show at the New York Botanical Garden, through Oct. 29, has drawn more than 484,000 visitors since April, making it one of most attended exhibitions in the garden's history.

At Chihuly Studio on a recent afternoon, workers were assembling a huge glass chandelier for a university, tinkering with a sculpture scheduled for installation in Union Square Park in New York, and painting flower images on glass in three big warehouses, like buildings in Seattle's Ballard neighborhood.

Seattle became an art-glass capital largely because of Mr. Chihuly, through the Pilchuck Glass School, a nonprofit academy north of the city that he helped found in 1971, and the two museums built around his work or glass art in general. Chihuly Garden and Glass, which opened in Seattle in 2012 next to the Space Needle, is the city's top-ranked tourist attraction on TripAdvisor, and has become a cash cow of its own. Admission costs $29, and the gift shops sells everything from Chihuly umbrellas ($36), to blankets ($500), to numbered prints of Chihuly paintings (about $3,000).

185

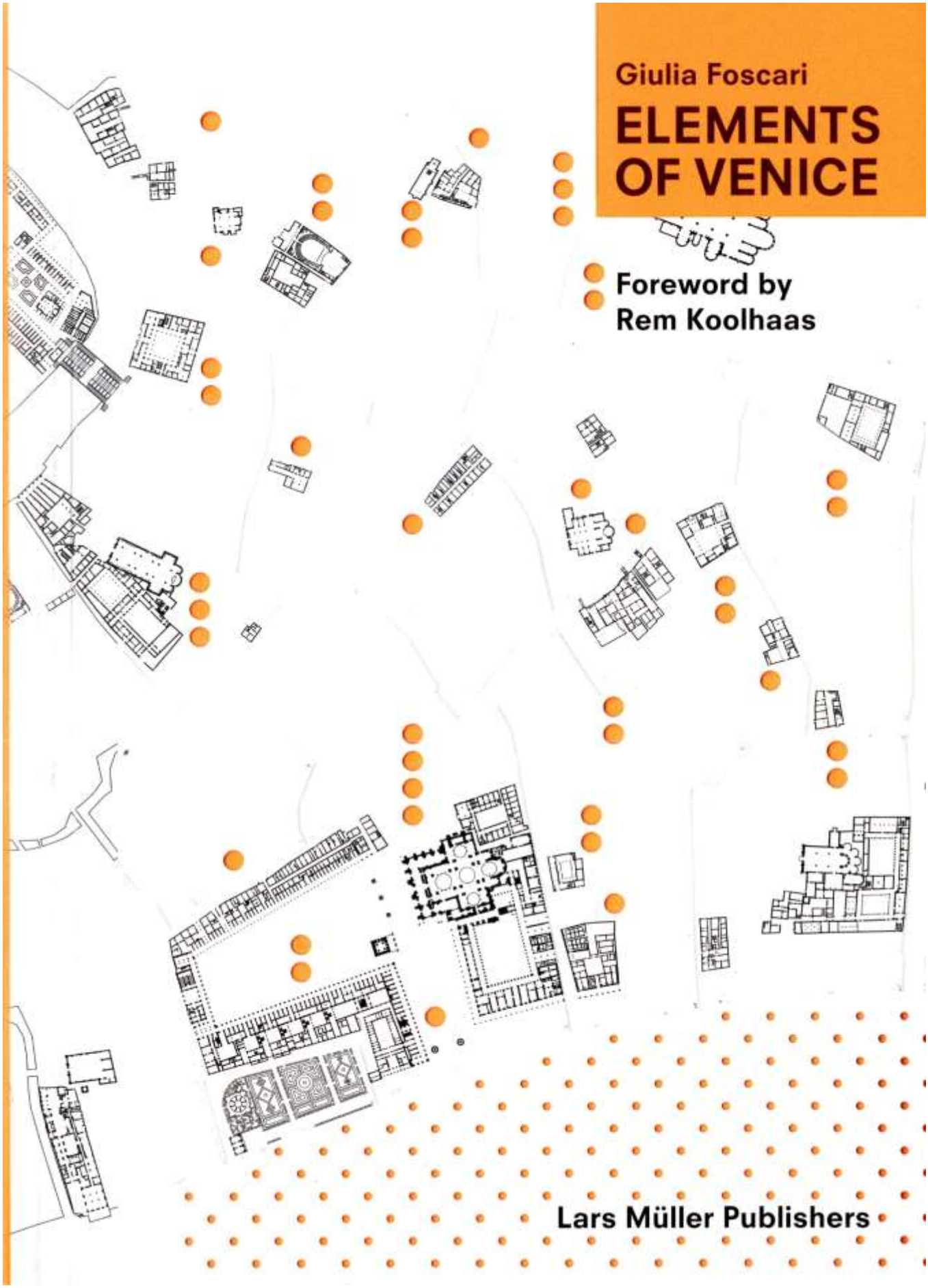
"Second on my list of things to see, after the Space Needle," said Alison Yeardley, a fourth-grade teacher from Boston, who was spending three days of her vacation in Seattle and had just left the Chihuly Garden and Museum on a recent morning.

Mr. Chihuly said that in looking back over the long arc of his career, he can pretty much pinpoint where his mental state was, in the cycles of up or down. In the mid '90s, for example, he remembers working for weeks with little sleep on a project to build and hang chandeliers over the canals of Venice. But then a couple of months later, working at Waterford Crystal in Ireland, he said, the cycle turned. "I was depressed, but yet I had my team with me and I could continue to work," he said.

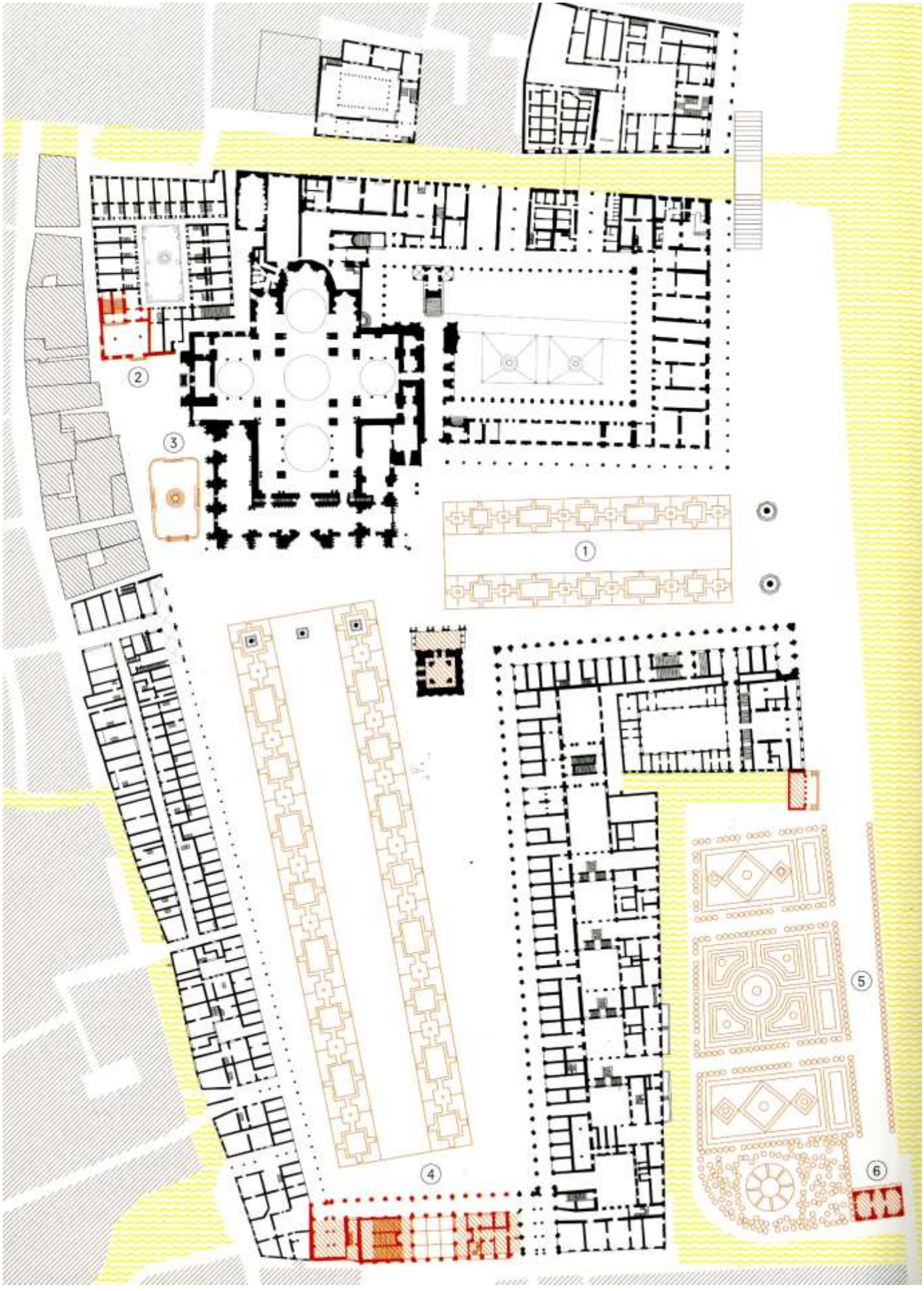
"I like my work when I'm up," he added. "Van Gogh, you know, he worked when he was depressed as well as when he was up, and I've never been able to figure it out."

Mr. Beers, the former student, said he looks back on those early mornings in the glass shop in Rhode Island partly as a response to the practical realities of working in front of a furnace, seizing time before the heat of the day, but also for the quiet sense of calm that seemed part of the experience for Mr. Chihuly and his students.

"It was a more peaceful sort of Zen time, that early in the morning," Mr. Beers said. "Or maybe he just couldn't sleep, and it was time to get to work."


Giulia Foscari
ELEMENTS OF VENICE
Foreword by Rem Koolhaas
Lars Müller Publishers

186



187

64 Ca' Farsetti → XVII Palazzo Loredan → XVII Palazzo Pisani Moretta → XVIII Palazzo Loredan degli Ambasciatori → XVIII

FAÇADES LIKE *TELERI*

Ca' Farsetti | Palazzo Loredan | Palazzo Pisani Moretta | Palazzo Loredan dell'Ambasciatori

Byzantine → Gothic

Anonymous

If Venice was the maritime emporium where East and West met and exchanged merchandise, then where were the port infrastructures that made this intense commercial activity possible? These were none other than the Venetian houses. Yet why is the answer not intuitive?

There are two basic reasons. Firstly, the three functions – residential, production, and tertiary – that traditionally had been intrinsically linked and were all housed under the same roof find themselves, in our present culture, distinct both in terms of architecture and urban planning. The second reason, not less relevant, is that large economic activities are run now by corporations – a revolutionary invention which transformed the means of production at the beginning of the 19th century – and not by families.

In the 1500s Venetian houses translated this fundamental cultural change in formal and structural transformations. Developing beyond the Gothic typology, the increase in size and the introduction of stone façades and architectural ornament to the Venetian houses of the 16th century are evidence of their gradual transformation from *case di stazio* into palaces, i.e. buildings designed to express the owner's social authority and wealth. Commercial activities were therefore slowly banned not

65 Ca' Vendramin Calergi → VI Palazzo Corner della Ca' Granda → XVIII Palazzo Grimani → XVII Palazzo Balbi → XVIII

Ca' Vendramin Calergi | Palazzo Corner della Ca' Granda | Palazzo Grimani | Palazzo Balbi

Renaissance

Authored

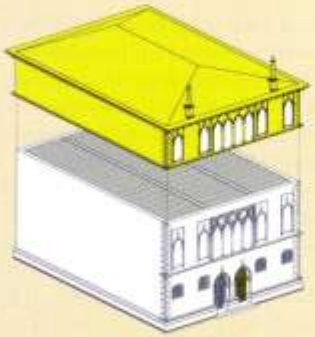
only from these formal (or even "self-representative") new structures but also from the older houses – Byzantine and Gothic – which continued to evolve, adapting to the changing times.

As the wealth and authority of families gradually faded away, these houses underwent yet another programmatic transformation, whereby – before starting a decline that would see most of them reduced first to offices and then to hotels – they were reduced to the single function of residences.

The transformation of programme and meaning of Venetian houses – proof in and of itself of the city's metamorphous capabilities – can be perceived when travelling along its canals, especially the Grand Canal, as it was on this same water system that all the port infrastructures were located.

On these same canals, built in close proximity to one another, the palazzi offer their façades, an almost two-dimensional plane that cannot unfold along the sides of the buildings for lack of space. The façades thus appear like manifestos, billboards, or perhaps like *teleri*, to quote the term used by Venetians long ago to describe Bellini and Carpaccio's giant paintings, as huge scenographic canvases.

VOLUMETRIC OPERATION – STACKING



The oldest palaces, as we see them today, are the result of gradual enlargement that took place over the course of generations, an aspect that was amplified by the time it took the lagoon soil to settle under the buildings' weight.

Looking at Ca' Dandolo-Farsetti (now the Town Hall), the "prologue of the evolutionary process of the Byzantine company house", one sees distinctly, for example, that the floors above the piano nobile are Renaissance additions "designed to reproduce the subdivisions of the ground floor – with the second piano nobile – and articulate this further with the small windows beneath the roof"(Paolo Maretto, 1987).

Equally, it is not difficult to discern in the façade of Ca' da Mosto – "at once simple, graceful, and strong, the most extensive and perfect" 13th-century Venetian palace (John Ruskin) – a distinctive historical stratification on all levels. In addition to the obvious addition of a second piano nobile in the 1600s, topped by a 19th-century floor, the offset between the ground floor portico and the multi-light window on the first piano nobile suggests that even the palace's lower part – of Byzantine matrix – was built in two phases. As Maretto observes: "the canalised portico recalls the one at Ca' Farsetti, both morphologically (raised semicircular arches) and compositionally, while the stylistic connotation of the small arches on the higher loggia (semicircular with only the extrados being cuspidate) suggest a successive phase in the evolution of the Byzantine style."

Situations similar to Ca' da Mosto appear in other raised Gothic buildings. Such is the case with Palazzo Barbaro, Palazzo Priuli, and Palazzo Bernardo. In the latter, the misaligned six-light windows on the two piani nobili reveal "two dwellings placed atop one another, clearly visible from the two water gates, and a similar stratification to Ca' Foscari" (Paolo Maretto, 1987).

It is worth noting that houses were raised, as was probably the case with Ca' da Mosto, not due to growing property values and a consequent desire to increase the size of the building, but as a consequence of important social and cultural change, namely the transformation of the family structure (giving rise to *fraterne*, where two brothers live independently under the same roof with their families, *comunioni fraterne*) and a new vision of buildings, which begin to be seen in the 16th century more as a real estate investment generating income than a family structure to manage trade.

This new social "need" is not confined to pre-existing buildings (which are raised

by a floor) but also influences the design of new Renaissance palaces, which concealed two independent apartments behind a single façade. Referring to his design for Palazzo Cornaro in San Polo, Jacopo Sansovino wrote "with an invention accommodating common use, it is big enough on one side for the Cardinal's whole family, and on the other for their men and women" not imagining that the second floor would be let out to Marino Cavalli and not used by the *fraterna*. The same happened with Palazzo Zorzi (S. Severo), Palazzo Loredan (Vendramin Calergi), Palazzo Contarini (S. Beneto), and Palazzo Balbi.

The Venetian palace, with its unified façade concealing insular units may be aptly compared to that popular commercial extension of the clan, the fraterna, *which owned property in common and engaged in mercantile operations jointly while allocing its members to engage in independent business ventures. More often different families lived in the same palace.*

Philip L. Sohm, 1985

Palazzo Pisani Moretta appears as the most complete and assured synthesis of the Gothic type – in service of stylistic, figurative, and even spatial intent. The presence of two piani nobili and two equal water gates, in addition to two internal courtyards, leads to believe that the building had originally been for two families, with two dwellings accessed independently from two distinct areas of the ground floor and mezzanine. This palazzo is a case where the architectural image [of the façade] was conceived as a "synthesis a priori".

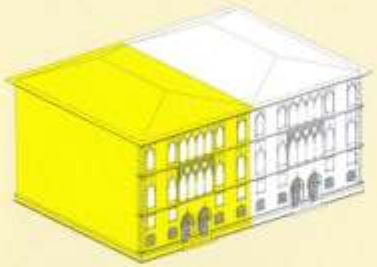
Paolo Maretto, 1987

Barcode architecture: construction phases of Venetian houses. » From the top: Ca' Bernardo, Ca' da Mosto, Ca' Loredan.

The Grand Canal from Ca' Rezzonico to Palazzo Balbi, Canaletto (detail).

Contemporary view of Ca' Rezzonico.

VOLUMETRIC OPERATION – DUPLICATING



Beginning in the 15th century there are also other ways to register the changes in the concept of a palazzo, seen as a building housing both a commercial enterprise and the family that runs the business with its many *famigli* (domestic servants).

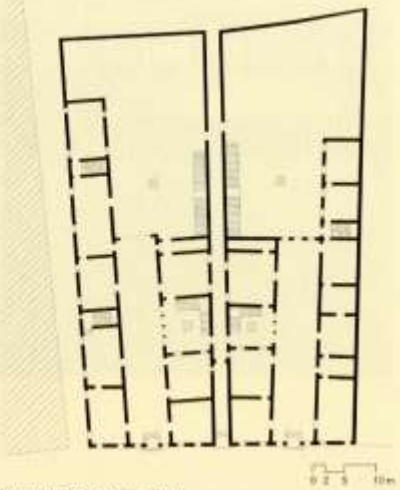
The construction of adjoining twin houses became a new way to affirm the conceptual unity of a family, even when it had split into parallel branches.

The most interesting example of houses of this type – i.e. the first to openly display a self-celebrative intent – are the twin palaces built along the Grand Canal in 1451 by the two Giustinian brothers. The houses are identical, not just the façade but also their layout, in which the bi-familiar programme of each house can be traced in the existence of a double courtyard and a double external staircase, each of which gives access to a separate piano nobile. The "great wall" of the Palazzi Giustiniani therefore conceals four independent housing units.

A narrow street divides the two buildings. Notwithstanding the brothers' political power in Venice, they were not allowed to close off a public passage granting the houses behind them access to the Grand Canal.

The only example in Venice of a great wall, almost an immense backdrop, organised along two great axes which centre the six-light window … Two façades in one, but designed so as to convey a sense of unity across the entire, vast surface … the two multi-light windows placed very close to one another and the richer windows at the centre establish a greater sense of unity.

Edoardo Arslan, 1970

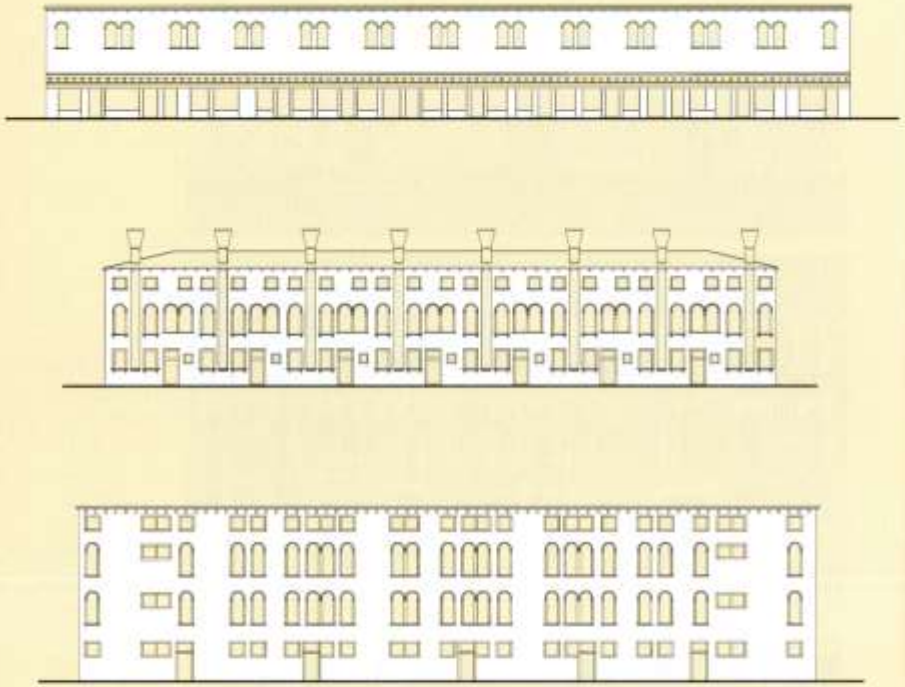


Plan of the Palazzo Giustinian

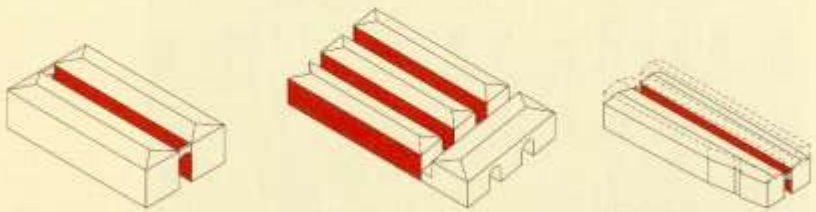
Double façades. From the top:
Palazzi Giustiniani, Palazzi Soranzo, double palaces in the Ghetto.

78 Calle del Paradiso → XIX La Marinarezza → XXXIII Calle del Volto → XVI

VOLUMETRIC OPERATION – MULTIPLYING



Serial housing. From the top: houses in Calle del Paradiso, La Marinarezza, and Calle del Volto.



1200
CALLE DEL PARADISO
12 stores
10 apartments

1480–1500
MARINAREZZA
24 apartments

1500–1600
CALLE DEL VOLTO
10 apartments

Examples of repeated modular structures are found even in simpler buildings beginning in the 15th century. Unlike adjoining palaces they are not only residential, and given their smaller scale, they are not always placed side by side, but rather form a repetitive series of identical buildings that can be described as "serial".

An example of this is the succession of buildings aligned along what is the "shopping mall" of Calle del Paradiso in San Lio. As was said, these were not dwellings, but small artisan businesses, where the "projecting volumes" of the living quarters, of "medieval plastic roughness" (which, considering "the uniformity of rhythm, the brick voussures, and the ancient stone lintels", date from the 15th century) were supported on beams above the shops" (Egle Trincanato).

Repetitive residential development first appeared in Venice at the beginning of the 16th century, rapidly becoming established in the following century. It represented the evolution of the state's structure, and the progressive shift of Venice's richer families from commerce to real estate and financial investments. As a result, both the state administration and private wealth management created a new social class of employees who worked in the service industry – accountants, inventory and record keepers, and office staff.

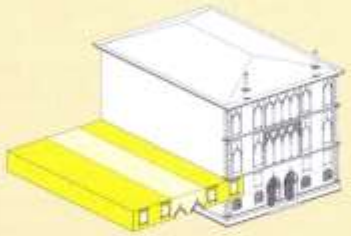
By virtue of their education, these people cannot be compared to the late medieval *famigli* (servants) living under the same roof as the *padrone* (master). This new professional group felt the need to assert its independence, also physical, from state offices or the firm where they worked. They also had the means to afford such autonomy. As they gradually began to form a social class, a new type of residential construction was developed, one that no longer needed to be multifunctional like the old Venetian houses (and in their own way, also artisans' joint workplace/houses). This new building typology was exclusively residential and had a repetitive design, as the prospective tenants had no specific need for self-representation. Not until a later phase – beginning in the 17th century – would this civil construction take on some of the attributes of traditional Venetian palaces.

The haphazard status that such buildings underwent over the course of the centuries – also as a result of divisions in ownership – makes it impossible today to understand how widespread the construction of "middle-class" housing was in 17th- and 18th-century Venice. What is certain, however, is that these buildings came to fill all the buildable land, playing a large part in creating Venice's dense urban fabric and the image of the city we see today.

Something close to three-quarters of the volume of the buildings constructed in Venice during the time of the Republic were devoted to residences for three social classes: proletarian, bourgeois, patrician. Since the numerical ratio of these classes was normally 4% patricians (that is, governing class), 10% bourgeois (of which many connected with the bureaucracy) and the remaining 86% were proletarian, we can conclude that perhaps 75% of the great volume of Venetian residences consisted of houses inhabited by the lower class.

Egle Trincanato, 1971

INSERTING THE MEZZANINES



Until the end of the 14th century, the arches and multi-light windows of the piani nobili stood above a basement five or six metres high, which had few other openings (high up from the ground) apart from the house's front door. These ground floors were particularly high because they were used to stock the goods Venetians traded.

By the 16th century this was no longer the case. In the early 1500s, the height of these storage floors was halved to add an additional floor. This transformation was the result of shrinking trade activities and the return of capital, which Venetians had invested in trade for generations. Instead of trading, they decided to manage their wealth, placing it in financial markets. They sacrificed the height of their storerooms (which appeared as large, closed volumes on the façade) to add new rooms for offices (due to their location in the mezzanines, "offices" were called *mezzà* in Venice for at least three centuries).

Mauro Codussi was perhaps the first to grasp the social change that had occurred. In his projects for Palazzo Loredan (now Vendramin-Calergi) and Palazzo Zorzi in San Severo he not only supported but designed the mezzanine, thereby introducing a new architectural solution to the city.

Formalised by Codussi's projects, the mezzanine began to appear on the façades of Venetian palaces, both new and older Gothic. As high ground floors were split across two levels, the arched windows that had once provided ventilation for the stock room were lowered and replaced by the mezzanine's new square windows.

Included in all Renaissance buildings, mezzanines would finally be "theorised" by Serlio in Book Four of his treatise, where he suggests proportions for each floor of a *fabbrica* "according to Venetian custom", including the mezzanine level for offices.

[Codussi constructs in Palazzo Zorzi] the virtual image of a structure arranged according to symmetries and frameworks that the building does not in fact have.

Giorgio Bellavitis, 1977

DESIGNED MEZZANINE

Palazzo Zorzi

RETROFITTED MEZZANINE

Palazzo Loredan degli Ambasciatori, Palazzo Franchetti-Cavalli

ASSEMBLED POPULATION OF VENICE

265,940
DAILY POPULATION
DURING PEAK FESTIVITIES

VISITORS DURING
PEAK FESTIVITIES
+120,000

145,940
DAILY POPULATION

EXCURSIONISTS 32,195

TOURISTS 14,760

98,985

ILLEGAL WORKERS* 2,500

COMMUTERS (WORK) 14,295

COMMUTERS (STUDY) 6,360

SECOND HOME 4,730

STUDENTS 5,415

RESIDENTS 67,690

166,955 VISITORS (V)

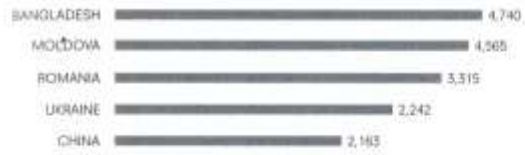
23,150 COMMUTERS (C)

75,835 RESIDENTS (R)

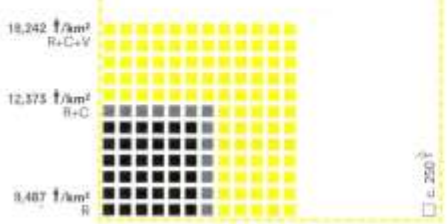
Top 10 countries of tourists to Venice
Yearly number of visitors, 2007

> COSES, Turismo sostenibile a Venezia, Report 141.0, March 2009.
> Wolfgang Scheppe & the IUAV Class on Politics of Representation, MIGROPOLIS, Hatje Cantz 2009.

Top 5 countries of immigrants to Venice
ISTAT Report, 31 December 2010.



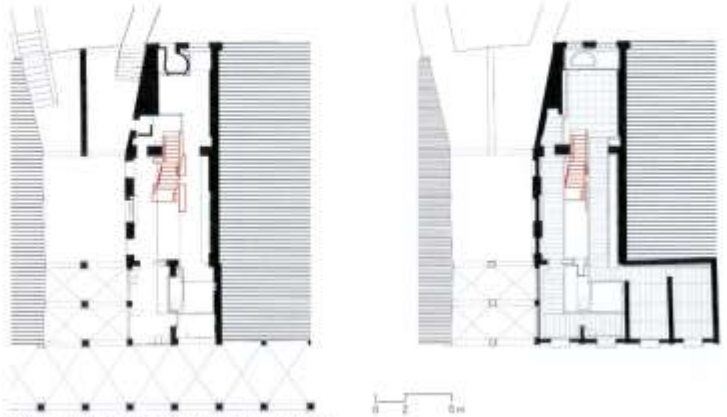
33,242 ☨/KM²
POPULATION DENSITY OF VENICE
DURING PEAK FESTIVITIES



THE APOTHEOSIS OF THE STEP

Adriano Olivetti commissioned Carlo Scarpa to design the Olivetti showroom in Venice in 1957, after the architect had won the Olivetti Architecture Award. The showroom is the only significant example of 20th-century architecture in St Mark's Square. An outstanding feature of Scarpa's sophisticated design is the staircase that connects the ground floor to the mezzanine above. The size, shape, and quality of the marble make the stairs more of a free-standing sculpture than a functional element. The staircase is designed as a succession of Aurisina marble slabs, finely carved and floating high above one another. Each rounded step is slightly different in both length (emphasising a neo-plastic effect) and depth. The first of these steps is significantly deeper than the rest, almost a "temple moonstone", suggesting that Scarpa was influenced by Michelangelo's plans for the Biblioteca Laurenziana staircase.

The lesson learnt from Carlo Scarpa was that in order to build a staircase within a complex framework like Venice, where building layout does not easily accommodate internal stairs, the best solution is to design the staircase not as an architectural element, but as an independent form, as a sculpture.



Olivetti showroom, Carlo Scarpa, 1958. Ground floor plan (left) and mezzanine floor plan (right).

Olivetti showroom, Carlo Scarpa, 1958 (section).

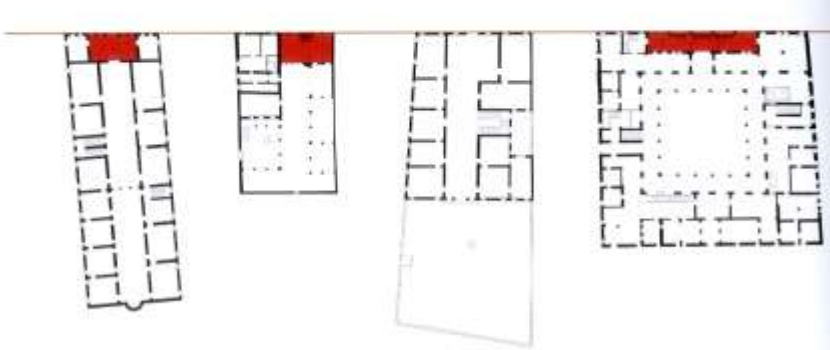
Study for staircase and architectural profiles, Michelangelo Buonarroti, 16th century.

Olivetti showroom, Carlo Scarpa, 1958.

WATER GATES

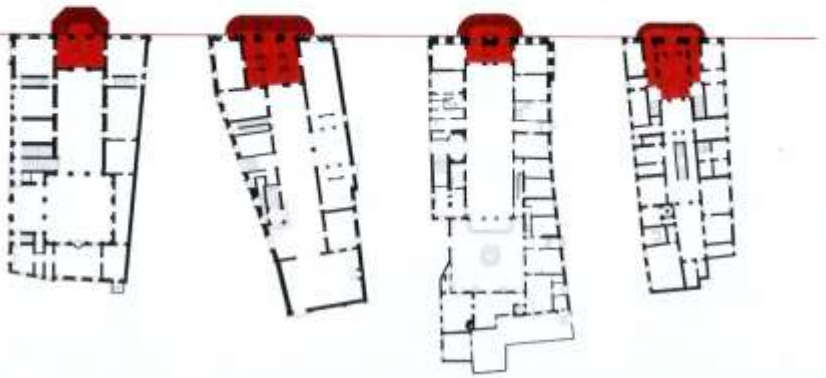
FROM PORTICO TO ATRIUM

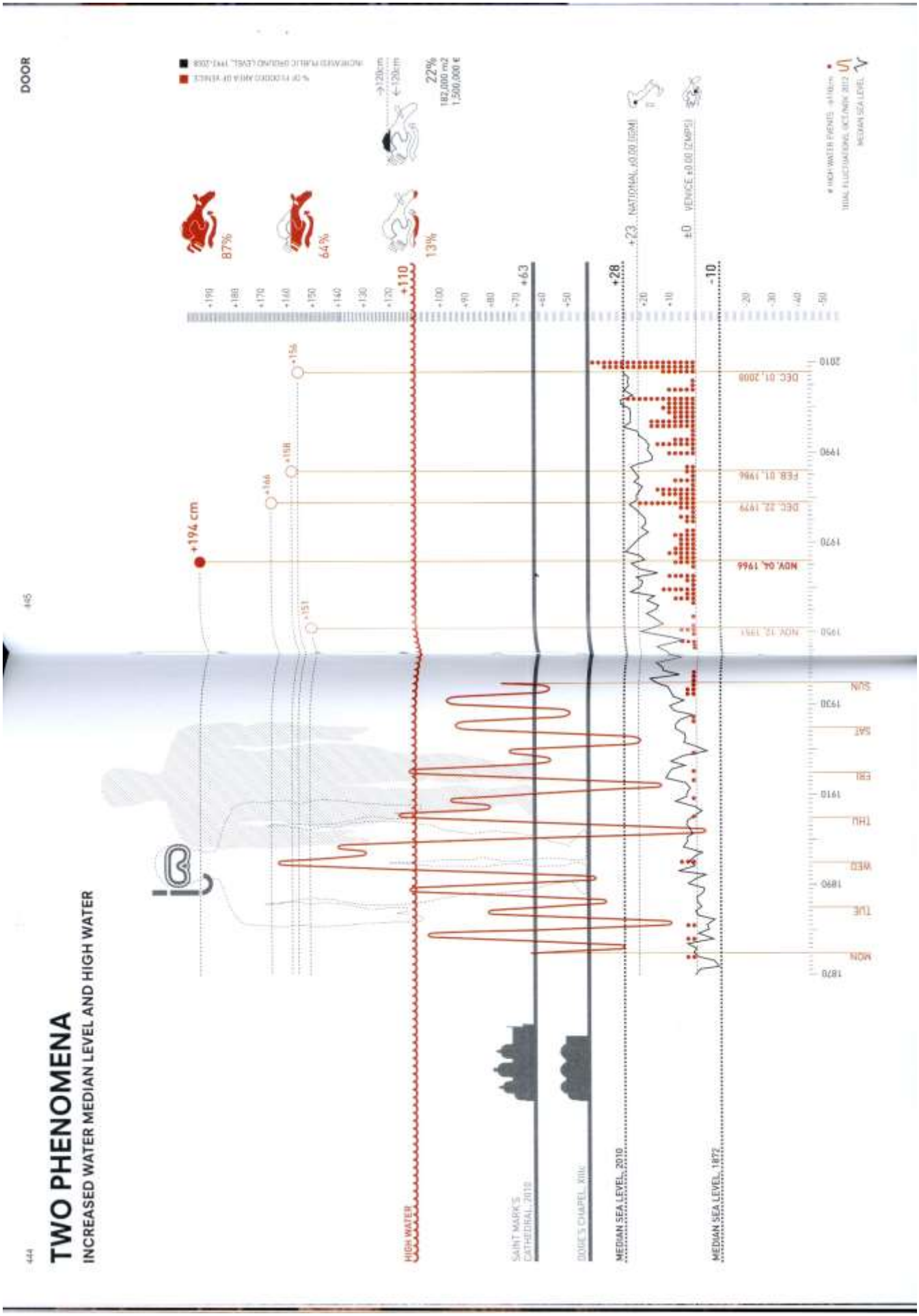
Doors began in Venice as a *porta d'acqua*, a water gate. A door marked not only the threshold between inside and outside – the fundamental role of any front entrance door – but also the separation between land and water, acting as a dividing line between the solid element and the liquid of the sea that connected the Serenissima to the maritime emporiums of her *Dominio da Mar*. In order to fulfil this double role both as door and "harbour" (a place to unload goods and negotiate transactions), older Venetian houses were accessed through a portico parallel to the façade. It is difficult to pinpoint precisely when this custom ended, scaling back the water entrance from an independent architectural element to a simple opening through the 14th to 15th century wall. Some have suggested this change was a consequence of the enemy Genoese fleet penetrating into the Lagoon in 1365. What is certain is that by the 15th century only a single, and exceptional *casa* – the so called Ca' d'Oro – replicated the ancient Romano-Byzantine style of the portico parallel to the façade, while all other contemporary *case di stazio* had one, or at most two water gates. The portico type was abandoned for another century before being reconsidered seriously at the beginning of the cinquecento by Fra Giocondo, the first neoclassical architecture "specialist" officially employed by the Republic.



From left to right: Plans (below) and façades of Ca' Loredan, Ca' d'Oro, Ca' Foscari, Fontego dei Tedeschi.
In the opposite page: Ca' Corner, Palazzo Grimani, Ca' Pesaro and Ca' Corner della Regina.

A "man of proven humanist culture", he presented a design for the area of Rialto featuring a classical-style portico he had built on the façade of the Fondaco dei Tedeschi, later described by Francesco Sansovino as "lacerating and therefore unacceptable." Fra Giocondo replaced the 13th century *banchina d'attracco* (dock) of the 14th century structure built on the model of the "Islamic funduqhan" with a portico. Here German merchants would process their goods through customs, and were obliged to live in the building above (Ennio Concina, 1996). Once the portico's functional structure as port infrastructure became outdated, the portico type was formally and definitively reinvented by Jacopo Sansovino, in 1532, at Palazzo Corner in San Maurizio. Sansovino shortened the portico, its three arches corresponding to the width of the *androne* on the piano nobile. The arches' counterpart is the modulated arcade in the "Roman" square courtyard Sansovino first introduced to the Lagoon. One should not be confused by the formal resemblance of the arches framing the entry door at Palazzo Grimani at San Luca (designed by Michele Sanmicheli in 1556) or again at Ca' Corner della Regina (designed by Domenico Rossi in 1724). Although the archways open out to the canal in front, as in Sansovino and Fra Giocondo's palaces the enclosed spaces corresponding to the archways introduce a new type to the Lagoon: the atrium.



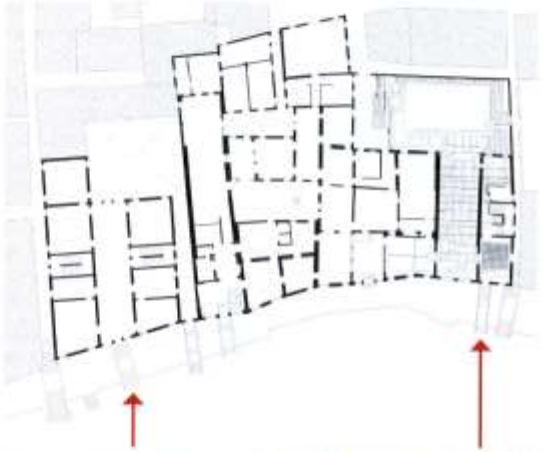

DOOR
TWO PHENOMENA
INCREASED WATER MEDIAN LEVEL AND HIGH WATER
444
445
87%
64%
13%
22%
182,000 m2
1,500,000 €
+194 cm
+156
+158
+166
+151
+110
+63
+28
-10
+23 NATIONAL ±0.00 (IGM)
±0 VENICE ±0.00 (ZMPS)
DEC. 01, 2008
FEB. 01, 1986
DEC. 22, 1979
NOV. 04, 1966
NOV. 12, 1951
2010
1990
1970
1950
1930
1910
1890
1870
SUN
SAT
FRI
THU
WED
TUE
MON
HIGH WATER
SAINT MARK'S CATHEDRAL, 2018
DOGE'S CHAPEL, XIII
MEDIAN SEA LEVEL, 2010
MEDIAN SEA LEVEL, 1872

197

DOUBLE ENTRANCE

At the end of the 15th century, some of the houses facing a *calle*, with a *fondamenta* on the other side, have a bridge included to give the façade a land entrance in addition to the water gate. The phenomenon is documented well in Jacopo de Barbari's engraving and became widespread in Venice at the time. This is not as distinguishable today after the many *calli* that were land-filled in the 19th century (of which the area marking the northern end of Campo San Polo is a famous example). Several instances of the efficient juxtaposition of a land and one or more water gates survive. Aside from the doors at Palazzo Cappello Trevisan, whose proto-Renaissance façade on the rio della Canonica is impressive, the buildings facing the eastern side of Campo Santa Maria Formosa are also noteworthy. Palazzo Malipiero Trevisan is a 16th century building erected on older 14th century foundations. Its door and the bridge leading to it rest on a symmetrical axis, aligned with the *quadrifora*'s load-bearing beam, and flanked by two water gates, further emphasising the palazzo's symmetry. Carlo Scarpa would add a wooden bridge to the only palazzo that did not have an old one on this side of Campo di Santa Maria Formosa. Once again, with this project for the headquarters of the Fondazione Querini Stampalia, Scarpa proves his ability to use modern parameters to work with themes rooted strongly in the past.

< Palazzo Cappello Trevisan.



Palazzo Malipiero Trevisan.

Querini Stampalia Foundation.

482 Querini Stampalia Foundation → XIX Olivetti showroom → XX

CUT-OUTS AND A RECLINING DOOR

Carlo Scarpa is the figure who demonstrated the most original thinking in the last century in Venice, even on the matter of doors. He understood that, in certain cases, the very presence of a door is unwelcome because it denotes the existence of a passage, of a connection that does not need to be marked. Both on the side of the Olivetti showroom, and the ground floor of the Fondazone Querini Stampalia, Scarpa eliminated the perception of the door as a threshold. When required, he used a rolling panel made from the same material as the surface on which it was placed. (In both cases, these stone doors are perhaps a memory, or a transfiguration of the great stone doors closing the southern opening of the ancient cathedral on Torcello.) In another case, Carlo Scarpa refused to raise up an ancient and precious portal that IUAV University had purchased to be installed in order to give the Tolentini convent a monumental entrance. The convent had been closed by Napoleon's orders in 1810 and turned into the Faculty of Architecture in 1960 with a project by Daniele Calabi. Perhaps Scarpa left the portal in situ, because he discovered the myriad fascinations of a door lying on the ground, defenceless, revealing its white Istrian stone. (Is it a grave? Are these the bones of a bison calcified by the sun over desert sand?) Instead of a door, Scarpa placed a barrier with the words : *verum IpsUm fActVm*. The inclined plane under which one passes is made of cement poured over a glass panel, and is perfectly smooth on its underside. When needed, a sliding element blocks the threshold.

Querini Stampalia ground floor doors, 1961–63.

Olivetti showroom side entrance door, 1958.

483 University IUAV → XV

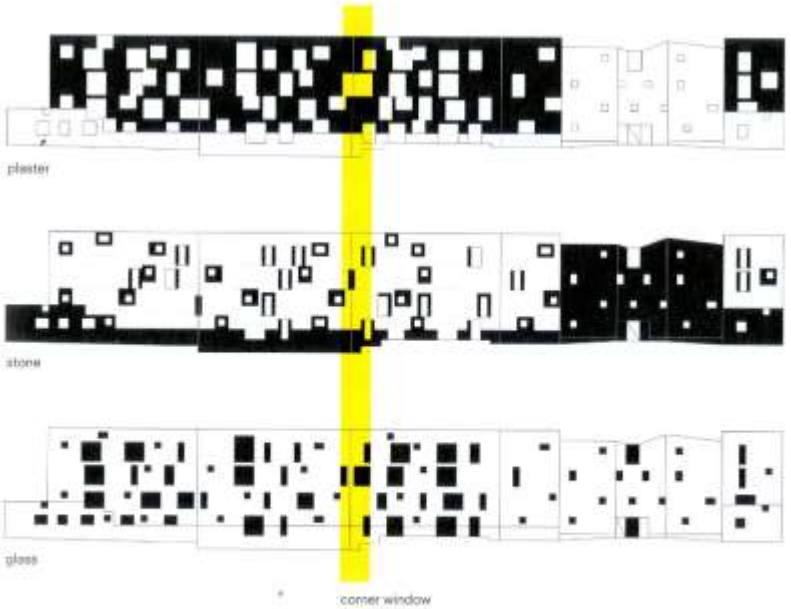
Two doors at the IUAV, 1985

Junghans Building D → XXVIII

That a contrary approach was possible, i.e. that of experimenting with the corner of a building to produce lighter forms, was well known to Venetians thanks to the breathtaking examples of the corners of the Doge's Palace and the final sections of the narthex of Saint Mark's. It is therefore not surprising that sometimes two windows, orthogonal to each other, appear at the outer edges of the façades of some Venetian houses, meeting in a column that rises up in isolation to the top of the building's corner. Venice's most striking corner window is that of the Palazzo Priuli, in part because of the height at which it is positioned. Its most curious corner window is in the so-called Casa del Cammello, near the Church of the Madonna dell'Orto, in which an ancient Roman altar is used as a corner column on the lower level. Although replicated in a limited number of cases, the construction of corner windows in Venice was a solution that was in many ways compatible with architectural practice in the Lagoon. Doors and windows were usually placed as close as possible to the outer walls of a building in order to encourage the settling process normally experienced by houses built on marshy ground. This meant that whenever a house stood independently and windows could also be positioned on its sides, the windows placed at the corner of the house were close to one another. The motif of the corner column had a prophet, so to speak, in Jacopo Bellini, who depicted it many times in his

Residential building, ex Junghans Area D photograph (above), and untold of the façade (right), Cino Zucchi, 1997–2002

drawings, and an unexpected modern champion in Frank Lloyd Wright. The American architect revisited the theme, giving it his own innovative twist in his design for the Fondazione Masieri in which, at the two corners of the building facing the Grand Canal, he placed a "lantern", an angular window, in which he also included neon lights.
The theme of the corner window was recently taken up in one of the buildings designed by the Milanese architect Cino Zucchi for Giudecca between 1997 and 2002. It is located in the disused industrial area of the former Junghans factory, which produced over 1,500 clocks a day in the 1920s, and employed over 4,000 people to manufacture military fuses during the Second World War. Building D is a residential building that retains only the smoke stack of the utilitarian construction it replaced.
To quote the words of the architect himself: "The cubic mass of the building was dug out towards the south with a trapezoid courtyard of white *marmorino*, an intimate space that leads from the public area to the entrance. Although the materials and techniques employed were entirely traditional, the details of their use made a historically accurate replica impossible. The traditional Istrian stone cornice that borders the windows of Venetian vernacular architecture was transformed into a 'graphic' motif by working on the various depths of the windows in relation to the various systems of darkening."



201

Ankündigung und Ankommen
Announcement and Arrival

Eine Ankündigung ist ein Versprechen. Sie nimmt etwas vorweg, das erst später eingelöst werden muss. Das Versprechen kann verbaler wie visueller Art sein. Vor allem kann es durch geschickt gewählte Aus- und Einblicke Kommendes andeutend sehen lassen.
Die Ankündigung ist daher nicht nur als Verweis relevant. Der ankündigende Text selbst besitzt seine eigene Machart und eigene sinnen- wie bedeutungshafte Schichten. Architektonische Aus- und Einblicke sind «sui generis» von unmittelbarer bildhafter sowie räumlicher Eindrücklichkeit.
Ähnliches gilt für den Ereignisverlauf des Ankommens: Im Rezitieren der Texte ebenso wie im tatsächlichen Durchschreiten der Raumsequenzen liegt die jeweils eigene unverwechselbare Präsenz des sprachlichen, visuellen oder auch räumlichen Objekts.

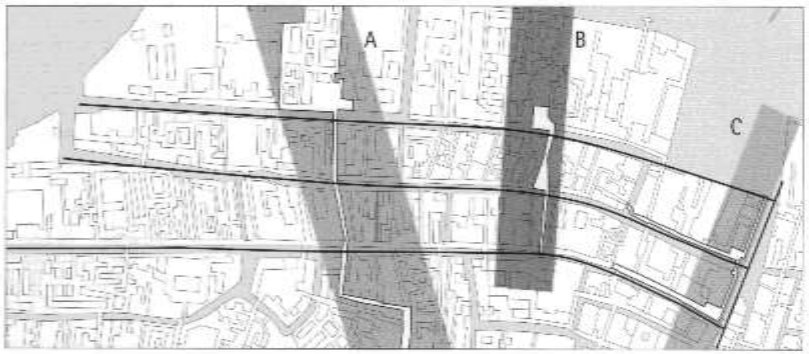
Die Kirche der Madonna de l'Orto macht durch eine enge Kanalrinne – den Rio Braso – hindurch bereits von weitem auf sich aufmerksam. Bildhaft deutet die Fassade ihre Funktion, Bedeutung und körperhafte wie geistige Präsenz an. Für die Ankündigung und das Ankommen gilt aber auch hier: Zwischen Betrachterstandpunkt und Kirchenfassade sowie innerhalb der einzelnen Teilbereiche der zur Kirche führenden Gassen- und Platzsequenz entstehen Raumeinheiten von besonderer Einprägsamkeit. Ankündigung und allmähliches Ankommen bieten relevante und konkrete räumliche Erfahrungen bereits vor dem Eintritt in die am einen Ende des Campo de la Madonna de l'Orto gelegenen Kirche, auf welche hin die Raumsequenz Fondamenta dei Mori, Campo dei Mori, Calle dei Mori, Fondamenta de la Madonna de l'Orto ausgerichtet ist. Umgekehrt besitzt die erwähnte Raumfolge dort einen End- und Anfangspunkt.

An announcement is a promise of something to be fulfilled later on. The promise can be verbal or visual. Above all, it can give us an idea of what is to come through cleverly chosen vistas and views.
The announcement is thus not only important as a reference. The subtext of the announcement itself has a composition and layers of meaning all its own. Architectural vistas and views are by nature pictorial as well as spatial.
The same is true for the arrival process: the unmistakable presence of the linguistic, visual or even the spatial object lies in the "recitation" of the text and in the act of passing through the spatial sequences.

The Rio Braso, a narrow canal, offers a glimpse of the church of Madonna de l'Orto from afar. The facade vividly intimates the function, significance and physical as well as spiritual presence of the church. Here, too, announcement and arrival are notable for distinct spatial units, which develop between the observer's standpoint and the church facade and also within individual subsections along the sequence of lanes and squares that lead up to the church. Announcement and gradual arrival deliver relevant and concrete spatial experiences before we ever enter into the church of Madonna de l'Orto located on the far side of the Campo de la Madonna de l'Orto. Composed of the Fondamenta dei Mori, the Campo dei Mori, the Calle dei Mori and the Fondamenta de la Madonna de l'Orto, the entire spatial sequence is oriented towards this square. In the reverse direction, the same spatial sequence begins and ends at this point.

Die breiten Kanäle des Sestiere (Stadtteiles) di Cannaregio und die in Längsstreifen gegliederte, dichte Bebauung werden von engen Gassen und Kanälen durchfurcht, die den Blick und den Weg in die Häusermasse hinein gestatten. Dadurch ergibt sich ein Rhythmus, der aus dem Wechsel von dichter Bebauung und großzügig weiter Kanalfläche lebt. Der Enge folgt die Weite und umgekehrt (1).
Man denke an den Campo San Alvise, von dem aus ein Wegenetz mit variierenden Ein- und Ausschlüssen bis an die Lagune im Norden führt (A), oder an jene Wegfolge, die vom östlichen Ende der Fondamenta de la Misericordia zum Campo de l'Abbazia reicht (vgl. «Der Saum») (C). An dieser Stelle geht es um die vom Campo dei Mori zum Campo de la Madonna de l'Orto führende Raumfolge (B).

Near the wide canals of the *Sestiere* (urban district) di Cannaregio, the dense development, arranged in long strips, is crisscrossed by narrow lanes and canals that provide views and access into the mass of buildings. This creates a rhythm, which comes alive in the alternation between dense development and wide, open canal area. Narrowness is followed by expanse and vice versa (1).
One need only think of the Campo Sant'Alvise, from which a network of lanes with varying in- and exclusions leads all the way to the lagoon in the north (A), or of the sequential route, which reaches from the eastern end of the Fondamenta de la Misericordia to the Campo de l'Abbazia (cf. "The Hem") (C). Here, our attention is focussed on the spatial sequence between the Campo dei Mori and the Campo de la Madonna de l'Orto (B).



1

Es ergeben sich Durchblicke, die ein Dahinter erahnen lassen, Ankündigung dessen, was jenseits der aufragenden Häuserfronten geschieht. Die Schaufassade von Madonna de l'Orto und der davor liegende kleine Platz nutzen die entstehende Dramatik. Durch eine schmale Gasse hindurch lässt sich der Campanile der Kirche ein erstes Mal bis hin zum Rio de la Sensa sehen (2). Von diesem ersten «Blickkontakt» bis zum Eintreffen auf dem Platz erscheinen die zu durchlaufenden Raumbereiche und -figuren als die hintereinander gereihten Abschnitte einer Inszenierung, die von der anfänglichen Ankündigung bis zur abschließenden Ankunft «folgerichtig» weiterentwickelt wird.

Sudden vistas let us image what lies behind, an announcement of the activity beyond the tall house fronts. The theatrical facade of Madonna de l'Orto and the small square in front of it make full use of the drama this creates. Through a narrow lane we can catch a first glimpse of the *campanile* of the church from as far away as the Rio de la Sensa (2). Between this first "eye contact" and the arrival on the square, the spatial areas and constellations *en route* seem like consecutive scenes in a drama, whose denouement unfolds "logically" from the announcement at the outset to the arrival at the end.

1. Abschnitt: Ankündigung
Immer wieder schneiden Kanäle und Gassen schmale Kerben in die Bebauung. An einer Stelle jedoch – dem Rio Braso – bietet der Durchblick eine Überraschung: Am anderen Ende des Kanals erhebt sich die Schaufassade der Kirche der Madonna de l'Orto (3, 4). Die Gebäudefluchten des Rio Braso dienen ihr als Rahmen, wodurch die Bedeutung der Kirchenfront bildhaft – im Sinne der erwähnten Ankündigung – übersteigert wird. Wesenhaft damit verbunden ist der Eindruck von physischer Nähe und gleichzeitiger Distanz.

1. Section: Announcement
Canals and lanes repeatedly carve narrow grooves into the development. But at one site – the Rio Braso – the view has a surprise in store: the theatrical facade of the church of Madonna de l'Orto (3, 4) rising towards the sky at the far end of the canal. The building lines along the Rio Braso create a frame that graphically – in the sense of the aforementioned announcement – exaggerates the significance of the church front. The impression of physical proximity and simultaneous distance is an intrinsic element of the setting.


3


3


4

5

6

7

2. Abschnitt: Der Trichter

Der Campo de la Madonna de l'Orto ist entlang der Blickachse nicht unmittelbar zu Fuß zu erreichen. Man muss Umwege machen. Die angekündigte Kirchenfassade gerät daher wieder aus dem Blick, wird aber entlang des nahezu geraden und gleichförmigen Verlaufes des Rio de la Sensa in der Erinnerung mitgenommen. Wenige Schritte weiter wird die lineare Bewegung längs des Kanals jedoch erneut unterbrochen. Trichterförmig öffnet sich der Campo dei Mori zum Wasser hin, wodurch eine nahezu dreieckige Freifläche entsteht, die wie ein Keil zwischen die aufgespreizten Häuserblöcke getrieben ist (5-8). Die Weite der offenen Kanalfläche schiebt an dieser Stelle eine Kerbe zwischen die feste Masse der Gebäude, welche die Richtung quer zu den Kanal- und Bebauungsstreifen aufnimmt. Der Fußgänger wird von den sich öffnenden Armen aufgenommen und in die Tiefe des Spaltes geführt.

3. Abschnitt: Führung

Der keilförmige Platzbereich verengt sich an der hinteren Spitze zu einer schmalen schnurgeraden Gasse. Der Sog hinein in den Trichter wird dort erneut zu einer linearen Vorwärtsbewegung gebündelt. Am anderen, hellen Ende lässt sich bereits der Austritt in den nächsten Kanalbereich – den Rio de la Madonna de l'Orto – erahnen (9-12).

8

2. Section: The funnel

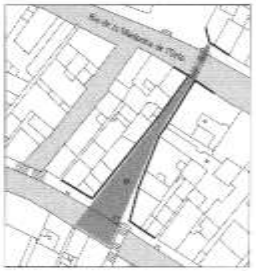
The Campo de la Madonna de l'Orto cannot be reached on foot by following the sight line. We have to take some detours. Thus we lose sight of the announced church facade, although we carry its image along in our memory as we follow the nearly straight, even course of the Rio de la Sensa. A few steps further, the linear movement next to the canal is interrupted yet again. The Campo dei Mori opens onto the water like a funnel, creating an almost triangular open area, pushed between the diverging blocks of houses like a wedge (5-8). At this point the expanse of the open canal area carves a groove into the solid mass of buildings, intersecting the direction of the canal and the strips of buildings. The pedestrian finds himself drawn into the welcoming arms and guided into the depth of the crevasse.

10

11

3. Section: Guided path

The wedge-shaped area of the campo diminishes at the far end into a narrow, arrow-straight lane. The pull exerted by the funnel is once again focussed in a linear forward movement. The exit into the next canal area – the Rio de la Madonna de l'Orto – can be glimpsed at the bright far end (9-12).

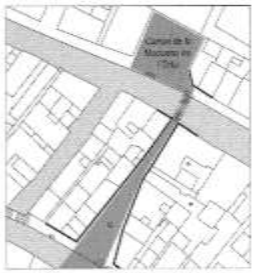


9

12

13

14



15

4. Abschnitt: Übertritt

Der Spalt entlässt den Betrachter nahezu unvermittelt in die weite Helle des Kanalbereiches, der jetzt quer zur eingenommenen Bewegungsrichtung verläuft. Überhöht wird der Austritt aus der Enge der Gasse durch ein paar Stufen, die hoch auf eine Brücke führen, welche die Bewegung durch die schmale Gasse noch über den Kanal hinaus fortsetzt, um dort etwas seitlich des Kirchenvorplatzes von Madonna de l'Orto zu landen. Die zuvor erzeugte Enge löst sich im Hinaufschreiten auf die Brücke. Das Leichte und Weite der sich öffnenden Kanalfläche lässt sich durch die Aufwärtsbewegung aus der engen Häuserschlucht «in den Himmel» gleichsam körperlich nachvollziehen.

Gleichzeitig öffnet sich zur Linken endlich der längst angekündete Campo de la Madonna de l'Orto. Dahinter strebt die Kirchenfassade in die Höhe. Der Übertritt auf das andere Ufer wahrt aber noch die Distanz. Noch ist man nicht in den Dominanzbereich der Kirche eingetreten. Auf der Brücke tritt man ihr zunächst in leicht erhöhter Position gegenüber (13-15).

5. Abschnitt: Ankunft

Die hoch aufstrebende Vertikalität und die ausgeprägte Symmetrie der Kirchenfassade beherrschen den Campo de la Madonna de l'Orto. Vor dem Eingangsportal entsteht daher eine durch den Bodenbelag des Platzes unterstützte imaginäre Achse orthogonal zur Wasserrinne, welche der zuvor eingenommenen Bewegungsrichtung quer zu den Kanal- und Bebauungsstreifen entspricht (16). Der erste Blick von weitem – die Ankündigung –, die Bewegung in die Tiefe des Trichters und die schmale Führung des Spaltes finden ihren folgerichtigen Abschluss schließlich in dieser aus dem Mittelschiff der Kirche auf den Platz hinauslaufenden Bewegungsachse. Zum Kanal vor dem Campo zurückgekehrt, bricht diese zwar ab (17). An den Flanken des Platzes jedoch wird ihre Bewegung von dem zuvor durchquerten Trichterhals und dem anfangs bereits wichtigen Rio Braso aufgenommen, deren Anordnung links und rechts der Mittelachse die Symmetrie der Anlage zusätzlich steigern (18).

4. Section: Passage

From the crevasse, the pedestrian steps suddenly into the open brightness of the canal area, which crosses the direction of the path at this point. We exit from the narrow lane onto steps that lead high up onto a bridge, which acts as a continuation of the narrow lane across the canal and lands just to the side of the forecourt of the church of Madonna de l'Orto. The narrowness of the lane dissolves as we mount the bridge. One can, so to speak, physically experience the lightness and breadth of the opening canal area through the ascending movement from the narrow gorge between houses "into the sky".

Simultaneously the long-announced Campo de la Madonna de l'Orto opens to the left. The church facade soars up to the rear. But the passage to the other shore maintains a measure of distance. We still have not fully entered the domain of the church. On the bridge we face it first from a slightly elevated position (13-15).

5. Section: Arrival

The soaring verticality and pronounced symmetry of the church facade dominate the Campo de la Madonna de l'Orto. In front of the entrance portal an imaginary axis is created, and emphasized by the paving on the square. This axis runs at a right angle to the canal, corresponding to the previous direction of movement, which also crossed the canal and building strips (16). The first glimpse from afar – the announcement – the movement into the depth of the funnel and the narrow route through the crevasse finally reach their logical conclusion in this axis of movement, which is in perfect alignment with the central aisle of the church. But the axis comes to a sudden halt at the canal in front of the compo (17). On the flanks of the square, however, this movement suggested by the axis is picked up by the neck of the funnel and the Rio Braso, which played such an important role at the outset; these two elements enhance the symmetry of the configuration through their position to the left and right of the central axis (18).

16

17

18

Campo de l'Abbazia
Campo de la Misericordia

206

Rio di Noale
Fondamenta de l'Abbazia
Campo de l'Abbazia
Fondazione de la Misericordia
Campo de la Misericordia
Rio de la Misericordia
Fondamenta de la Misericordia
Sacca Fisola
Rio de la Senza
M 1:1000

Der Saum
The Hem

Ein Saum ist eine Einfassung oder Umrandung. Er schützt das Kleidungsstück vor dem Ausfransen und bewahrt damit dessen Kontur. Die Einfassung kann schmucklos gearbeitet sein. Als Umfassung von Edelsteinen und wertvollen Stoffen wird sie oftmals selbst zu einem Ornament.
In jedem Fall aber begleitet der Saum den äußeren Rand des einzufassenden Stückes. Vor- und Rücksprünge, Ein- und Ausschlüsse werden von ihm nachgefahren und dadurch akzentuiert. Der Saum erzählt daher immer auch etwas über das Gesäumte, dessen Kontur er ist.

Wie der Saum eines Kleidungsstückes so folgt auch die Bewegung entlang der breiten Kanäle des Sestiere (Stadtteiles) di Cannaregio der Kontur der lang gezogenen Baufelder und begleitet als Einfassung schließlich noch deren äußere Ränder, an denen eine schmale «Borte» vom Campo de la Misericordia zum Campo de l'Abbazia reicht. Durch den Saum werden die Raumfolgen um die beiden Campi zu einer szenischen Einheit zusammengeschlossen. Die am Ort möglichen Bewegungsweisen hängen daher unmittelbar von der Beschaffenheit des Saumes und des davon Gesäumten ab.

A hem is a kind of border or surround. It prevents clothing from fraying and maintains the shape. The border may be realized in plain fashion. When it surrounds precious stones and fine fabrics it often becomes an ornament itself.
In each instance, the hem accompanies the outer edge of the piece it surrounds. It describes all projections and recesses, inclusions and exclusions, accentuating them in the process. Therefore, the hem invariably tells a story about the object it surrounds and whose contour it forms.

Like a clothing hem, the movements along the wide canals of the *Sestiere* (or urban quarter) di Cannareggio also follows the contour of the elongated zones; bordering their outer edges, which are accompanied by a narrow "trim" that stretches from the Campo de la Misericordia to the Campo de l'Abbazia. The hem combines the two campi and the spaces that surround them into one scenic unit. The movements within and across these spaces are thus directly influenced by the nature of the hem and the elements it surrounds.

Die breiten Kanalrinnen des Sestiere di Cannaregio laufen auf der Höhe des Campo de l'Abbazia (B) und des Campo de la Misericordia (A) in noch breitere, quer zu ihrer Richtung verlaufende Becken aus (1). Auf ihrer nördlichen Seite werden diese Kanäle nahezu ohne Unterbrechung von gepflasterten Wegen, den Fondamenta, gesäumt. Diese laufen wie lange, abgespulte Fäden an den Häuserwänden entlang. Erst bei den beiden genannten Plätzen biegen dann auch die Fondamenta orthogonal ab, um die begleitenden Hausfassaden saumartig zu umfassen und anschließend am parallel liegenden Kanal erneut als lange lineare Saumstreifen in die Tiefe des Sestiere di Cannaregio zurückzulaufen. Dazwischen erhebt sich das hoch aufragende Gebäude der Fondazione de la Misericordia, das durch seine riesenhafte Ausdehnung den Aufenthalt sowohl auf den beiden Campi als auch entlang des saumartigen Umganges prägt (2; das hell markierte Gebäude).

The broad channels of the Sestiere di Cannaregio debouch into even wider basins, set at right angles to the canals where they reach the Campo de l'Abbazia (B) and the Campo de la Misericordia (A). The northern shores of these canals are almost continuously accompanied by paved public quays, the *fondamenta*. These run along the buildings like long, unravelling ribbons. At the junction with the two squares mentioned above, the *fondamenta* turn around a bend to border the facades; as soon as they have "circumnavigated" the facades, however, they pick up their linear progress along the canals, receding into the depth of the Sestiere di Cannaregio. Soaring into the sky, the imposing scale of the Fondazione de la Misericordia sets the tone for the atmosphere on both *campi* and along the hem-like path (2; the building marked in light colour).

1

1. Steg

Eine gleichmäßige, nahezu gerade Bewegung führt die Fondamenta de la Misericordia entlang, die wie ein Streifen einfassenden Saumes an den Gebäudewänden liegt. Durch das regelmäßige Vorwärtsschreiten wiederholt das Gehen das lineare Fortlaufen des Kanales, der Häuserfassaden und des begleitenden Steges. Das Links-rechts der ausgreifenden Beine ähnelt dabei der Stichfolge der Saumnaht, die den gefassten Stoff allseitig umgibt (3).

1. Footpath

A constant movement in a straight line stretches along the Fondamenta de la Misericordia that follows the house fronts like a strip of trim. As we stroll along this strip, our steps pick up on the linear course of the canal, the facades and the accompanying footpath. The rhythmical left/right of our steps resembles the stitch pattern in a hem that surrounds the fabric on all sides (3).

2. Erweiterung

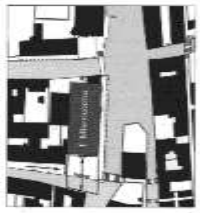
Vor dem riesenhaften Volumen der Fondazione de la Misericordia weitet sich der Saum der Fondamenta zu einem kleinen Vorplatz, dem Campo de la Misericordia (2, 4). Das Eintreten auf den Campo ist durch drei quer über den Weg gelegte Stufen gekennzeichnet. Die Erweiterung aber lässt sich kaum spüren, da das nur knappe Wegklappen der Hauswand zur Linken überlagert wird durch die enorme Fassadenhöhe der Fondazione, deren »Verlangen« nach Raum die kleine Platzerweiterung längst nicht genügt.

Dennoch zögert der Schritt des Passanten ein wenig beim Erreichen des Campo, da quer zur Bewegungsrichtung eine Raumachse, vom gewaltigen Volumen der Fondazione ausgehend, über die Fondamenta hinweg bis auf den Kanal und sogar noch bis zu den Gebäuden auf der anderen Seite reicht.

2. Expansion

In front of the massive volume of the Fondazione de la Misericordia, the hem widens into a small forecourt, the Campo de la Misericordia (2, 4). The entrance to the *campo* is marked by three steps that cross the path at this point. Yet the expansion is barely noticeable because the narrow recess of the facade to the left is overpowered by the soaring height of the Fondazione, whose greedy "demand" for space is insufficiently met by the modest expansion into a small square.

Still, our steps falter slightly upon reaching the *campo*: the path we are following is crossed by a spatial axis that begins at the massive volume of the Fondazione and reaches across the Fondamenta down to the canal and all the way to the buildings on the opposite side.



2

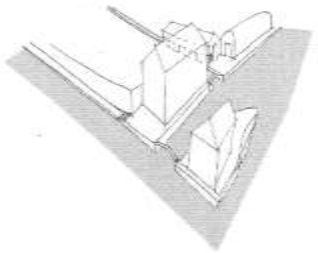
3

4

5

3. Darum-Herum

Gleichzeitig wird das aufgrund seiner Höhe nahezu freistehende Volumen der Fondazione als eigenständiger Körper begriffen, dessen äußere Kontur – wie die zuvor den Weg begleitenden Hauswände beim Betreten des Campo – ebenfalls nach links zurücktritt. Um die entstehende Ecke herum legen sich zwangsläufig der weite freie Raum über den Kanalbecken sowie die Fondamenta, welche saumartig um den alles beherrschenden Körper der Fondazione herumgeführt ist. Zwar könnte man die Fondamenta geradeaus über eine Brücke verlassen. Der Saum aber fordert den Weg um den Körper herum (5-7).



6

4. Innen und außen

Die östliche Längsseite der Fondazione de la Misericordia bildet zugleich die Stirnseite des zwischen dem Rio de la Misericordia und dem Rio de la Sensa liegenden Baufeldes. Dort spannt der Raum«schatten» (vgl. «Die Situationen») der riesigen Fassadenfläche ein Raumvolumen auf, das weit in den Bereich der Wasserfläche hinaus reicht (8, 9). Durch die schiere Höhe der Fondazione wirkt die umlaufende Fondamenta auf dieser Seite wie ein schmaler, etwas über der Wasseroberfläche aufgekanteter Steg, der als dünner Saum zweierlei Eigenschaften besitzt:

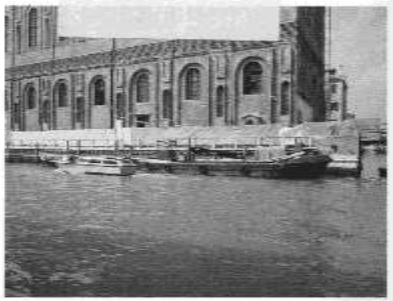
Zum einen «schnürt» er das Volumen der Fondazione fest an das dahinter ankommende Baufeld und verhindert somit dessen «Wegtreiben». Wie geduckt geht man an diesem äußersten Rand um das Gebäude herum (5, 6).

Zugleich aber liegt der «Steg» am inneren Rand des über die Kanalfläche ausgreifenden Freiraumes. Der Gang über den Saum entlang der riesigen Seitenwand ist daher ebenso ein Gang «über» das Wasser (10). Die Hauswand wird dabei zur Rückwand dieses über «Steg» und Wasserfläche ausgreifenden Volumens. Dem Vorbeigehenden ist sie Hintergrund oder Projektionsfläche, vor welcher die erzeugten Raumfiguren, über die Wasserfläche hinweg, zur Wirkung kommen (8).

7

3. Round-about

Nearly free-standing because of its height, the Fondazione reads like an autonomous volume, whose contour recedes on the left side, like the walls along the entry to the campo. The open space over the canals and *fondamenta* that surrounds the dominant volume of the Fondazione are per force wrapped around the resulting corner. One could leave the fondamenta by following a straight line across a bridge. But the hem inspires us to follow the path around the volume (5-7).



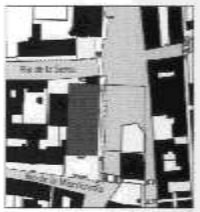
8

4. Inside and outside

The longitudinal east side of the Fondazione de la Misericordia is simultaneously the face side of the block between the Rio de la Misericordia and the Rio de la Sensa . At this point the spatial "shadow" (cf. " The Situations") cast by the enormous facade surface opens up a spatial volume that reaches far into the canal area (8, 9). The sheer height of the Fondazione makes the fondamenta on this side appear like a narrow, up-ended footpath, distinguished by two characteristics:

It "ties" the volume of the Fondazione to the buildings behind it, thereby preventing the large building from "floating free". We feel as if we should duck as we walk around the extreme corner of the building (5, 6).

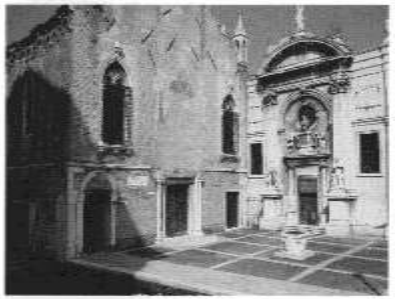
But the "footpath" also lies just inside of the open-space that yawns above the canal. The walk along the hem next to this monumental side becomes a walk "across" the water (10). The wall provides the backing to the volume that encompasses "footpath" and water surface. To the passer-by, it operates as background or projection screen on which the spatial figures across the water can be fully experienced (8).



9

10

11



12

13

5. Drehen

Am Ende des «Steges» tritt die Außenwand erneut nach links zurück. Ebenso zweigt der Kanal an dieser Stelle in den Rio de la Sensa ab, um zwischen zwei Baufeldern hindurch fortzulaufen. Der «Steg» aber wird von einer Brücke abgelöst, die dort anhebt, wo die «Projektionsfläche» endet und der von ihr beherrschte Freiraum um die Gebäudekante schwenkt (11, 15).

Wieder aber dominiert die riesige Fassadenfläche der Fondazione den Kanalraum sowie das gegenüberliegende Ufer. Wie als Reaktion auf diese imaginäre Last ist dort daher die vorderste Ecke des Gebäudestreifens nach «innen» zurückgewichen, wodurch ein kleiner Platz, der Campo de l'Abbazia, entsteht (11, 12).

Über die Brücke hinweg weist der Schritt weiter geradeaus. Das Umbiegen der Gebäudekanten, des Raumvolumens und der Kanalfläche, das Hochsteigen auf die Brücke sowie das von dort mögliche Überschauen der freien Fläche des Campo verlangsamen das Gehen, negieren die Dominanz seiner bisherigen Richtung. Entsprechend verlässt der Schritt die weiterhin mögliche Gerade und dreht sich in den kleinen, nahezu quadratischen Platz. Dessen Form und Bodenbelag sowie die ungefähre Übereinstimmung der beiden Fassaden in Größe und Bedeutung, wodurch keine vorherrschende Achse entsteht, nehmen dem Schritt für einen Moment Richtung und Geschwindigkeit (12, 13, 15).

6. Takt

Durch einen loggienartigen Durchgang entlang des Rio de la Sensa kann der Platz wieder verlassen werden (14). Die Stützenreihe sowie das Hell/dunkel des über den Weg laufenden und die Hauswand hinaufkletternden Spieles von Licht und Schlagscharten takten die wieder aufgenommene gleichförmige Vorwärtsbewegung und steigern dadurch das regelmäßige Alternieren, das Links-rechts, der ausgreifenden Beine (16). In einer gleichmäßigen linearen Bewegung entlang der Fondamenta de l'Abbazia läuft die Bewegung des wieder schmaleren Saumstreifens in die Tiefe des Sestiere di Cannaregio hinein aus (15).

Die beschriebene Bewegungsrichtung ist nicht zwingend. Mit leichten Akzentverschiebungen kann die Raumfolge auch umgekehrt auf entsprechende Weise durchschritten und erlebt werden.

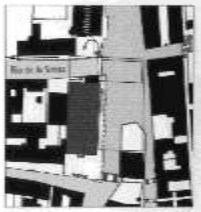
5. Turning

At the end of the "footpath," the outer wall recedes yet again, recessed to the left. The canal, too, turns at this point and joins the Rio de la Sensa, continuing on its course between two blocks. The "footpath" is replaced by a bridge that lifts off where the "projection screen" ends; the open space it dominates disappears around the corner of the building (11, 15).

Once again the enormous facade of the Fondazione dominates the canal space and the opposite shore. As if in response to this imaginary load, the foremost corner of the row yields "inward", creating a small square, the Campo de l'Abbazia (11, 12).

The path takes us straight ahead, across the bridge. As we follow the turns around corners, the spatial volume and the canal surface, mount the bridge and look out across the open space of the campo, we instinctively slow down. These factors counteract the hitherto dominant direction. Instead of following the proffered straight line, we are drawn into the small, nearly square campo. Momentarily, the shape and paving of the square, the roughly equivalent scale and impact of the two facades (and thus the absence of any dominant axis) diminish our pace and sense of direction (12, 13, 15).

14



15

6. Beat

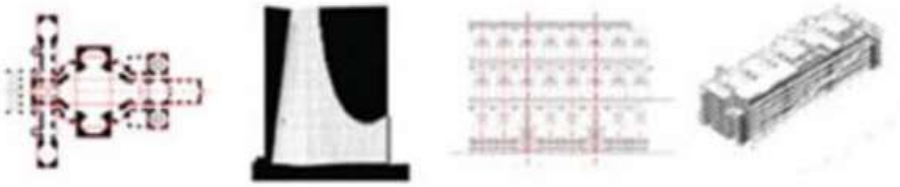
We leave the area through a loggia-like passage and follow the Rio de la Sensa (14). The row of columns and the chiaroscuro of light and shadow on the path and up the wall provide the beat for the regained forward movement, increasing the even left/right rhythm as we step out (16). The movement along the hem, once again narrow, recedes on a straight course into the depth of the Sestiere di Cannaregio (15).

The direction described above is not compulsory. With minor differences in accents, the sequence of spaces can also be traversed and experienced in the opposite direction.

16

ARCHITECTURE PRINCIPIA

PRINCIPLES OF ARCHITECTURE



211

GAIL PETER BORDEN BRIAN DELFORD ANDREWS

212

The book is thematically organized as follows:

01 - Organization Systems
Beginning with the fundamental organization systems of the plan, the relationship of the practicalities of position, placement, and function interrelate to define over-arching principles of order and parti (the organizing diagram of an idea). This realm, governed mostly by geometry and the relative relationships of hierarchies in space, deals with the arrangements and the related social, functional, spatial, and conceptual intentions of a design agenda. Centralized systems (square, circle, Greek Cross, Latin Cross, and radial) deal with self-resolving geometries. Linear systems (single-loaded, double-loaded, and point-to-point) allow for the extrusion of a form. Grid systems (position, form, structure, and module) develop a multivalent system. Dispersed fields (including organized and disorganized systems) establish the interrelationship of discrete objects within a fabric. The free plan of modernity, through technological, material, and structural advancements, allows the elimination of the load-bearing wall, which enables the subdivision of space and fluidity of form to be dependent upon other considerations. Raumplan evolves the organization of spatial zones through the deployment of varied sectional relationships. Hybrid systems combine, splice, mix, juxtapose, and bastardize aspects of all of these organizational approaches.

02 - Precedent
From the focus on organization principles, the book moves towards an overt examination of precedent. Precedent involves the role of history and formal iteration based on referential tactics. Precedent analysis is examined through the lens of vernacular, cultural, and intellectual evolutions and their affect on the iterative production of form. Using a "lineage" methodology, the analysis picks strains of façades, plans, spatial types, and ultimately hybridized assemblies that cross-pollinate multiple precedents to produce a new precedent. The morphological examination allows for the cataloging of referential layers and the rationale for their adoption.

03 - Typology
Directly associated with the use of precedent is the development of typology. Typology deals with the classification of trends, based upon either form or function. It engages geometric typologies that include square, circle, oval, triangle, polygon, spiral, and star. In addition, functional or programmatic typologies include the temple / church, palace, house, museum, library, school, prison, theater, office / high rise, parking garage, and campus. The textual and visual trending of these strains allows for the iterative evolution to be documented and presented.

04 - Form
Form, as the most visually dominant figural shape of a building, is classified based on the primary driver of its derivation. These classifications are broad and varied. Platonic formalism relies upon the purity of geometric relationships. Functional formalism allows for the pragmatics of need and purpose of architecture to derive form. Contextual formalism relies upon surrounding physical and cultural factors to determine form. Typological formalism relies upon referential imagery of function, which is based on a response to historical practices. Performative, or technological, formalism depends upon systems and building construction knowledge to produce formal, environmental, and effectual response. Organizational formalism is dominated by the organization's system (discussed in Chapter 1) as derivational ideals that have universal compositional implications. Geometric formalism uses geometric rationale (traditional and descriptive as well as digitally advanced techniques) to predicate form. A related classification, symmetrical formalism, uses axial geometries to establish reflection lines to establish order. Hierarchical formalism deploys form to produce contrasting gradients that allow for relative readings within a system. Material formalism uses the material and tectonic to define form. Experiential formalism relies upon the perceptive nature of human interaction (that of the viewer or user) to define form. Sequential formalism, a subset of experiential formalism, deploys chronology of movement and perception to define form. Axial formalism, linked to sequential formalism, defines the hierarchy and perception through the privilege of line.

05 - Figure / Ground
Associated with the legibility of form is the dialectical balance of figure and field engaging the graphic and physical ramifications of the interrelationship of positive and negative. This chapter begins with the graphic reading of Nolli's map of Rome, which deploys the idea of poche as a thickened mass. The theme of poche is further examined through position (plan, section, and urban) and function (defense, monument, structure, service, and material).

06 - Context
Context is the relationship of the object to its surroundings. Its classifications include the natural condition; the local, cultural, and broader urban condition; historical context as a condition of cultural, time, and technology; material context as a physical and technological relationship with matter; and cultural context relating to social norms, interactions, and traditions.

07 - Geometry and Proportion
Geometry and proportion refers to the mathematical rules of idealized form. The interrelationship of these principles to architectural form establishes the proportional systems, which include both the two- and three-dimensional modules in elevation and plan, and their implications on space, construction, and perception. Included in the study of these systems are the advanced techniques of distorted geometries and computational complexities that allow for more dynamic spaces with more intricate ornamentation of a structure's skin.

08 - Symmetry
Symmetry focuses on the relationship of form to axis through axial, bi-axial, radial, asymmetrric (denial of the axis), local, material, and programmatic methods.

09 - Hierarchy
Hierarchy focuses on the ordered valuation of objects within a composition through formal, axial, visual / perceptual, scalar, monument, control, geometric, program / function, color, and material methods.

10 - Material
The theme of materiality examines the physicality of the matter with which we build through form (geometry / system / pattern / ornament), the relationship of surface, the engagement of material with tectonic, the perceptual nature of materials, the role of material relative to physics and structure, the engagement of the detail as a conceptual and material factor, the ecology of materials (origin and production), the function of material, and ultimately the meaning and association of materiality.

11 - Ornament
Ornament is the articulation and embellishment of material intended to lend grace and beauty to a building or structure. It has been defined as an element not belonging to the essential harmony or melody. It has been said that ornament is, in fact, all that separates architecture from building. This chapter divides ornament into a number of different types that include material (the physical way in which we make things and the ordering and composition of segmented construction); religious (the iconographic cultural reference of form); performative (the responsive nature of articulated materials toward a specific agenda); structural (the physics of forces and their engagement with functional verse ornamental); referential (creating a relationship to another premise or topic); organic (that tries to evoke specifically the natural condition); and historical (that directly relates to architecture or another identifiable form).

12 - Pattern
Pattern refers to the field effect of aggregated units accomplished through the method of repetition and rhythm, employing material elements such as shape, color, and composition. These variables may occur on varying scales of piece/unit, portion/panel, bay/module, or chunk.

13 - Sequence
The sequential nature of chronology, narrative, and experience of movement through space is engaged through the focused analysis of both horizontal and vertical movement, which include axial, ceremonial, experiential, organizational, and programmatic circulation.

215

14 - Perception

Perception is the most significant factor in the understanding of architecture and yet one of the most elusive and difficult to govern. The following factors are the primary categories relative to perception: light, color, visual focal point, perspectives (both real and false), material, sound, memory, and environment. Designers employ these factors and their impact on perception of composition to affect the user's experience and ultimately satisfy the programmatic requirements of the building or space. Examining the perceptual qualities of the body and the palette of manipulable factors that influence our five senses, the thematic investigation includes an examination of light, color, focal point, vantage or perspective (Constructed, False, and Multiple), material, sound, memory (history) and environment, and their impact on perception and composition.

15 - Meaning

This chapter focuses on the intellectual content and underpinning theoretical agenda of architectural movements, relative to broader themes and precedents, and their implications on form. An understanding of these movements is critical in comprehending how this book works. The movements discussed follow the primary architectural beliefs chronologically by era, covering classicism, Romanesque, Gothic, Renaissance, baroque, mannerism, neo-Gothic, industrialism, art nouveau, neo-classicism, arts and crafts, modernism, rationalism, brutalism, postmodernism, structuralism, post-structuralism, deconstructivism, hi-tech, regional modernism, pluralism, and globalism.

Layout and Key Features

The specific layout was carefully considered and graphically standardized to produce a consistent analytical lens that engages the diverse themes. In a spread, there is a series of descriptive devices that aid the reader in understanding the theme relative to a vein of thinking and a specific moment within architecture.

Each of the aforementioned chapters has an introductory essay that outlines the primary principles, conceptual evolution, and associated subthemes. Each two-page spread then pursues the illustration and unpacking of these subthemes through a comparative sequence of analytical case studies. Each spread is divided into four columns. The first is dedicated to a textual description followed by three chronologically organized case studies. Each case study is identified by a caption, the first line of which identifies the project name and architect. The second line contains the geographic location and a date of completion. For some urban projects, a larger time span was adopted so as not to minimize the scale and duration of the project. The third caption line then positions the project within the larger conceptual movement in which it was designed and built, followed by a condensed and primary description of the project relative to the theme, and finally the primary materials, illustrating both the level of technology and the associative physical-to-conceptual limitations. The brief description then tries to textually unpack the diagram and reference the significance of the case study relative to the broader principle. Certain case studies occur in multiple chapters of the book and have different visual and textual descriptions as the complexity of their thinking makes them applicable to diverse issues. An effort to use such case studies was intentional to illustrate the sophistication and multi-principled nature of architecture, which is rarely about a single system or reading.

AI and the Advanced Architectural Studios:

Within the past few years, developing weekly, architectural designers have been experimenting with AI (Artificial Intelligence) systems which dramatically truncate the distance between image and words, which result in architectural design proposals. Currently, AI systems provide a means to very quickly explore hundreds of design alternatives though scripting and image seeding. The almost instantaneous creation of images, often illustrated in context with super realism, challenge the designer to determine and select what is "good" from that which is "bad."

The evolving role of the architect is becoming one of "editor and judge." Whether the AI system inputs words or images, the result (renderings, animations, 3D models or technical drawings) requires a high degree of good judgement, knowledge and insightful instinct. The "quick and glossy" output of current AI systems can deceive, and over value the image or its uniqueness. At its core, AI systems redefine aspects of originality and creativity in architecture.

Conversely, various AI systems provide the opportunity to define architectural rules and attributes, and quickly see and test their merit. The "what if" capabilities of the design process has been greatly enhanced. Seeing how words and precedents may "instantly and interactively" derive and develop architectural concepts throughout the design process has obvious merit.

Excerpts from: RIBA AI Report 2024

Leveraging the ability of AI to augment, automate and analyze gives architects their time back – not just by increasing productivity, but by giving them the space to be more ambitious and to focus on creative solutions. When used correctly, AI can help architects analyses a myriad of design variations in a very short time, offering them new perspectives on how to achieve important project outcomes.

But, as we try to replace larger and larger chunks of the design process with machine-learning we encounter difficulties with its black boxed nature. We have become accustomed to digital technologies bringing greater legibility to process. Software should bring reliable functions with clear inputs and outputs. More crucially, when a building must reconcile both quantified and unquantified factors, the designer needs to be able to interrogate how different calculations are manifesting in an outcome

Yet AI and deep learning is a paradigm shift in how we relate to computation. It offers none of the algorithmic feedback we have become accustomed to. It is not written in code as operations or processes, but merely learns an emergent behavior from examples. We have to take on trust that its function will be the same next week as it was last week and that it has not been altered by a new context. There is no hard-coded function that explains its behaviour, just probability.

The expectations that AI is here to automate, to literally self-act, might suggest this technology can fit neatly into the computational world we have built over the past 50 years. Design has been transformed by and for software, with many discrete and quantifiable tasks that might be replaced. And yet, deep learning is a different kind of automation, acting in the world but without any function, without a parametric legibility. It does not easily replace or extend the established computational tools without undermining our ability to make complementary good creative judgments.

If architecture can engage with this technology as a form of machine-perception, one that perceives a site, a design and a process in novel and unexpected ways, architecture will have a new tool for the unquantifiable. It can extend and recalibrate the relationships and associations that are already out in cities and everyday life and serve as a constant source of reference for new buildings. This should ultimately place architecture at the center of the debate about how to use the technology, rather than just being another automated application.

The following lists some of the current AI systems that you may consider investigating as a *supplement* to the design process and specific assignments of the course.

217

The use of AI systems is optional and is not to replace the studio's methodology and associated concepts.

See the Google drive AI folder for tutorial videos.

https://www.arch2o.com/the-best-26-architecture-ai-tools-in-the-field/

Krea.ai	Maket.ai
Mnml.ai	Runway.ai
Veras.ai	Vary ai
Xkool	Testfit
Roomgpt	Finch3d
Midjourney	**Chatmind**
Runway	**Kaedim**
Stable Diffusion	Vitruvius.ai
Architectgpt	**Finch3d**
Luma.ai	**Rendair**
Promeai	**D5 hi**
Veras.ai	**Lookx.ai**
Adobe Firefly	Arko.ai
Bricscad.ai	Lookx.ai
Spacey.ai	TensorArt

Index:

218

Semester Schedule:

Tuesday	2 September		NJIT First Day of Classes	
Thursday	**5 September**	**Noon & 4:30 PM**	**Studio Meetings**	**Alumni Hall**
			Videos: Venice and Misercordia	
			Video: Elements of Venice	
Thursday	5 September	1:00 PM	Studio Project Quiz (“open book”)	
Monday	9 September		Last Day to Add or Drop a Class	
* **Monday**	**9 September**	***12:30 PM***	**Studio Meeting**	**Alumni Hall**
			Videos: Glassworks	
Thursday	12 September	Noon	Conceptual Design I Presentation Due	
Monday	**16 September**	**Noon**	**Studio Meeting**	**Alumni Hall**
			Presentation: Rhino + Grasshopper	
Monday	16 September		Last Day to Withdraw, 90% Refund	
Thursday	**19 September**	**Noon**	**Studio Meeting**	
			Videos: Dale Chihuly	
Thursday	**26 September**	**Noon**	**REVIEW 1: Conceptual Design I & II**	
* **Monday**	**30 September**	***12:30 PM***	**Studio Meeting**	**Alumni Hall**
			Videos: Carlo Scarpa	
Monday	30 September		Last Day to Full Withdraw, 50% Refund	
Monday	30 September	Noon	Architectural Regulations Notebook Upload Due	
Thursday	3 October	Noon	**Studio Meeting**	**Alumni Hall**
			Videos: Venice Aqua Alta & Traditional Construction	
Thursday	3 October	Noon	Exterior Elevation Notebook Upload Due	
Friday	**4 October**		**First Assessment (20 Points)**	
Thursday	10 October	Noon	Schematic Design Presentation Due	
Monday	14 October	Noon	**Studio Meeting**	**Alumni Hall**
			Presentation: Ladybug, Honeybee, Insight Energy Analysis	
Monday	14 October	Noon	Piazza & Landscape Notebook Upload Due	
Monday	21 October		Last Day to Full Withdraw, 25% Refund	
* **Monday**	**21 October**	**12:30 PM**	**Studio Meeting**	**Alumni Hall**
			Presentation: Ladybug, Honeybee, Insight Energy Analysis	
Monday	**28 October**	**Noon**	**REVIEW 2: Design Development**	
Thursday	31 October	Noon	**Studio Meeting**	**Alumni Hall**
			Presentation: Rhino Inside Revit	
Thursday	31 October	Noon	Materials and Systems Notebook Upload Due	
Friday	**1 November**		**Second Assessment (20 Points)**	

219

* **Monday**	**4 November**	***12:30 PM***	**Studio Meeting**	**Alumni Hall**
			Presentation: Rhino Inside Revit	
Thursday	7 November	Noon	Performance & Sustainability Upload Due	
Monday	11 November		Last Day to Full Withdraw from Classes, No Refund	
Thursday	**14 November**	**Noon**	**REVIEW 3: Technical Development**	
Monday Tuesday	**25 & 26 November**	**Noon**	**Pre-Final Review**	
Wednesday	27 November		Friday Classes Meet	
Thursday – Sunday	28 November – 1 December		Thanksgiving Recess	
* **Monday**	**2 December**	***12:30 PM***	**Studio Meeting**	**Alumni Hall**
			TBD	
Wednesday	**11 December**	**9:00 AM–6:00 PM**	**REVIEW 4: Final Presentation (40 Points)**	
			Each student's assigned presentation time will accommodate their attendance to all other scheduled required classes and Institute events.	
			The Final Presentation schedule for each studio section will include a one-hour lunch break.	
			Students are required to attend all Final Presentations of their fellow students in their course section, except during when they are required to attend other classes or Institute events.	
			All Final Presentations will include both a printed "poster" including all final presentation requirements, and also a large screen monitor display of a selection of enlarged images.	
Thurs – Friday	12-13 December		NJIT Reading Days	
Mon – Saturday	15 – 21 December		NJIT Final Exam Schedule	
Tuesday	**17 December**	**11:59 PM**	**Final Record on Studio Google Drive** (Upload completed)	
Thursday	**19 December**	**9:00 AM**	**Faculty Review of Final Record Submissions (20 Points)**	
Thursday	**19 December**	**11:59 PM**	**Final Record on Canvas / Kepler** (Upload completed)	
Sunday	**22 December**	**11:59 PM**	**Final Grade Submission to NJIT Pipeline and Advanced Studio Coordinator**	

220

Advanced Studio I Arch 495

Dincer Savaskan 15 019

Studio: Colton 343C

Cej	Carolina
Colon	Stephanie
Cortes	Christopher
Delpiu	Owen
Dy	Matthew
Freij	Oomnia
Galvez	Eddie
Havers	Ky
KutuAkoi	Jaynna
Luna Villanueva	Raphilla
Rizza	Jack
Secaida	Ecson
Shah	Teeshane
Urgles	Darwin
Verdejo	Gabriella

Duncan Reid 15 009

Studio: Colton 281A

Brown	Jessica
Carino	Thais
Conover	Azriel
DiMaggio	Matt
Ebeid	Abdel
Eckert	Riley
Hakeen	Kermeena
Hylton	Malaika
Jimenez	Giovanni
Lawton	Kimberly
Pirog	Joshua
Pumar Carrion	Roberto
Ramnanan	Timothy
Shalita	Liam
Yap	Kathryn

Marc Rosenbaum 14 005

Studio: Weston 255

Ahmed	Hasham
Blender	Rebecca
Bonfrancesco	Amanda
Eduardo	Silvester
Escott	Shoshama
Ferrovecchio	Mauro
Habashi	Mera
Loaizza Henao	Vallentina
Lyczko	Mateusz
Ochoa	Brandon
Patel	Diya
Riad	Youssef
Rios	Jamie
Sarmiento	Mejia

Maria Drozdov 14 013

Studio: Colton 281C

Acosta	Paola
Arjomandi	Ghaida
Jarnel	Jiannah
Karic	Armin
Khella	Martina
Lopes	Rui
Lorenzo	Jaileen
Lunis	Joshua
Malley	Michael
Patel	Vinali
Rojas	Alfredo
Shah	Disha
Syed	Aliza
Tai	Jen

Peter Dumbadze 15 011

Studio: Colton 281B

Al-Shujaire	Sedeel
Charitos	Theano
Hurtado	Camile
Irigoyen	Renato
Irwin	Andrew
Junco	Jonah
McCabe	Jeffrey
Metwaly	Sama
Miccicha	Savatore
Osorio	Roberto
Peralta	Annabell
Perea	Orlando
Tran	Ngan
Ulioa	Jason
Vitalos	Amelia

Sampath Pedirdla 15 015

Studio: Colton 343A

Abdalla	Carolyn
Abdelaziz	Yaseen
De Tenoria	Naomi
Domercant	Sebastein
Duvyur	Varnke
Elmarry	Lodie
Friel	Jonathan
Garcia-Mendoza	Danielia
Li	Johnny
Marroguin	Rene
Bottone	Julia
Patterson	Carley
Rodriguez	Steven
Sahu	Sudiksha
Tasman	Raunak

221

Vera Parlac **15** **007**

Studio: Weston 254

Beniamien	Martyrous
Benjamin	Anna
Bravo	Joshua
Bubb	Cameron
Hollesen	Erik
Kaddour	Eaman
Kosteska	Kristina
Mendez	Odalis
Mercado	Gabriel
Prudencio	Diaz
Johan	Sebastian
Sasidhar	Johnny
Skwara	Hubert
Soto Cuique	Sthesy
Whitehead	Mychaela
Wintermute	Shane

Victoria Diskina **14** **017**

Studio: Colton 343B

Anti	Kwane
Barrientos	Olvares
Baskaran	Mirthulla
Chimbo	Angee
Elsaba	Mariem
Fagan	Mark
Fajardo	Samuel
Faltas	Ivan
Laurenciana	Alissa
Nerreh	Sarah
Ortega	Vincent
Rey	Kyle
Suaza	Salvador
Villagomez	Adrian

Stephen Zdepski **14** **003**

Studio: Weston 256

Aduna	Fraiser
Barczmski	Samantha
Girgis	Daniel
Gutierrez	Alexcia
Herbert	Tyler
Hu	Tiffany
Lucas	Jordan
Morcos	Ramy
Perez	Jasmine
Roberts	Jenna
Rodriguez	Ariene
Swanson	Jacob
Trianh	Kathy
Vail	Cole

Advanced Studio I Arch 505G

Sunny Li

Studio: Weston 730

Studio Section Groups

Diskina	Pedirdla
Dumbadze	Drozov
Parlac	Li
Reid	Savaskan
Zdepski	Rosenbaum

222