

# [ case studies ]

San Marco - Firenze - Monastic Cells - Michelozzo

Sainte Marie de La Tourette - Lyon - Monastic Cells - Le Corbusier

Olympic Villiage - München - Student Housing - (Gunter Behnisch) Werner Wirsing

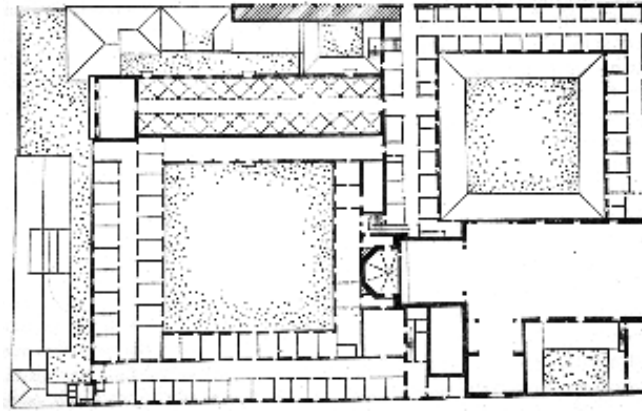
## San Marco - Firenze - Monastic Cells

The complex of San Marco in Firenze, Italy is comprised of many pieces. The cloister and housing wing in particular is that of Michelozzo's design. The idea that apartments could be inserted under a roof within a shell was a very unorthodox idea for its time and marks a significant development in modern space planning.

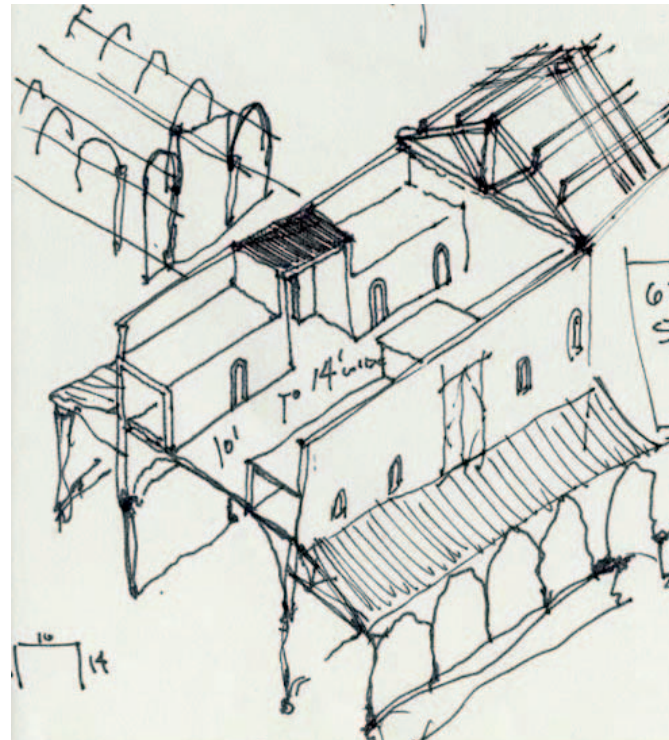
The ceilings for each of the cells are part of the rectangular volume and not open to the trusses above reinforcing the idea of the cell and its isolation from the world around it. The separation of layers also is a progressive move towards the modern idea of building systems and begins to clearly delineate the architectural masses and gives hierarchy to the materials and methods of construction in a visible and tactile presentation. This is an example of a space within a shell.

The exterior facade, thicker than the other walls, forms a skin that encloses the interior space while the cells fuse with the exterior membrane. This outer wall is typically the only source of natural light except for a few instances where the cells must gain natural light from within the hallway's modestly glazed areas between cell groupings. The introverted social aspects of this living arrangement are heightened by the fact that one has nearly no outside contact from within the cell except for the small opening to the outside.

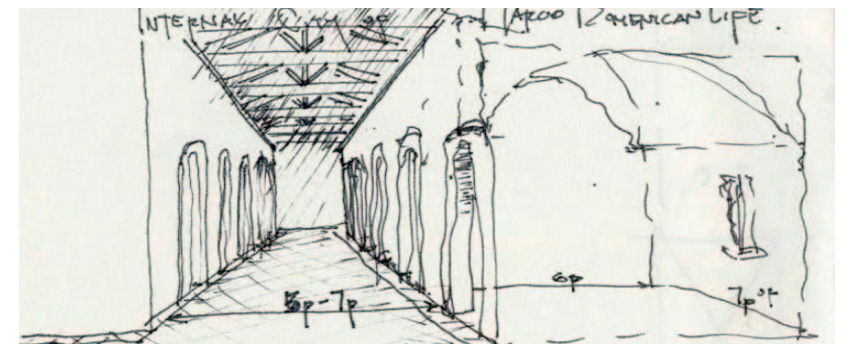
Most cells average around a 9 to 12 square meter area in its interior space with an ultimate volume height of around 3-1/2 meters. This space more than gracious enough for the monk lacks the specific architectural definition and therefore could be easily adapted to many other uses such as an office, bedroom, storage, or any number of uses.



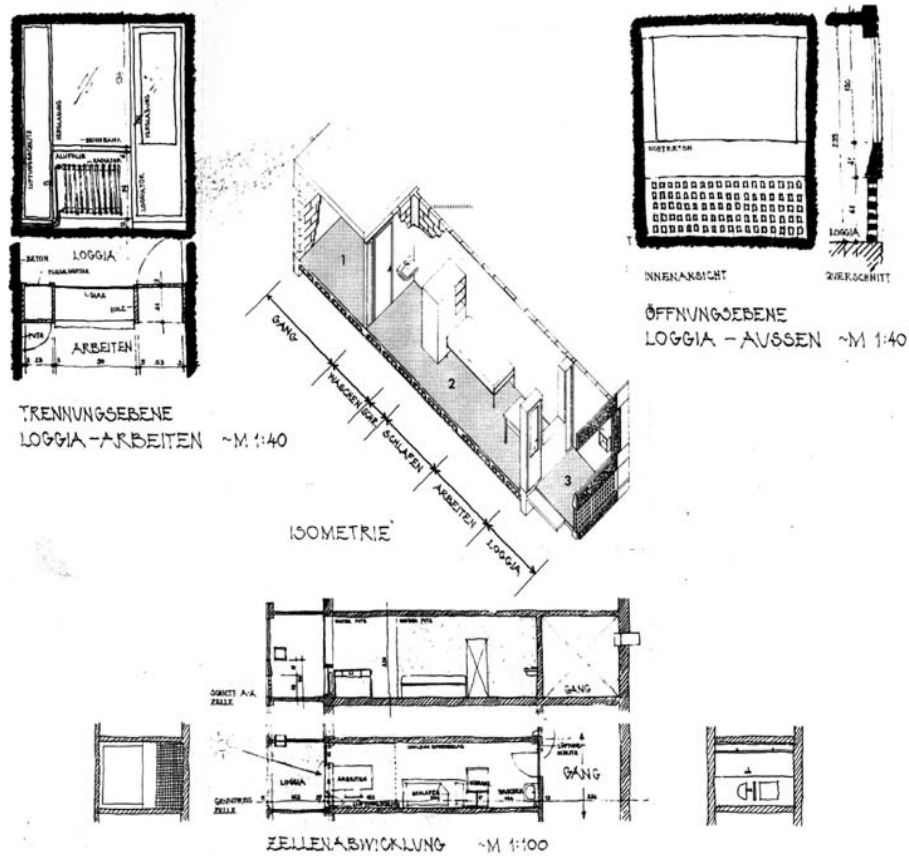
*plan of San Marco*



*inside apartments of San Marco*



## Sainte Marie de La Tourette - Lyon - Monastic Cells



*inside a cell at La Tourette*

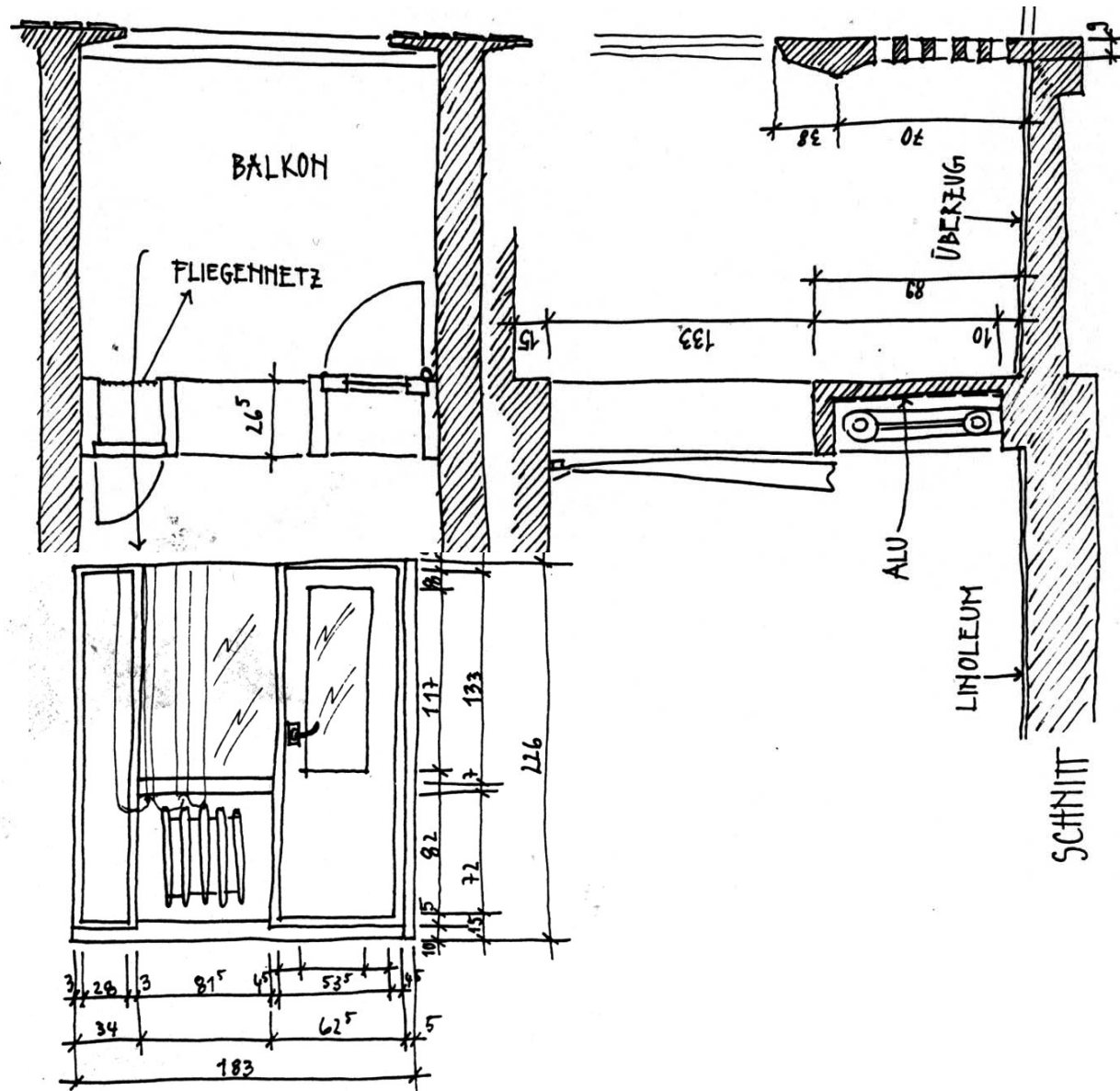
The geometry of the cell at La Tourette was largely based on Corbusier's Modulor of 2,26m in height and width in the circumstances of the cells for the fathers while the students and brothers in training received narrower cells also based on the Modulor measurement of 1,83m. The accommodations of all cells remained the same despite the spatial differences which included a bed, sink, integrated wardrobe-storage cabinet, lamp, desk and chair, balcony with glazed wall, door and natural ventilation louvers on both ends of the cell for cross ventilation. The balcony itself was enclosed by walls which separated the occupant from the neighboring cells and directed the focus of the occupant to the outside. Within the public realm, the headroom clearance is well above the 2,26m of the modular while the private spaces reduce down to the common denominator of 2,26m respectively. Another important change is the orientation of the person. Quite often the orientation of the public passages lie on the exterior perimeter of the convent while in the private wings, the passageways are shifted to the interior perimeter facing the inner courtyard of La Tourette.

The delineation of the spaces comes through spatial promenade transitions that are marked by material (or dematerialization), light (or lack thereof), and spatial transitional thresholds.

The wall and ceiling material within the cell is spray-applied concrete whitewashed. This changes past the entry space and becomes smooth plaster within the second part of the cell where the majority of time is spent in work and sleep. This resilient material was juxtaposed by the smooth warm wood of the integrated cabinet and doors. The cabinet divided the entry space with sink from the bed and working space that received natural light from the glazing wall that acted as a window for viewing the exterior environment also. Within the entry space of the cell the sink was mounted and frequently abused by the brothers as a makeshift urinal and thus leading to the eventual deterioration of the pipes evacuating the sinks contents into the main soil stack.

The deep balcony acted as a privacy element between cells and integrated brise soleil and thus reduced the effects of thermal gain inside the cell through the glazed wall.

The cells at La Tourette are based on monastic cells Le Corbusier visited on his travels through Tuscany, specifically at the Carthusian monastery of Certosa nearby Firenze.



looking out of cell at La Tourette



athlete/student housing

*'standardization ... the agreement of an established module by its relation to a kit of parts that go together'*

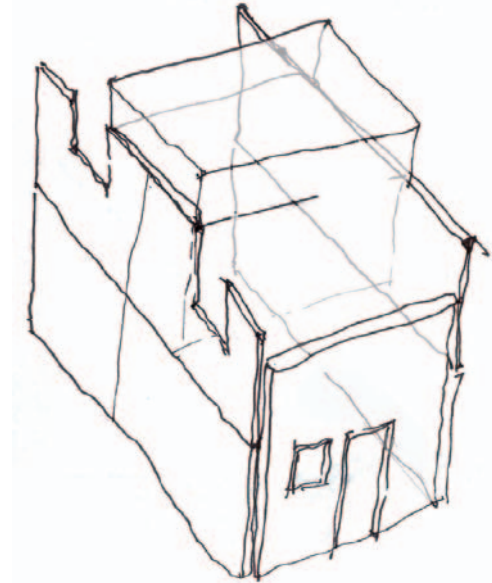
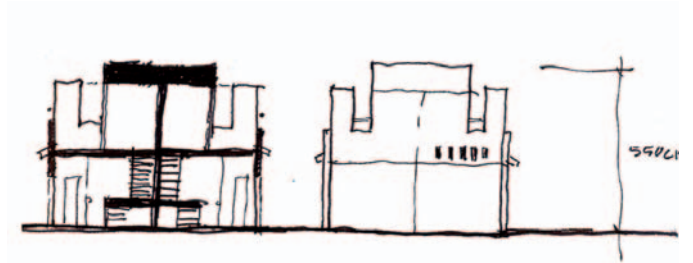
**- Charles Jencks, Le Corbusier and the Tragic View of Architecture**  
p79

## Olympic Villiage - München - Student Housing

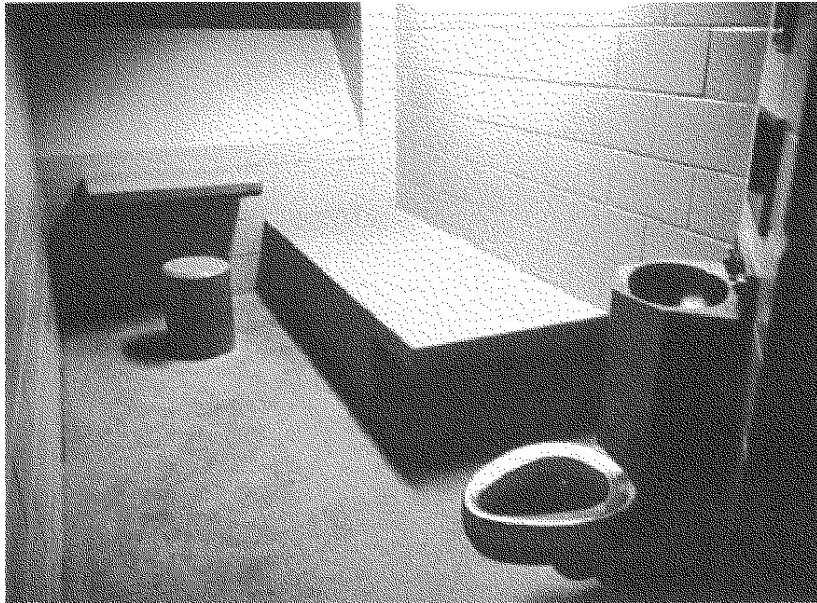
The lower Olympic village student housing consists of precast cells, for the athletes of the München 1972 Olympic Games originally designed by Werner Wirsing. These cells are now used by the university's students. These living units are two stories and contain complete prefabricated fiberglass bathrooms. Also provided are a kitchenette, closet, and balcony on the second floor. For one person, the accommodations are quite luxurious. In regards to the amount of space provided, it is slightly more spacious than the monastic cells at San Marco but with low headroom clearances and the stair that leads to the second floor eliminating usable floor area.

The construction of these units are of vertical and horizontal precast concrete slabs that could be repeated endlessly and thus a whole village was created economically and quickly with much of the work and fabrication performed off site. Standardized elements, prefabricated interior installations, and unit glazing system also contribute to the economy and speed of the cell's construction. The choice of material being precast concrete also assures that the durability and quality of the product is maintained for a long life cycle.

The idea of community is very strong in the sense that everyone can be a part of society apart from the privacy of their own cells. The idea of Le Corbusier's Villa Immeuble and Plan Voisin are employed here at a very small scale. The exception of the roof terraces being in such close proximity denies its total isolation from rest the society visually or otherwise.







## **OTHER CELL TYPES**

### **JAIL**

The jail cell being the most regulated in spatial allotment and least luxuriously furnished while aside from the necessity for showering providing the requirements for one to two people living within. While being very rigid in its design and functioning structure, its inhospitable and non-personalizing conditions have been incorporated as a design feature for its long term applicants.



### **DORMITORY**

The dormitory while not the most restrictive in its spatial allotment, is typically modest or uncontrolled in spatial definition with only the most functional necessities provided. Its often generic space promotes an uncontrolled personalization. Its time span of occupation can be from medium to long in duration depending on student aspirations.

### BOAT CABIN

The boat cabin is the traveling cell that, while sometimes luxuriously furnished, is very spatially condensed, yet it provides the required necessities for its occupants including full washroom facility. Its inability to provide occupant personalization is related directly to its short time of use. The boat cabin could be considered the pure cell in that, with every need so precisely provided, it still offers living options based on the occupant's needs and resources. The integration or removal of luxuries is directly related to the amount of money one wants to invest or save in the acquirement of the room. The elimination of the window or the upgrade to a balcony are examples of how the cell responds to the occupants needs and desires.



### MONASTIC CELL

The monastic cell, which provides for the brother's daily needs, is fully sustaining in that it allows minor personalization through the framework of the architecture, yet is furnished luxuriously enough to maintain the equilibrium of harmonized living within the confines of the cell. The time frame of occupation lasts for a long to indefinite period of time.

