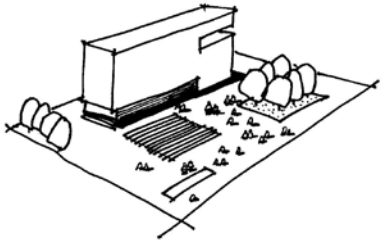
VSB Technical University of Ostrava
Faculty of Civil Engineering
Department of Architecture

FAQ by Students of Architecture

Sixty/Twenty-one most frequently asked questions
by students in the studios of architectural studies



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Reviewer: prof. akad. arch. Mikuláš Hulec

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Foreword

Very similar questions come up every year. They start emerging from the moment students in architecture studios start working on their projects, and then multiply in vocational discussions over proposed buildings, while organizing, drafting and revising architectural drawings.

There is no single possible outcome in architecture design which is determined beforehand, nor there is a single correct procedure. It is therefore logical (and also desirable) that student queries over projects arise. Before they start working in design studios, students acquire all the basic knowledge in lectures and via various assignments in order to be able to carry out designs. Initially, from time to time, these findings can appear to students to be boring.

When design work starts in architecture design studios, only then students realize that the knowledge acquired during lectures and assignments will be to a full extent utilized in their projects. In the course of this process, many new questions will come up...

During my practice as a professor I realized how similar students' questions are year after year and how often they are repeated. I have therefore

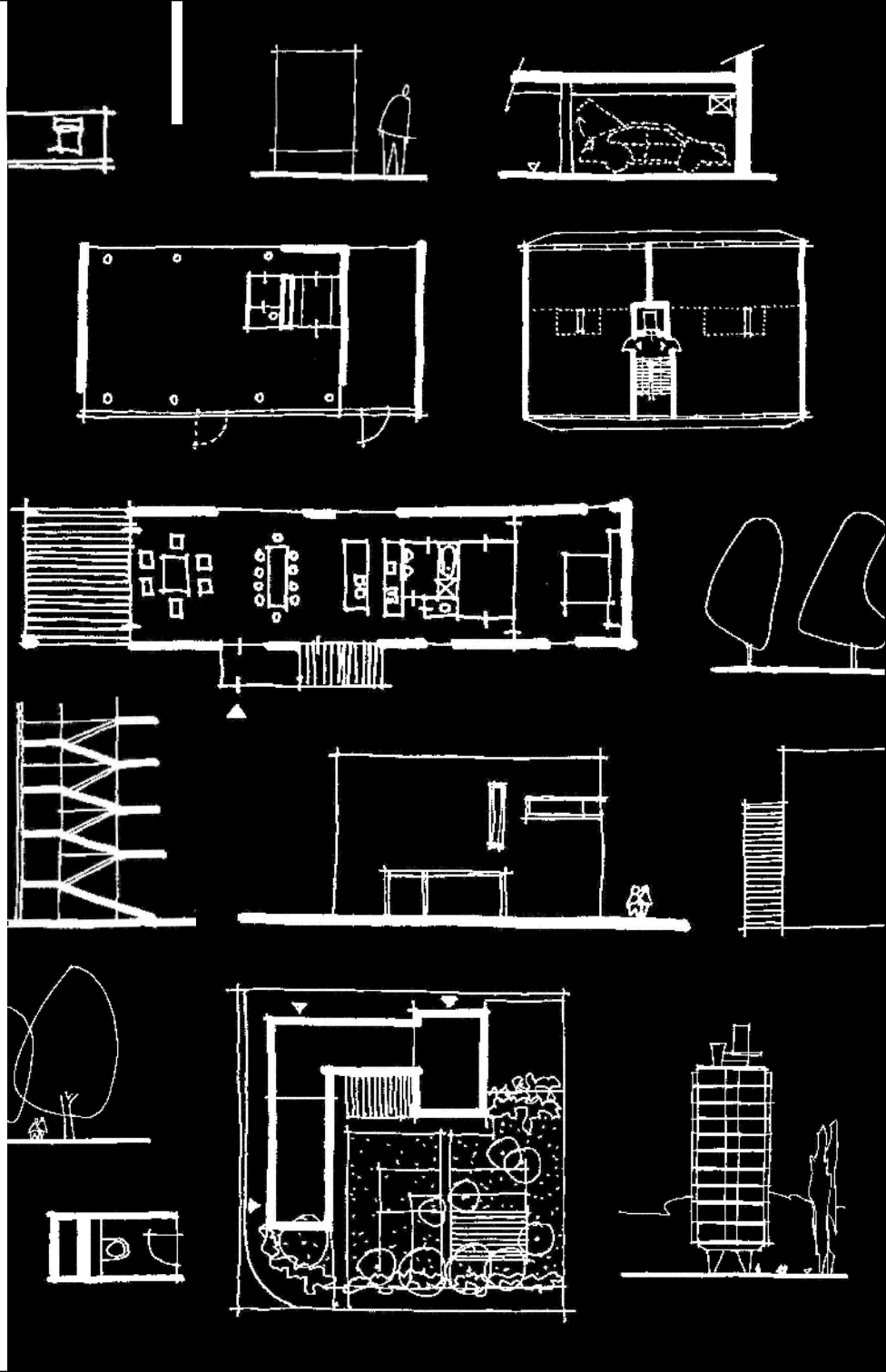
decided to write this small book, or better a handbook, which summarizes frequently asked questions and answers them using texts and images. My answers are plain and focused on the questions as much as possible. I offer most to-the-point explanations in the form of very short, concise texts and illustrative, simple drawings. I collected questions from students of bachelor's and master's degrees in architecture during the years 2009 to 2015. I selected 60 of the most frequently asked questions and kept their wording, including the professional slang.

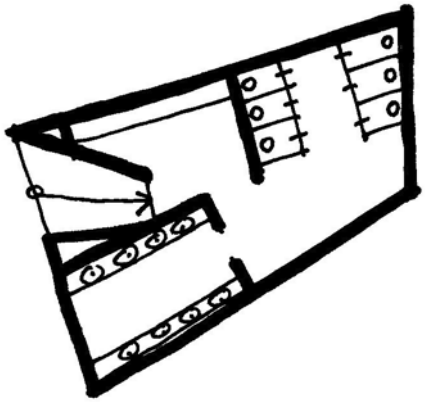
I believe this publication will make - for you students - your professional beginnings easier. However, do not expect to find exact instructions here. In the words of Portuguese architect Álvaro Siza: „Nowhere you can buy a proposed shape of a house." And I add – fortunately.

Architectural design is a creative process. Nowadays, while a majority of people tend to specialize narrowly in a particular area of their work, architects still use and integrate into their work a wide range of human knowledge – coming from the construction industry, fine arts, environment, energy sector technologies, ecology, sociology and many others.

I wish for you to enjoy architecture.

Jindřich Svatoš



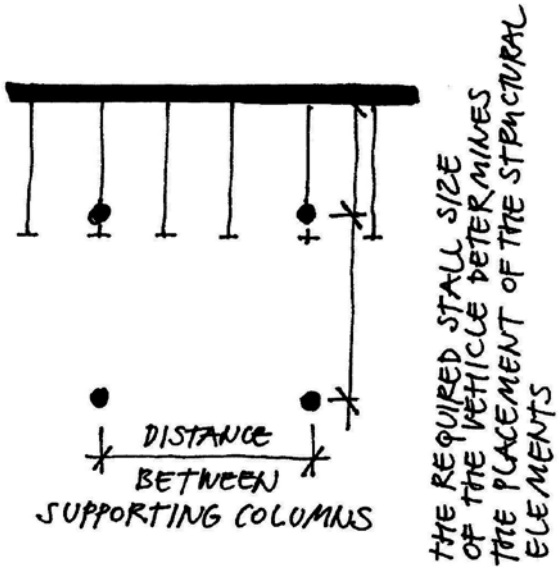


1

Why should I know about toilets?

Elementary knowledge of toilet rooms' dimensions is unavoidable, not only of toilet bowls as such, but also in combination with sinks, a shower, a bathtub. Such knowledge is necessary for family houses, apartment buildings, and, simply put, from the rest stops on highways to the Philharmonics.

An example from the life of a graduate of the Faculty of Civil Engineering at CTU (Czech Technical University): *The skill to plan flawlessly a washroom in a design became an entrance ticket into the "great" world of architecture – in the form of a job offer by the architectural studio Coop Himmelb(l) au, Wolf D. Prix & Partner, which is based in Vienna, with branch offices in Los Angeles and Beijing.*



2

Why should I know the size of a car parking space when I am designing a building for people?

For residential functions, your design will have to provide a required number of car parking spaces based on the number of apartments. New buildings must allow parking of automobiles, usually placed on underground levels. The required size of the car parking space and its multiples affect the possible distribution of load-bearing elements (walls and columns) in garages. According to the proposed structure of the building, the columns from the garages can be transferred to the upper floors and affect their layouts.

Ministry of Foreign Affairs, Berlin,
Müller Reimann Architekten

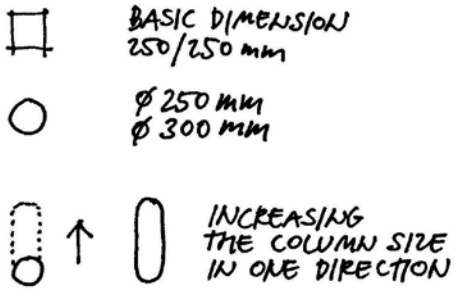
3

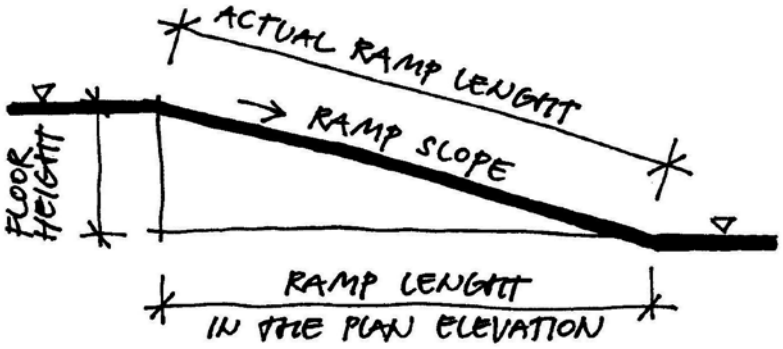
How big should I make concrete columns?

Basic dimensions of reinforced concrete columns are 250 × 250 mm, 300 × 300 mm; circular ones will have a diameter of 250 mm or 300 mm.

Dimensions of columns arise from structural calculations. As a result, they can end up being smaller or bigger than those described above.

If a narrower column is needed, you can increase its width in the other direction.



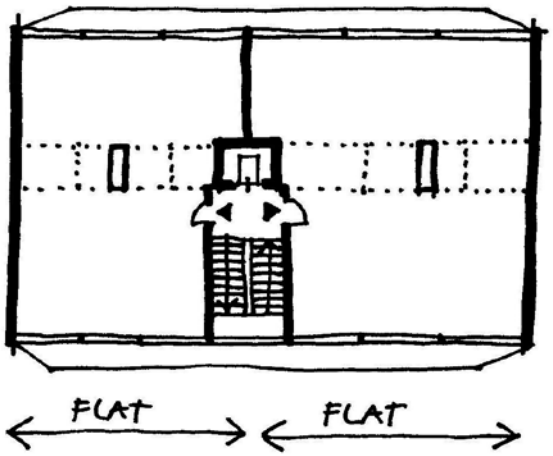


4

How long should an entry ramp into a parking garage be?

The length of a ramp is given by the floor-to-floor height and by the prescribed slope of the ramp.

We refer to a garage as being underground when the floor level of the garage (the area with parked cars) is 1.5 meters below ground level or more.

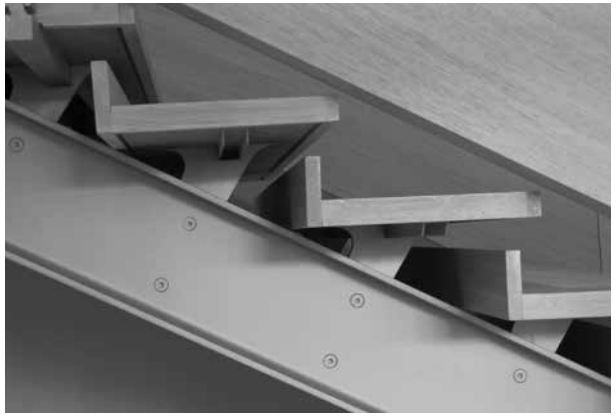


5

Where should I place the core?

IIdeally locate the service core of the building in the center of the layout, in connection with the WC, the bathroom and the kitchen. Its cross-sectional area will be given by the number of cables and pipes servicing the building.

First of all, design a building with its floor plans. When you are satisfied with your design, let us say the design of an apartment building, only then consider inserting technical cores into the floor plan of the flat.



Paul Klee Zentrum, Bern, Renzo Piano Building Workshop

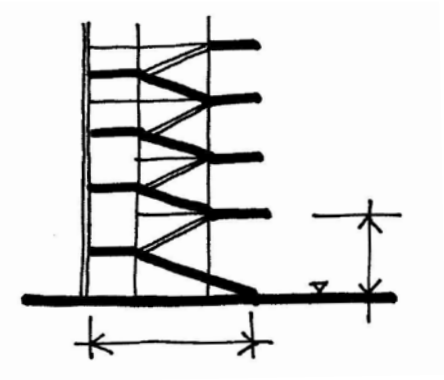
6

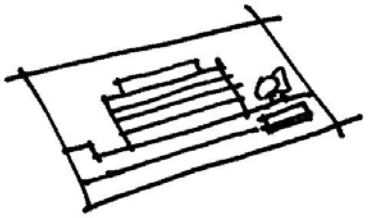
How big should I make the staircase?

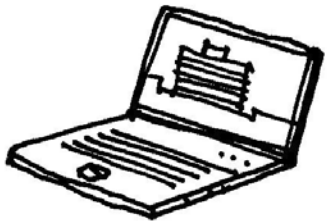
A staircase should be designed according to established procedures and stair-related design calculations.

Do not forget:
- the staircase in a residential building must be illuminated by day light
- flights of stairs must be straight in an apartment building
- the length of the flight varies according to the construction height of the floor.

A well-designed staircase must allow for passage while carrying a coffin. Not every building has an elevator of a sufficient size.





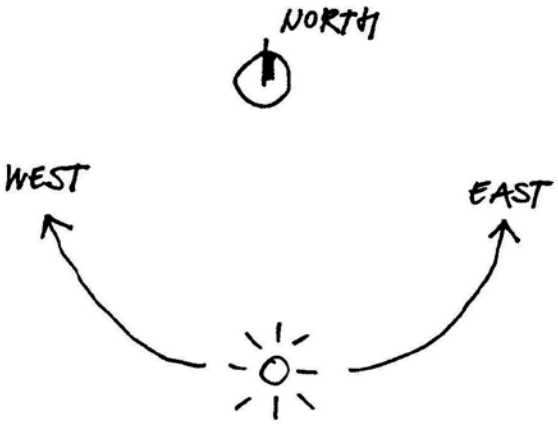


7

Can I throw away my designs once they are all saved on my computer?

Save all your designs, whether hand-drawn or digitally produced. You may return to the initial ideas and find a solution as you continue to work on the project. Archived proposals can also show you your professional development. And besides, later, you may also find them entertaining…

It is possible to study in detail architect Le Corbusier's work, even today, thanks to the fact that he diligently catalogued most of his projects, drawings, sketches and paintings.



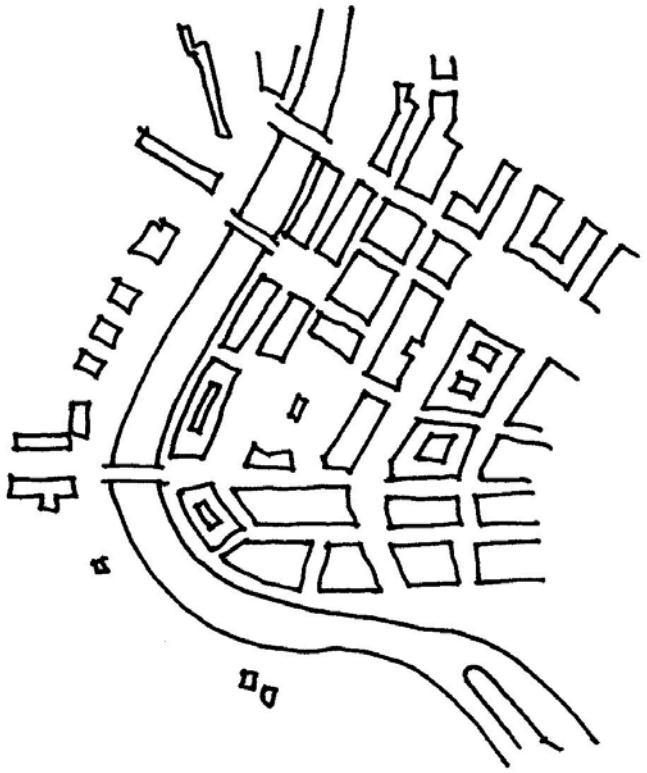
8

Where does the sun shine from?

From the east in the morning, from the west in the evening and from the south around noon time. Be conscious of how important the geographical orientation is for a house design, and conscious of how the sun moves around the building site.

One of many important actions of an architect during the course of a project, and better at the start of design works, is a site visit, a visit to the place of the future building. Not only you will find out in detail how the sun impacts the site, but you will also become aware of a variety of factors which will influence your proposal. Walk around the neighborhood, check the structures and heights of surrounding buildings, note the presence of greenery, the terrain's relief and other factors.

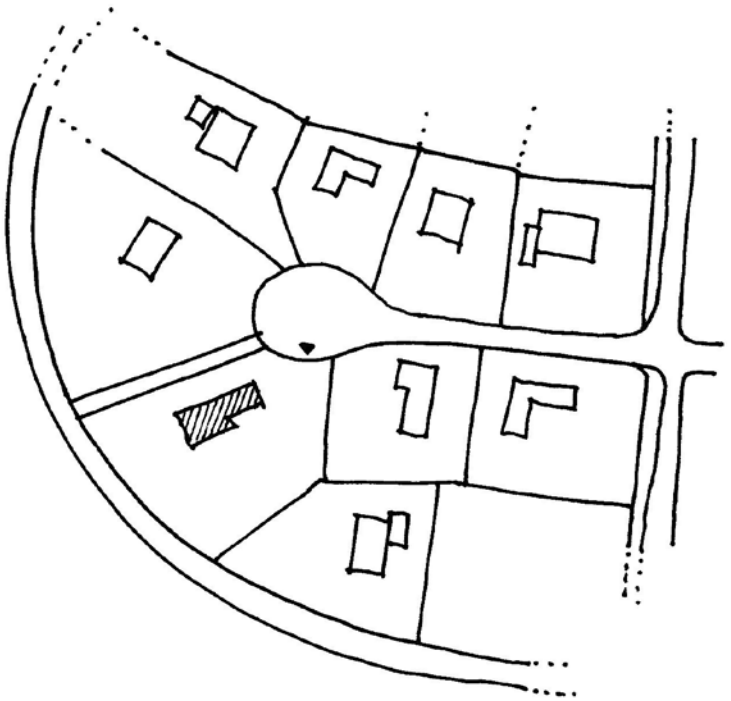
Of course, all I mention here is possible to study on a series of websites providing what at first glance may look like a sufficient amount of information. Believe that architects of integrity will visit the site of their future design in person. Some of them will even spend several days at the place of the future building.



9

Why should I draw surroundings of the building?

The building's surroundings are a very important factor in the design of any building. The surroundings of the building include: existing adjacent buildings, roads, gardens, terrain, water surfaces, greenery, etc. You need to draw the surroundings of the house in order to best insert/integrate your design into the current situation.



10

Does the size of the plot affect the size of the building's floor plan?

The area of the land that can be built up by a building is determined by the coefficient of ratio of the built-up area on the plot to the area of the land (Built-Up Area Coefficient, BUAC).

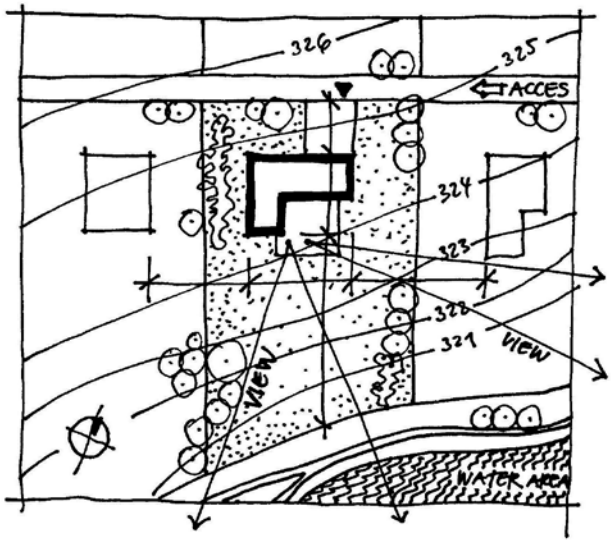
The BUAC is prescribed by the land use plan/zoning. The design of a building follows the prescribed BUAC value from the start of the architectural study.

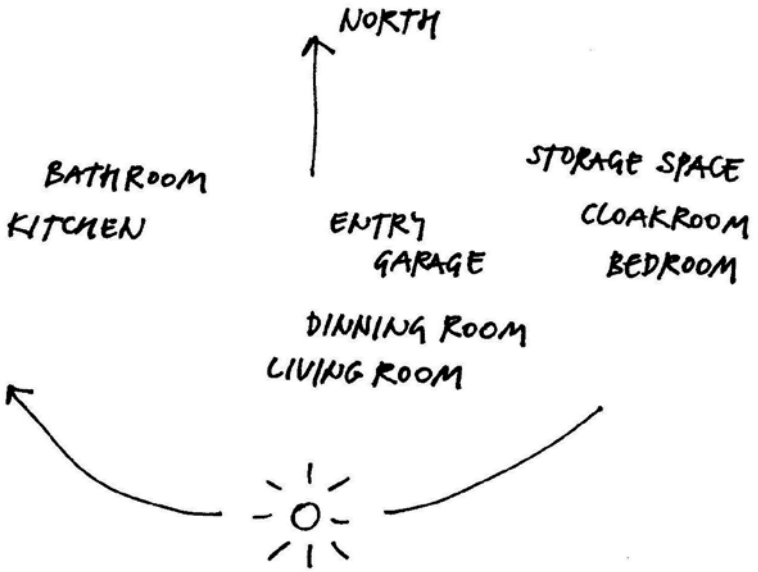
View of Salzburg from the restaurant in the museum of art, the Museum der Moderne, by architects Hoff and Zwick from Munich, the winners of an international competition, Luigi Snozzi was the chairman of the jury

11

What will affect siting of a building on a property?

Among basic factors that will influence siting of a building on a land plot are: access and arrival points to the land, four cardinal directions, the terrain, a distance from neighboring plots and neighboring buildings, existing greenery, water areas, direction of prevailing winds, views.

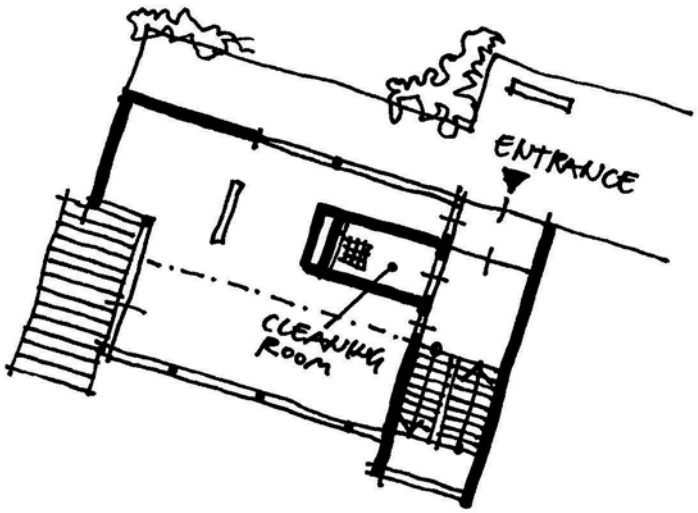




12

What rooms of a family house or an apartment building are oriented to which cardinal directions?

Orientations of rooms based on cardinal directions are recommended. The exact layouts in the design of the house will be determined by the surroundings of the building, greenery, roads, terrain, etc. For example, you can design a living room facing the north, if you provide sufficient sunlight for all other habitable rooms of a family house or an apartment.

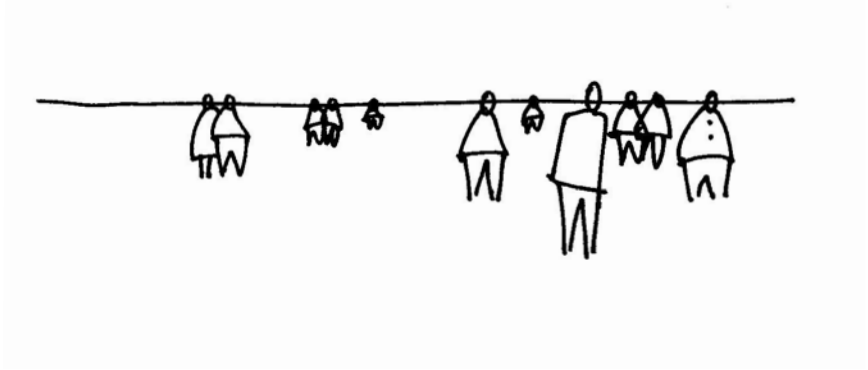


13

Why do I have to include a janitor's storage room in an apartment building?

Apartment buildings must be equipped with janitor's storage including a janitor's sink for cleaning common areas of the building. It can be located on the ground floor or in the basement, preferably near the main staircase and the elevator.

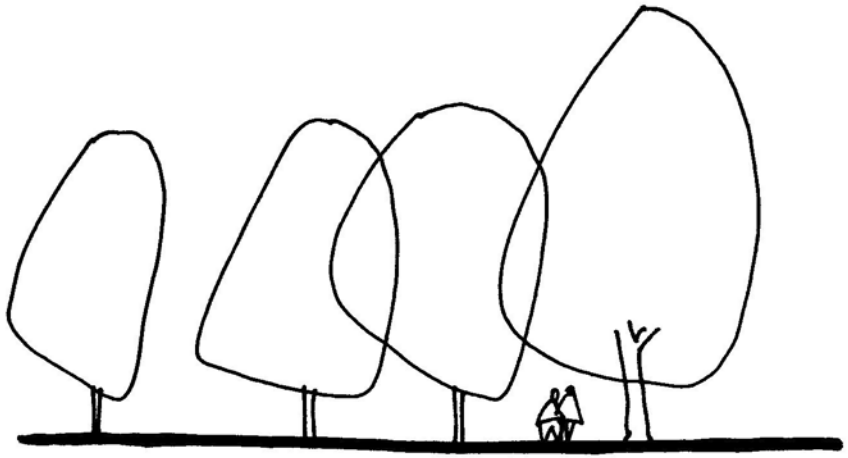
Janitor closets in your professional projects will often lead to "battles" with hygiene authorities during the approval process of your projects. I can confirm this based on my own experience.



14

Why do you want me to place figures on the horizon line?

When drawing or visualizing any perspective, eyes of the figures must be placed on the horizon line, otherwise individual characters in the drawing will “float” at different heights. Not placing the eyes of characters on the horizon is a very common error degrading fundamentally any visualization.

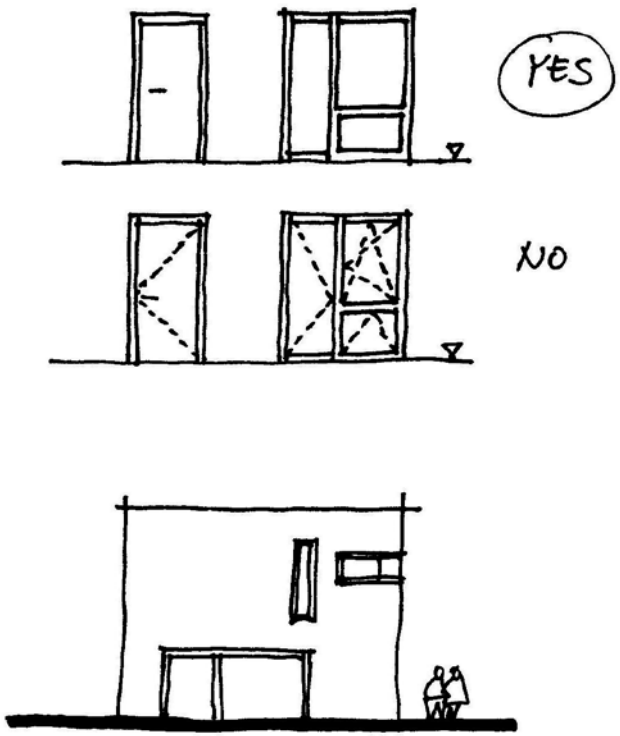


15

How big should I draw trees?

You should aim to draw most trees selected for your design in actual (mature) size; a smaller number of less mature trees may be included in the drawing – just like adults and children. This is valid for drawings trees into site plans, floor plans, elevations and visualizations, at the established scale.

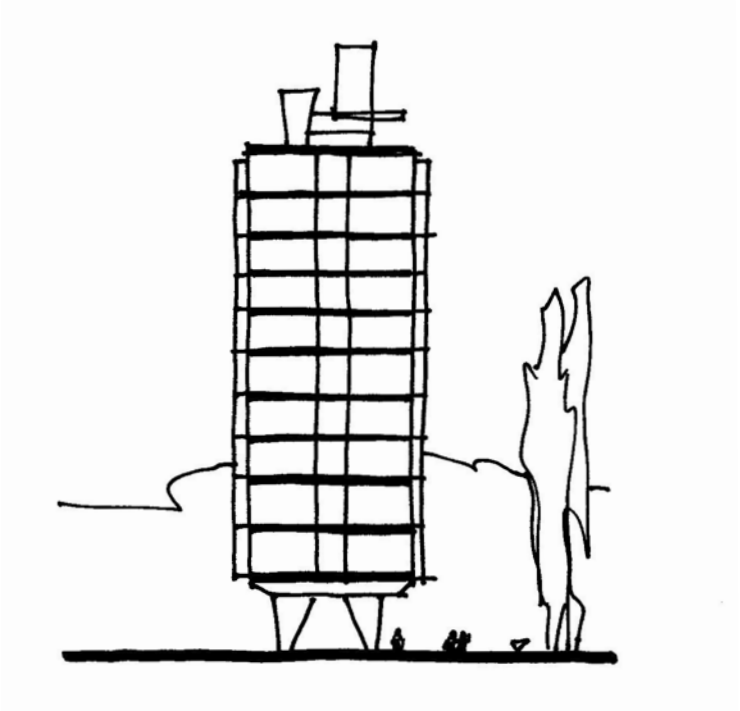
For example It is possible for you to include your own images of trees in the catalogue of elements which you use in drafting elevations, i.e. your own tree images. Such a tree should be compatible in its proportions to real trees, but its appearance will be your own creation. You can draw your "own" trees according to the real models. This way, you will have in your projects greenery other than greenery which is normally a part of AutoCAD, ArchiCAD and other software.



16

How should I draw windows on facades?

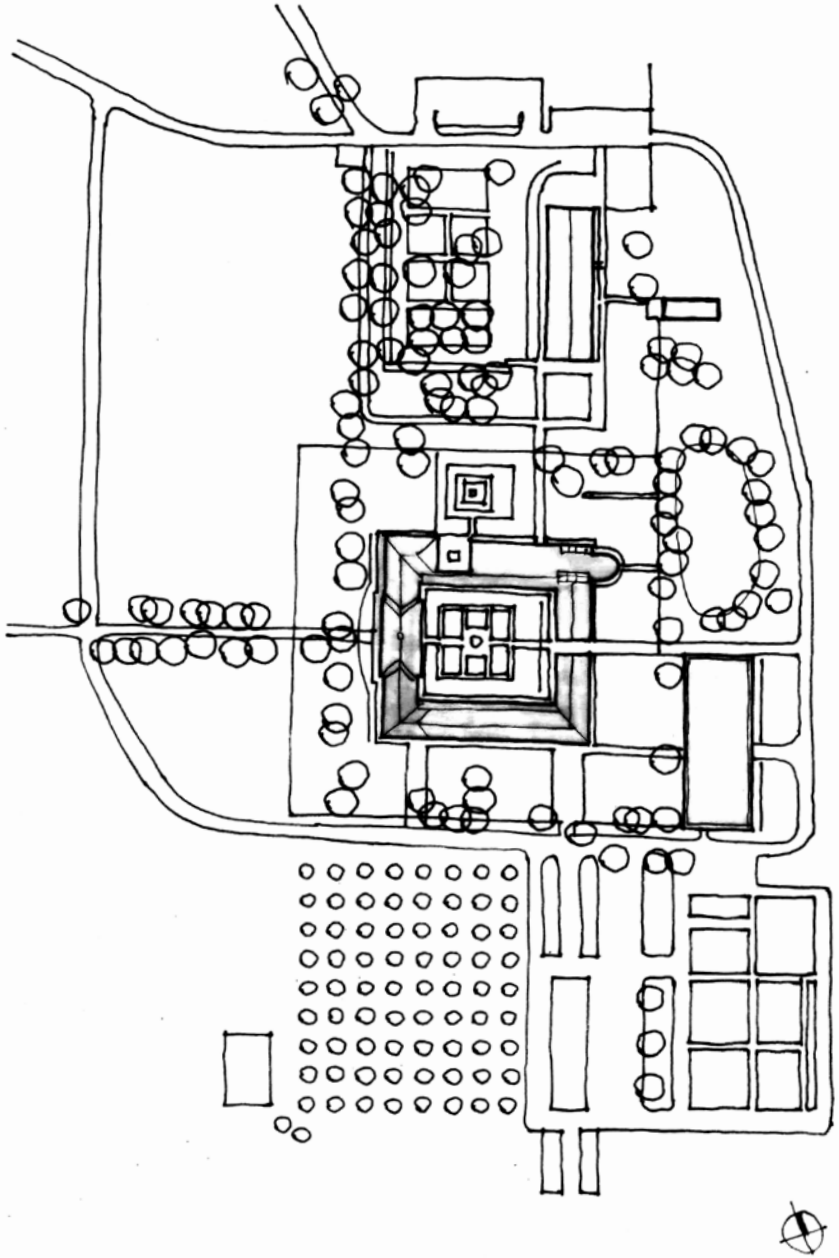
Windows on facades are drawn in a basic shape. However in elevations and sections in architectural drawings windows are not drawn with the direction of opening symbol. This principle also applies to the drawing of doors on the façade and in the section.



17

And should we draw sections too?

A section is the basis of your design. The section of the building is drafted from the lowest basement level to the roof. The most important is the section through the stairwell. All clear heights, floor heights, roof heights are visible in the section. According to these heights, you will then draw or check the facades. The section is established during initial stage of the 3D design.



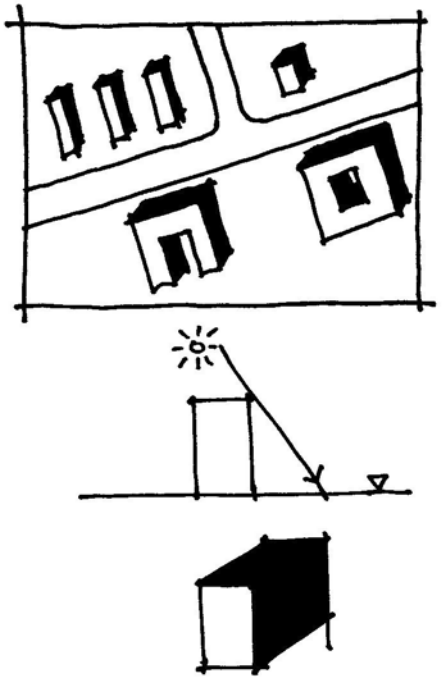
Monastery of Our Lady of Nový Dvůr,
cloister, workshop building and guesthouse,
Czech Republic, architect John Pawson

18

Why should I draw a site plan?

A site plan gives you information about relationships around the future structure. A site plan is the floor plan of surroundings of the proposed building. It is a view from above showing the neighboring houses, streets, greenery.

No design of a building will make do without a site plan. You can find out in older and historical maps/site plans how the site of "your" building looked recently or even ten or a hundred years ago. It will often help you to understand, for example, development of the road network or development of your particular built-up area.

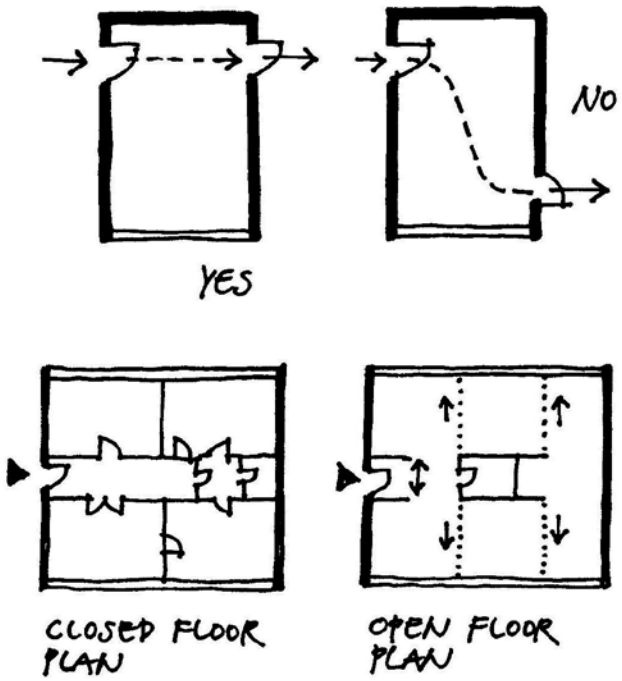


19

Why should I draw shadows on a site plan?

By drawing buildings' shadows, you indicate buildings' heights. Applying sunlight to structures at 45° angle forms shadows which reveal the actual height of the buildings.

On a site plan you alone will determine the length and direction of shadows. Shadows should not hide some of the important elements, like the proposed surface of a square or a park, for example.
I do not know why, here we are accustomed to apply shades to site plans, so that the sun shines from the left, i.e. from the west. It is possible that this has something to do with the fact that some time ago, during manual drafting or drawing, work tables were set to have day light coming from the left hand side. The majority of architects drew with their right hands.



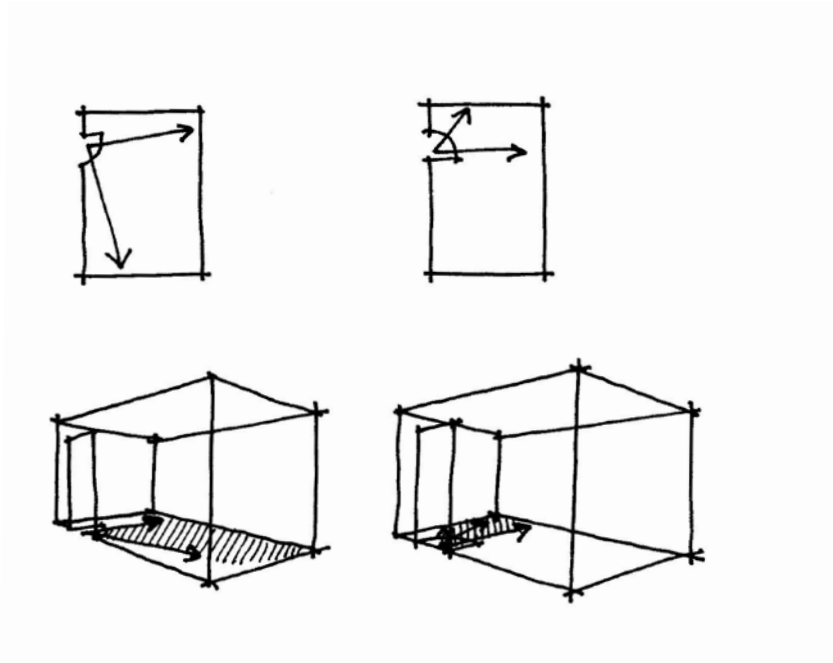
20

Where should I place doors?

The location of doors in a floor plan depends on their function in the apartment or house. Ideally locate doors in places which will allow for the shortest passage through the rooms. Avoid crossing of the passageways. Crossing through rooms on a diagonal will result in poor arrangement of furniture.

Note: This applies in particular to residential buildings. Conversely, you can design a more complex walking experience for a museum or a gallery.

When designing floor plans for an apartment/family house and working on laying out doors, you can use a closed or open floor plan. A closed floor plan uses doors, meaning rooms are separated by doors. An open floor plan works with openings in walls, meaning that doors should be left out wherever possible. In this case, you are designing a free-flowing open space. Some openings can be closed by sliding doors or parts of the apartment can be divided by sliding partitions.

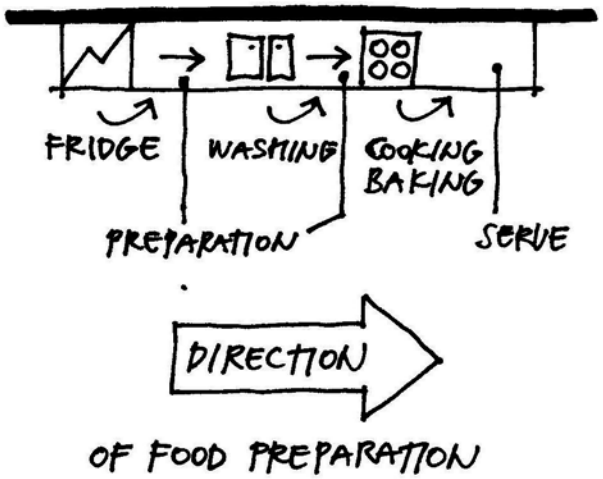


21

In which direction should doors open?

Design door openings so that it will allow you to see the major part of the rooms into which you are entering. The direction of the door leaf as it opens will or will not allow to view the room.

For example, in many French chateaus, the door opened into the room so that servants entered discreetly and did not immediately see the entire room.

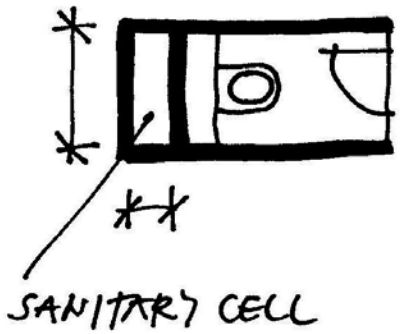


22

How am I supposed to make a kitchen?

By that question it is usually meant the kitchen counters. It is essential that work surfaces and counters are arranged in accordance with the food preparation process.

Try to prepare your favorite dish on a kitchen counter which is not organized in the right way. You'll cover a lot more distance walking around, or you will cross paths with a potential assistant who would also like to eat. It is possible that in the end, after such a meal preparation, you won't have much appetite left.



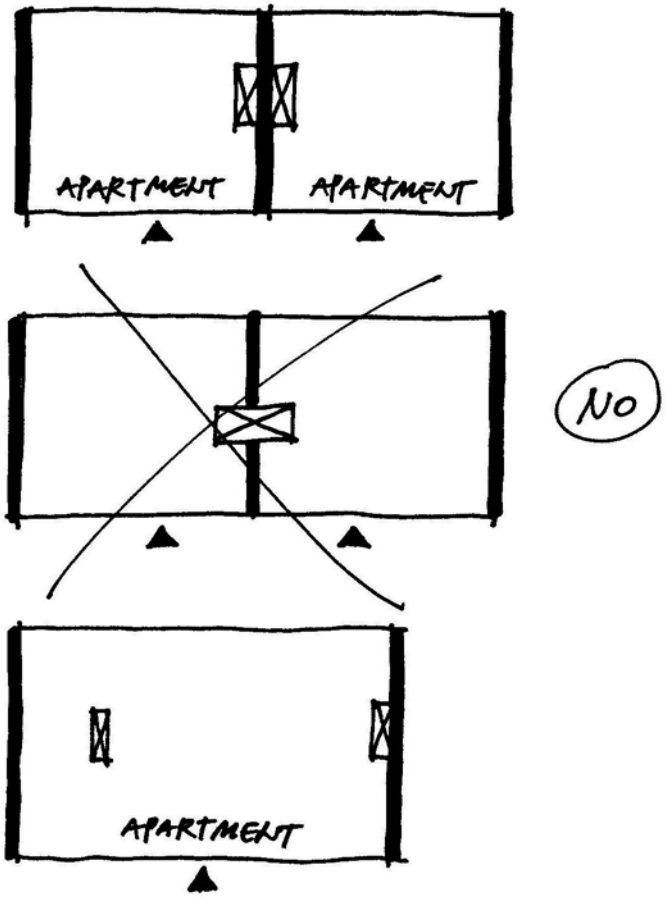
23

What is the size of a service core?

First get an idea of what you need to place in the service core. For example, in an apartment building it will be: toilet drainage, bathroom and kitchen drainage, water distribution pipes, heating system, electrical cables, gas pipes, bathroom and toilet ventilation, exhaust from hoods in the kitchen, TV cables, data cables, etc.

Other things that may need to be installed in the core are ventilation of garages, or ventilation of commercial spaces in the building, as well as rainwater drain from the roof of the house.

This logically implies that if you, in addition to the above, also cool the building with air conditioning or extract air from a restaurant or a pool, demands on the sizes of pipes will increase and thus so will the size of the service core.



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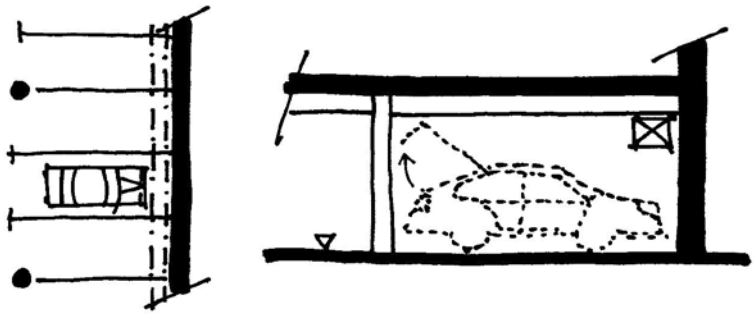
How many service cores should there be for an apartment building?

The principles for installing cores in an apartment building are:
- 1 core per apartment
- there must not be one core per two apartments
- a large apartment can have more than one service core



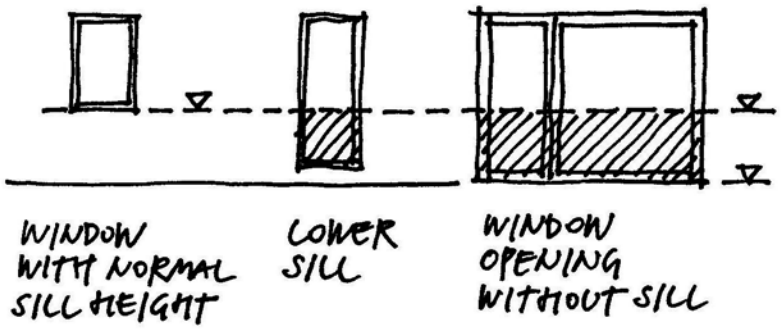
25

Where should I put air-handling systems in an underground garage? It will not fit under such a low ceiling!

In a garage floor plan you should place air ducts at perimeter walls, particularly in the case of a perpendicular parking arrangement. Install air ducts, lighting and other equipment into the space above the hood/trunk of the car.

However, this should be done only under the condition that the free height above the parking space at the trunk compartment is designed so as to allow the trunk/hood to open – see standards. Distribution of utilities in a garage area has to follow such requirements.

You certainly do not want while opening the trunk of your shining automobile, hatchback or four-wheel drive, to scrape the ceiling of a garage, the height of which was wrongly proposed, or to scrape an improperly installed collection of pipes or equipment.

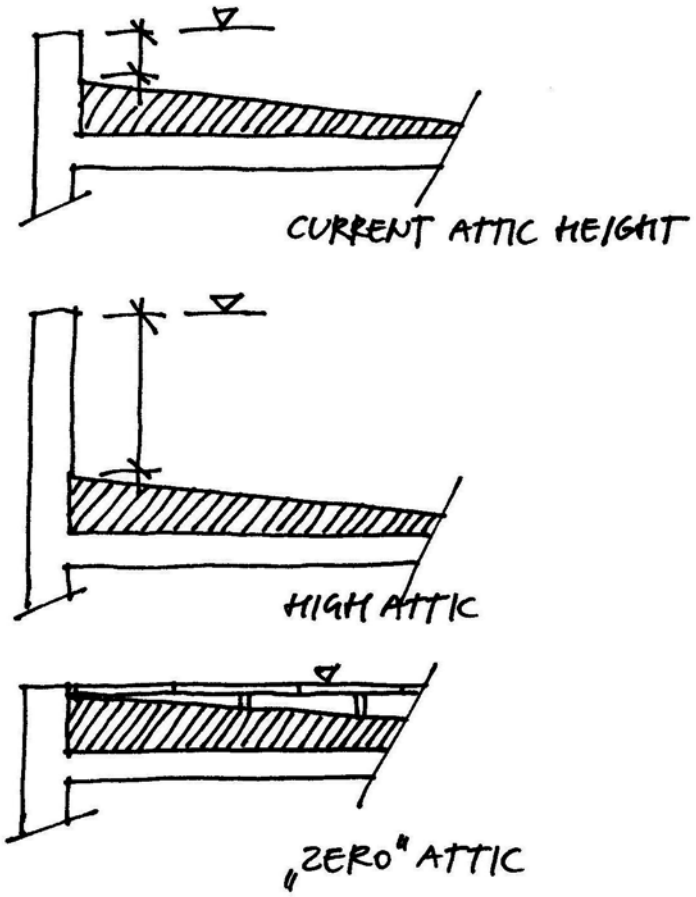


26

At what height should I propose a railing for a window that has a lower window sill or does not have a window sill at all?

If you are designing openable windows, with or without a lower window sill, you must provide such a window with a railing. The minimum railing height corresponds to the height given by the local design standards. The minimum height of the railing increases with the depth of the free space under the window.

It's simple – no one is allowed to fall down from anywhere.

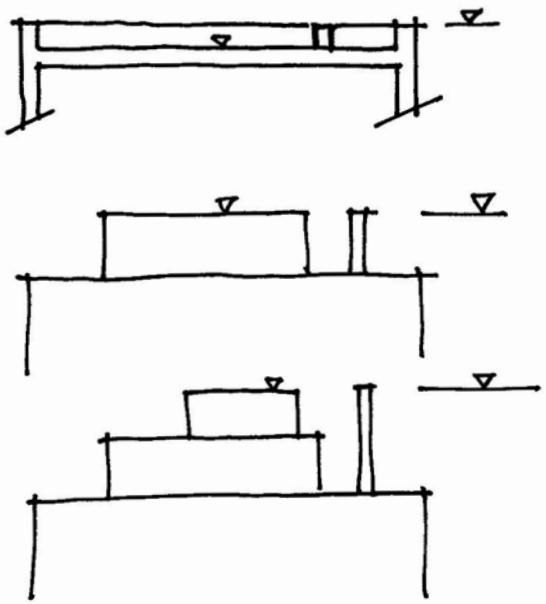


27

What is the height of an attic?

The main principle: the height of the attic is a product of your architectural design; resolving the roof structure and composition of the roof cladding will follow.

The height of the attic may be chosen as the absolute minimum, just enough to accommodate its function or, on the other hand, it may be relatively high, forming the house's unique appearance according to your design.



28

How high does the service core project above the roof?

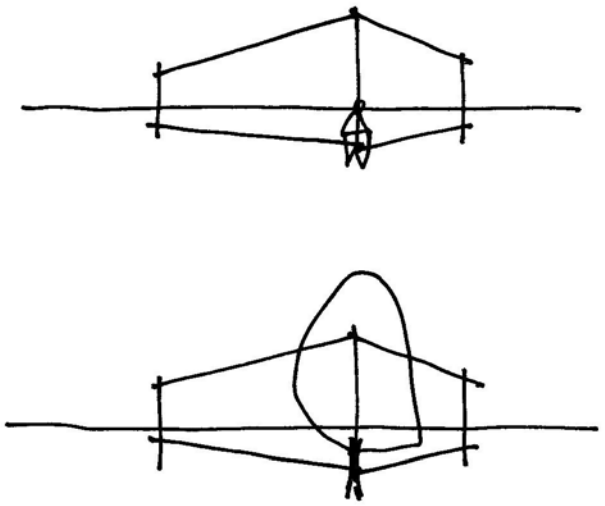
The height of the service core projecting above the roof is determined by the height of the roof superstructure or, alternatively, by the height of the adjacent buildings. If there is a recessed floor on the roof of the house, the height of the exposed service core, i.e. the outfall point above the superstructure on flat roofs is equal to, or higher than the height of the superstructure.

29

Should I draw trees in the elevations?

Greenery, figures and other accessory items are an integral part of architectural drawings.

In your drawings of elevations and in visualizations include everything that will be a part of your design. Present surrounding area of the building in a way that will show how your design will alter it.



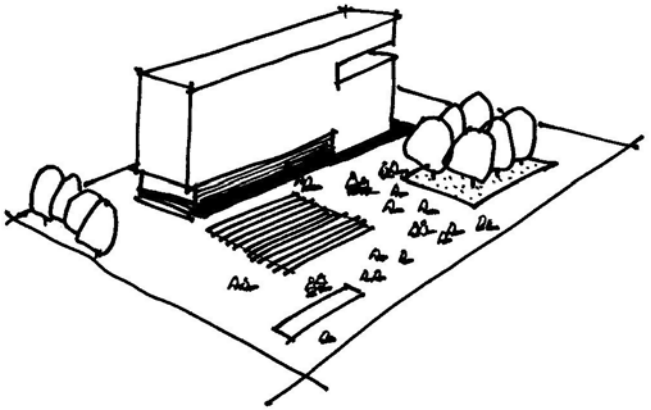
30

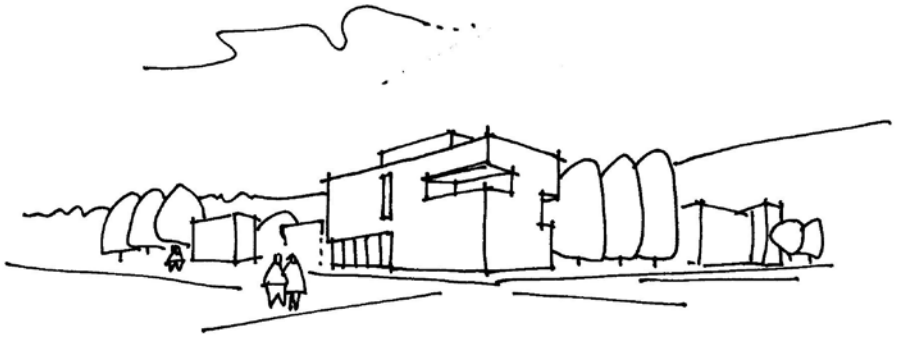
Where do I place people in a visualization?

Position the figures and the accessory items according to the following principles:
- do not place people at the corner of the building
- do not place columns at the corner of the building
- do not place trees at the corner of the building
- do not cover the proposed building with trees, cars or figures.

Do not cover tree trunks by figures if you have only a few trees in the visualization. Visualizing a building within a forest or designing a house inside of a botanical garden is another case, here large numbers of tree trunks can be overlaid by other accessory elements.

By inappropriate placing of staffage elements you can damage your intent. You can even unwittingly hide interesting details of your building. Pause for a moment, breath out and consider in peace the placing of people, cars, trees, clouds...

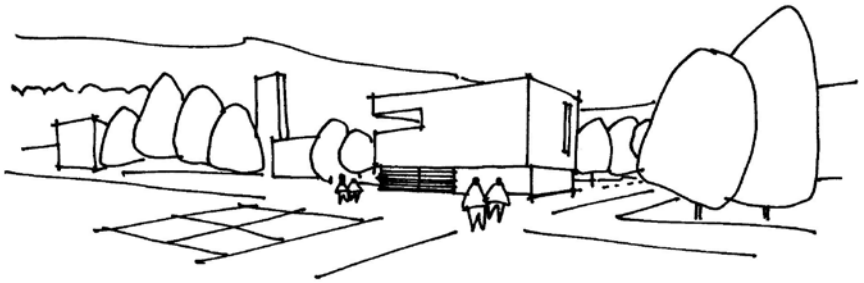




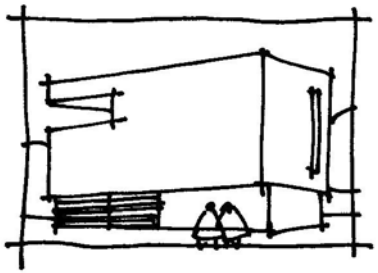
31

What view angle should I choose when preparing the visualization of a proposed building?

Select a view angle that will show your design as a whole. Massing of the building must be shown. Fit the building into the existing surroundings with caution. Select a position for the view that also shows neighboring buildings and greenery.



right



incorrectly – do not trim the area around the proposed building

32

How do I place a visualization on a drawing panel in a format suitable for handing in?

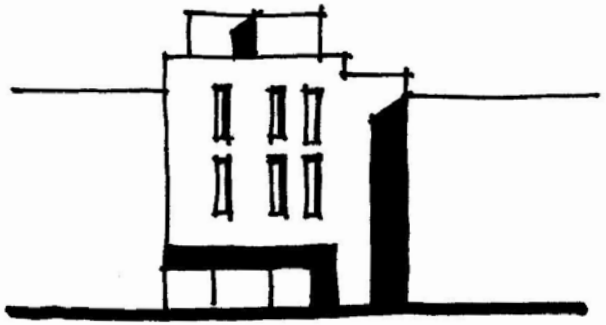
A visualization /perspective view angle should tell you as much as possible about your design and its incorporation into the surrounding area and greenery. The perspective view should not be showing only your proposed building.

A mistake – do not cut off the surroundings from the view of the building you are designing.

An endeavor to choose the right view of the proposed building is one of important tasks of an architect. The 3D visualization "sells" your design; it is therefore necessary to choose from many views the right one

The perspective view/visualization of the design must express your ideas to the maximum, to show your work without the need for your personal explanation.

An example: the evaluation of designs in an architectural competition takes place without the participation of authors. Your drawings must do the talking for you.

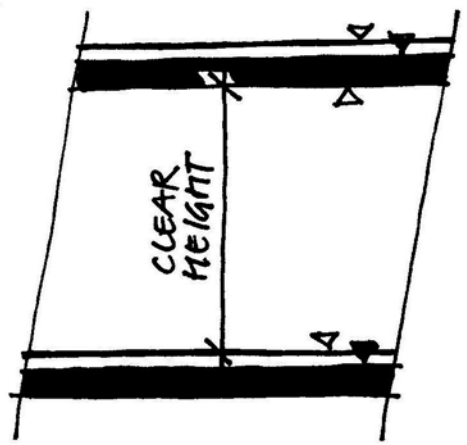


33

Why apply shadows to the facade?

By applying shadows to the facade drawing you will create an impression of massing. With shadows you will express various depths within the surface of the facade.

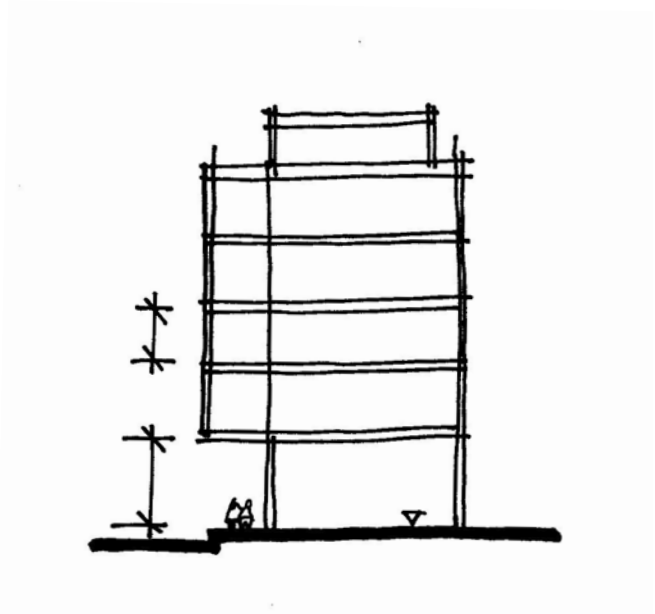
You should set out the direction of the sun's rays and the position of the sun in advance and then you can explore how long the shadows should be in order to best present your design, the composition and the massing.



34

What should be the height of one story?

This question concerns the floor-to-ceiling height of the story (the distance between the surface of the floor and the lower elevation of the ceiling of this story), which is given by the regulations, depending on the function of the building. There are different heights prescribed for residences, offices, restaurants, etc.



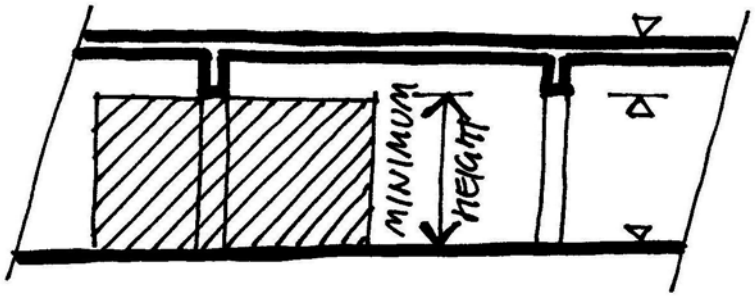
35

Why is the floor-to-ceiling height of the ground floor bigger that the clear height of the typical floor in apartments?

The ground floor of residential buildings is often used for commercial purposes – shops, offices, cafes. Regulations for commercial spaces prescribed for floor-to-ceiling height tend to be higher than in the case of apartments.

Not only the prescribed regulations, which formulate the arrangement of the building, are to be followed. By proposing various heights for your storeys you can accomplish your architectural intent. For example, the entrance spaces of skyscrapers have relatively high floor-to-ceiling height in order to create an entrance of a monumental scale while also generating the impression of entering into an important building.

The entrance into the new skyscraper One World Trade Center at Ground Zero in New York (by architect David Childs from SOM office) was implemented with these thoughts in mind.



36

What should height of garages be?

The minimum height of garages is given by the local building codes. This refers to the space between the floor and the lower edge of the ceiling structure or the edge of any proposed equipment installed under the ceiling.

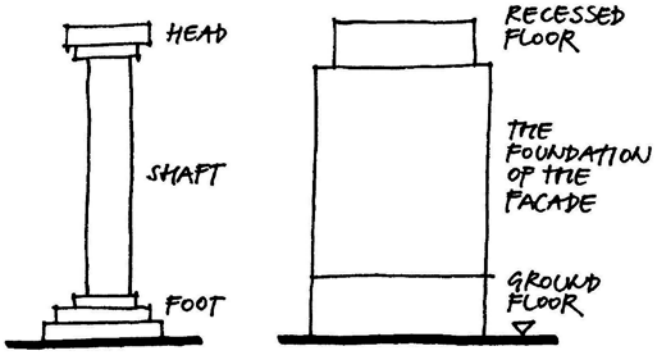
Air conditioning, lighting, sewerage or other equipment or items are not allowed to encroach into this notional space.

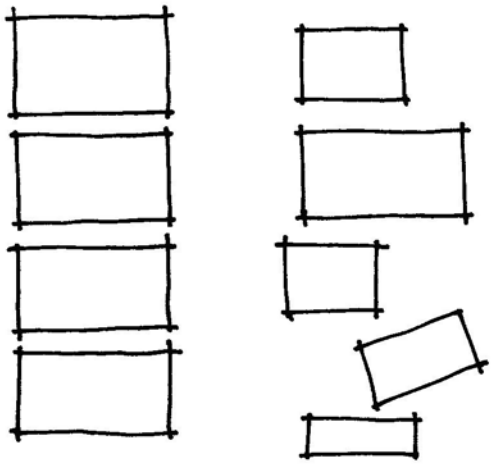
Upper East Side Building, Unter den Linden Street, Berlin

37

How should I design the façade of a residential building?

One of the rules which can be applied to design of the façade of a residential building stems from the basic element of architecture, i.e. from a column. A column consists of the base, the shaft and the capital. You can apply the same rule to the design of a façade.



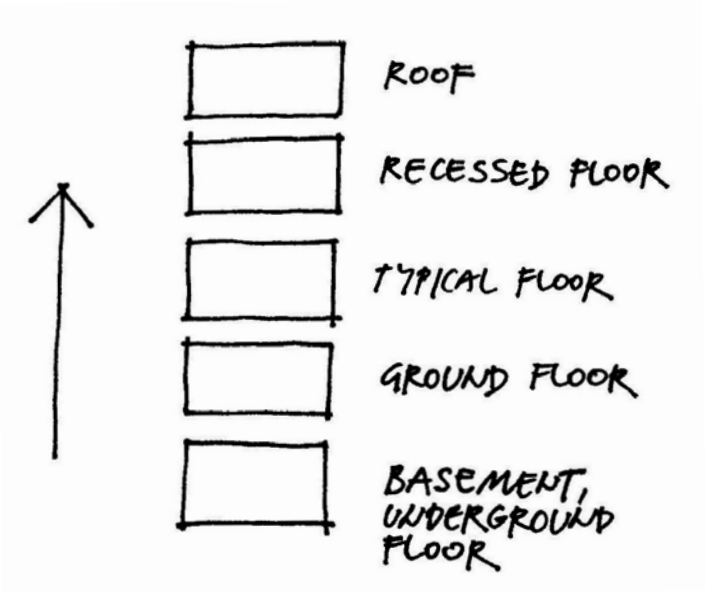


38

What format of a drawing should I select?

The dimensions of architectural drawings can vary. A set of drawings for various submissions or drawings designated for presentations should have the same dimensions. Uniform size of drawings in a set gives an impression of seriousness. For architectural competitions the organizer defines the required dimensions of drawings.

For presentations, develop a design, if possible, in uniform scale, and present the drawings in uniform formats. This applies both to printed drawings and digital presentations.

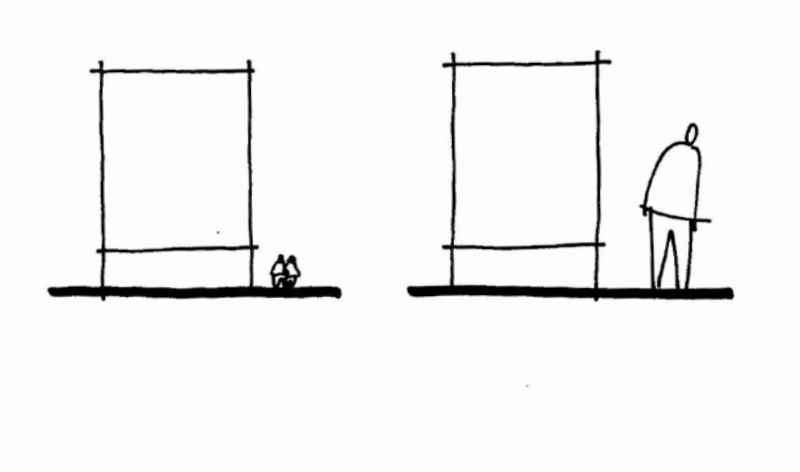


39

Am I free to place the floor plans of the building onto the panels as I would like?

For clarity of your presentation it is important to always arrange floor plans above each other in a logical order – from the basement in ascending order to the roof plan.

Of course the floor plans will all be drawn in the same scale. Elevations and sections will be drawn in the same scale as floor plans. Site plans, maps and details will be drawn in different scales.



40

Why should I place figures into sections and elevations?

Place figures into elevations and sections in order to indicate the scale of the building.

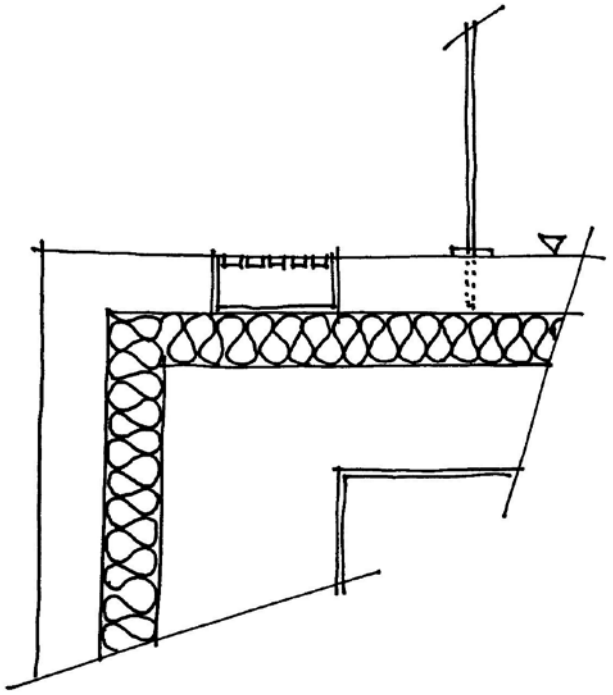
Using the same size of design, while differing the height of the figures will affect the scale of the proposed building.

41

Why am I am supposed to talk about my project, when I have already drawn everything?

Because not every investor or client is capable of reading the drawings. Your verbal description will explain the proposed solution. That way, in most cases you will explain your proposal, even to the layman public, and hence contribute to its better understanding.

Architects learn to talk about their projects during studies, they learn to explain the design. The art of describing the proposed works convincingly and accurately does not stop at the end of studies. Some architects continue to hone this skill during their professional practice, under supervision of therapists, fashion consultants and communication experts.

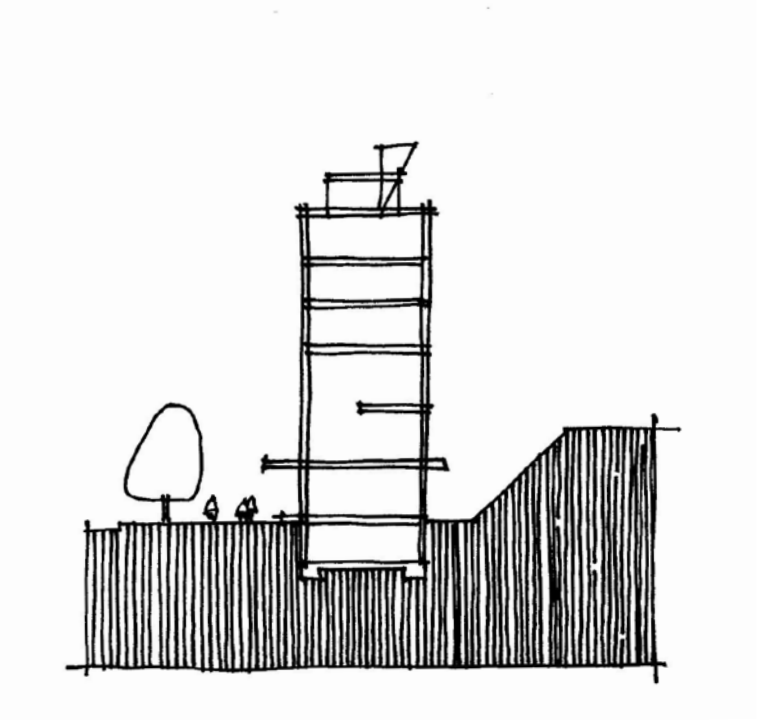


42

Can I make a flat roof without an attic?

Yes, of course. Contemporary structures and composition of roofs allow for this solution.
If the roof will be accessible to people you must not forget to provide a railing.

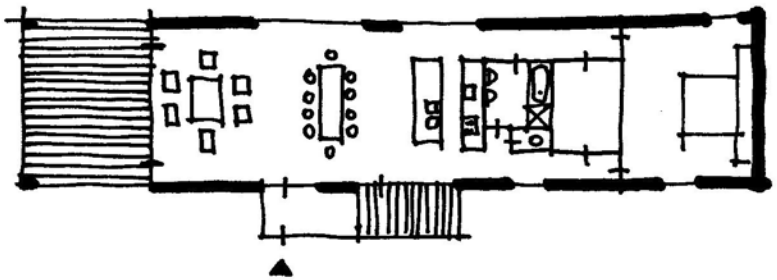
A flat roof without an attic creates an elegant look; that way you will form an impression of a thin roof or an impression of recessed storeys with a lower height.



43

How should I cross-hatch the sections?

Unlike in construction drawings, cross-hatching is not used in architectural drawings. But the “cut” parts of the structure are colored in as gray, black or other color surfaces. Selecting colors for cut parts will be related to the overall presentation.

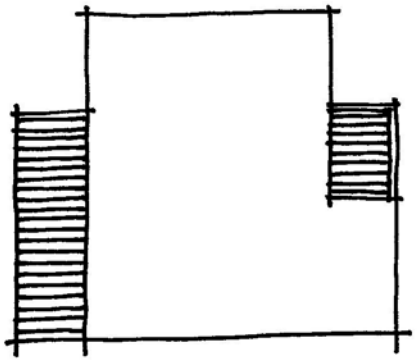


44

Why should I draw furniture in the floor plan?

Furniture and fixtures (a kitchen counter, a water closet, bathroom fit out) are drawn in order to explain the function of designed spaces. That will clarify how the building will work. An architectural drawing, complemented by the above mentioned, does not need to show individual room names.

The first look at an architectural drawing, specifically at a floor plan, which includes images of tables, chairs, wardrobes, cars or a swimming pool, allows one to assess the function of the building. You will be able to tell if the place is a residence, bank, theater, art gallery or car showroom.



45

Why should I hatch a terrace or a balcony in the floor plan of an apartment?

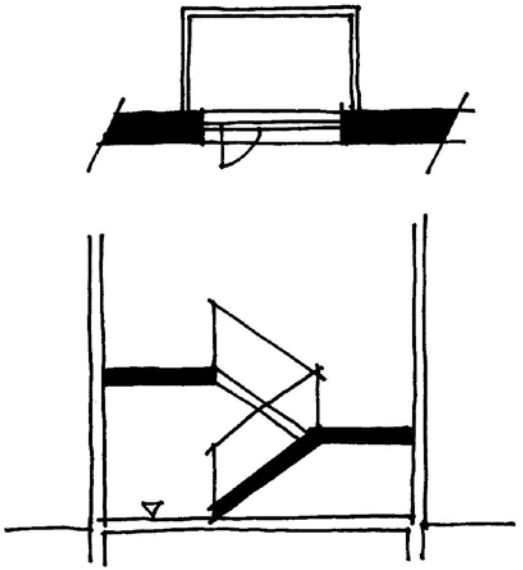
By simple hatching or by other spatial designation of the terrace and balcony you will indicate that these parts of the floor plan are in the exterior.

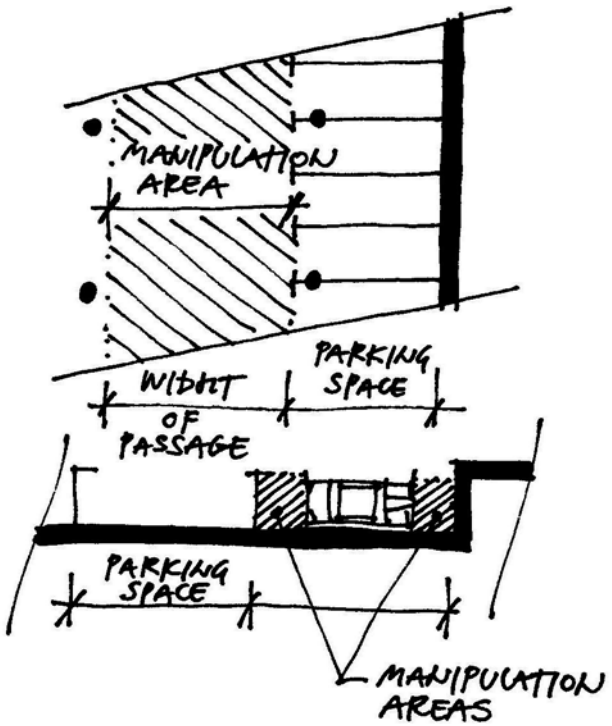
MACBA, Barcelona Museum
of Contemporary Art, Spain,
Richard Meier & Partners Architects

46

And should I draw the railing too?

While students often do not draw railings in architectural drawings, it is necessary to draw them. Not only staircase railings, but also railings on balconies and terraces. In the floor plan it is sufficient to express a railing with two thin parallel solid lines. In sections and elevations handrails can be drawn as a minimum by one line. The balustrade panel can be omitted.





47

Why mightn't a car be able to exit? There is enough space.

The dimensions of parking spaces are given by architectural standards according to the sizes of automobiles. The width of the lane is also stipulated so that a car driving in and out of the parking area has sufficient space for manipulation.

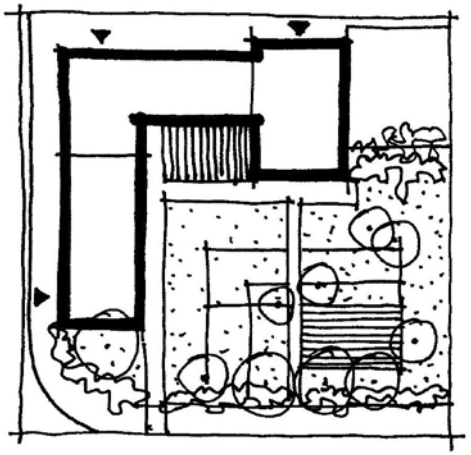
Imagine that you will be parking in the garages you design. Will you really be driving through comfortably and parking comfortably? Even if you will be using a "Parking Assistant", these days offered in many cars, parking sensors (detectors) will not allow you to enter into a poorly designed parking space.

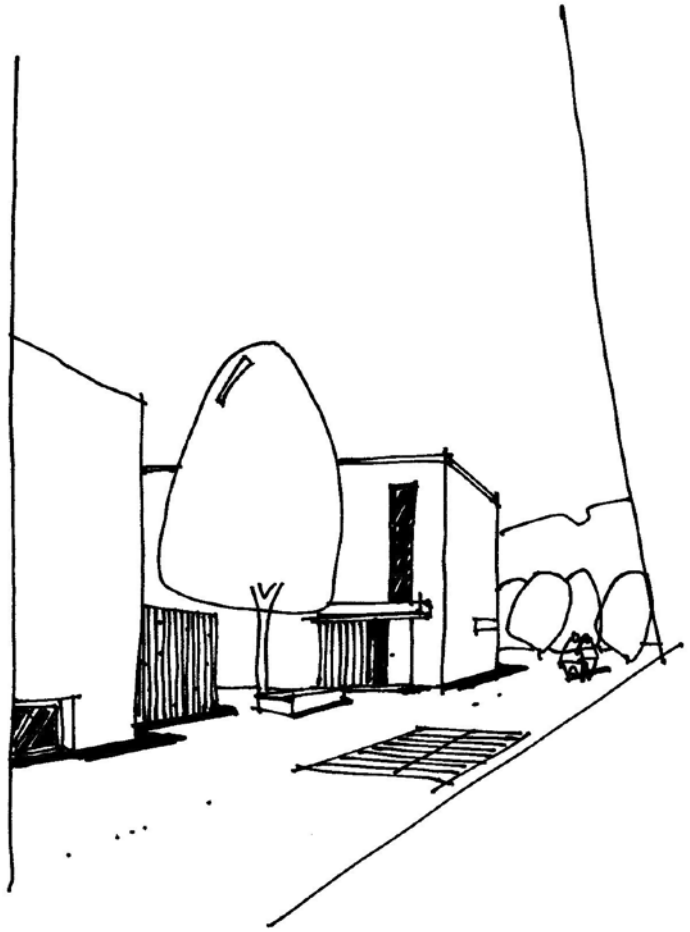
Garden of Vela Latina Restaurant, Lisbon

48

Why should I design greenery around a building?

By planning greenery in the vicinity of the building you will enhance the architectural design of the building. Surroundings of the building are an important element of the design. That means design of greenery, lawns, shrubs and trees, paved areas, water surfaces and general landscaping. Access to the building for pedestrians and cars, deliveries and waste removal, and outdoor seating should all be shown, as well as the integration of the new building with the existing greenery, design of fencing, placement of artwork and more.



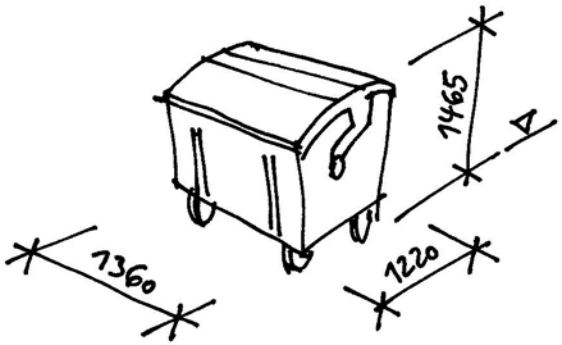


49

Why should I spend effort on a building's entrance? It's obvious, every building has an entrance!

The entrance to a building provides the first impression of the whole building. It is the first contact a person has with the interior of the building. At the entrance, everyone entering the building can form an idea of what will follow, what to expect.

The entrance to a building must be clear, both as a layout as well as with regard to its workings. It should be made of materials appropriate to the function of the building – whether it is an entrance to a warehouse or to an opera.



50

Why should I deal with garbage? That´s a job for garbage men.

One part of the design of the building that students often forget is the garbage disposal solution, whether we are dealing with a family house, an apartment building, an office building or the philharmonic. It is necessary to know the size of garbage receptacles – e.g., containers, bins. One must also design the location of the garbage room, considering various factors. How will people wanting to dispose of garbage enter? How will garbage men access? From where will the garbage truck arrive? Consideration should be given to make it well functioning, keeping the containers accessible, but at the same time as "invisible" as possible.

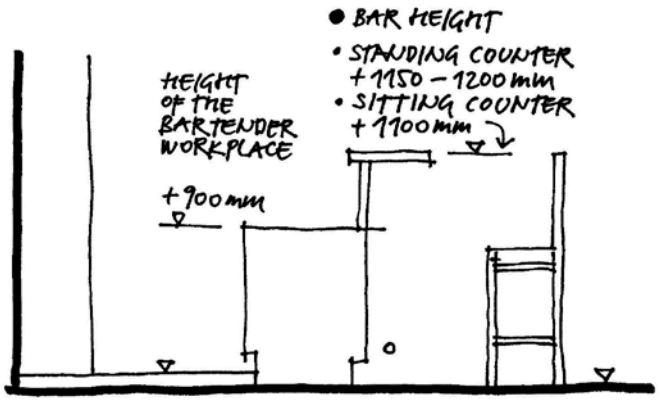
Think carefully where to locate containers whether inside of a building or outside. For example, placing garbage containers on the basement level of an apartment building or in an underground garage seems to be at first glance a good solution. Containers are nicely hidden here, and a building resident coming down the elevator to the garage level can dispose the garbage and drive off in the car. However, do you know a garbage collecting firm whose employees will once or twice a week push several containers up a garage ramp out to the street to the waiting garbage truck?

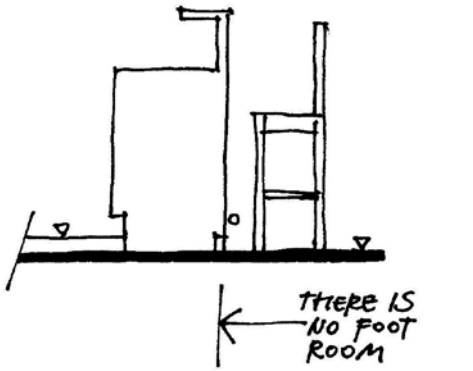
Lexington Bar, Barcelona, Marcos Catalan Studio

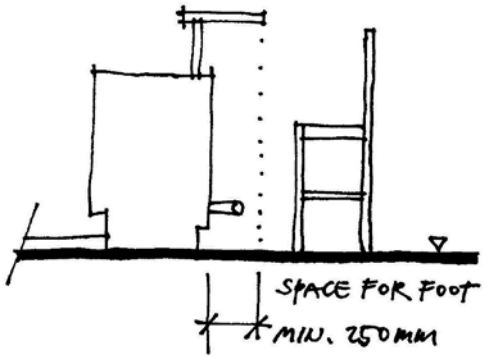
51

How high should a bar countertop be?

All heights of furnishings and articles in the interior are derived from the height of the human body, and so the dimensions for the bar counter are also determined in this way. A bar countertop may have different heights depending on whether it is intended for standing or sitting.



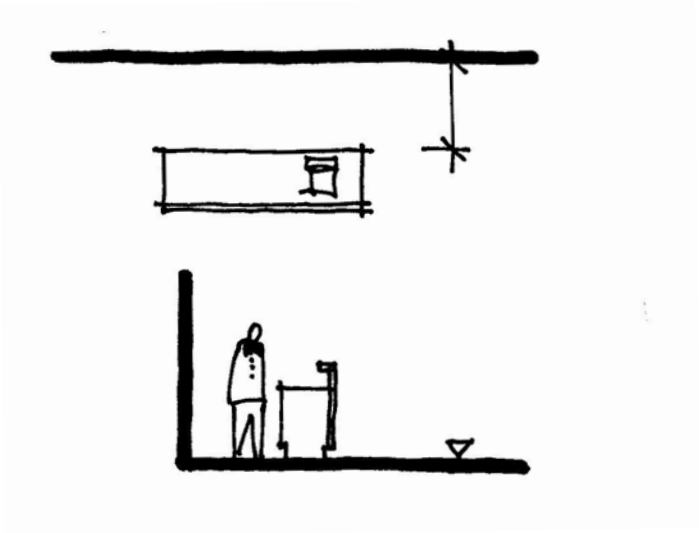




52

And why should I be concerned with designing foot room at a bar counter?

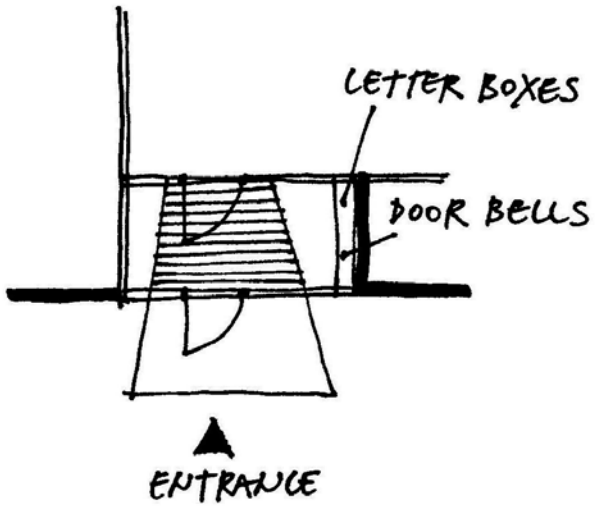
If you are designing a bar counter for sitting at, you must not forget about room for feet. The worst thing that can happen is when the countertop of a bar is flush with the vertical front part of the bar and there is no room to rest your legs, forcing you to sit sideways. Such a bar probably won't have big sales. The countertop surface must protrude above the seating position, to allow for sitting as if at a dining table.



53

How much space should be left for reception staff behind the counter in a hotel?

Everything is subject to fashion, and the current trend in the world's hotel chains is that there is no staff seating. The reception staff must stand, not sit, therefore no chairs are provided.

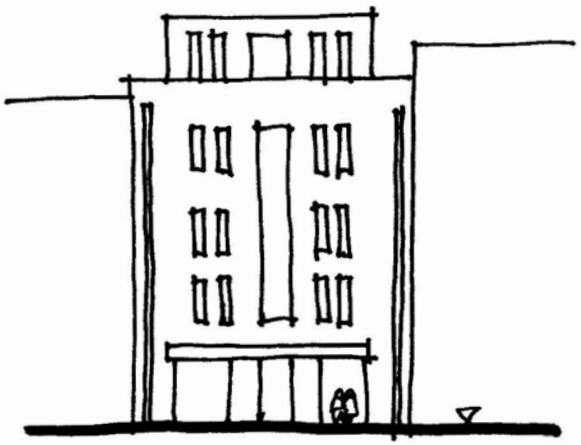


54

What do I put in an entry foyer?

An entry foyer's fittings change according to the function of the building.

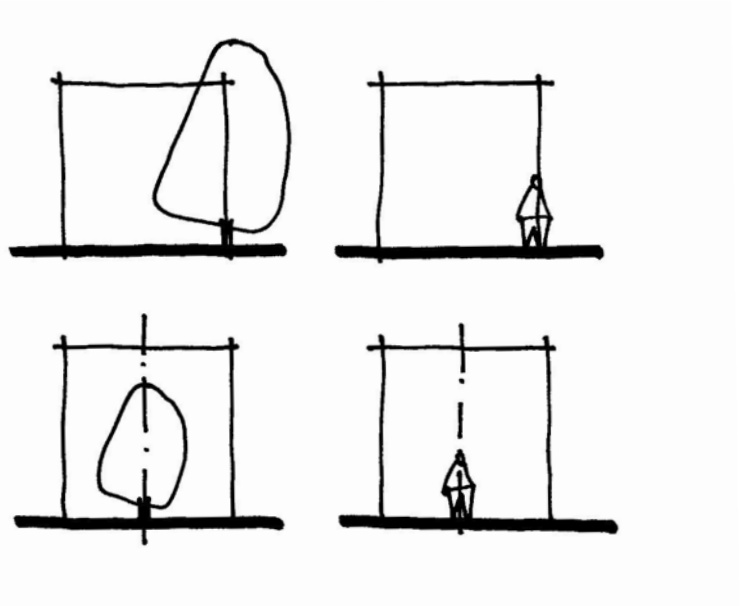
For example, the vestibule of an apartment building may include door bells, mailboxes, information and orientation signs, and a janitor's closet.



55

Downpipes on the facade? Well, they're something I didn't think about at all … where do I put them?

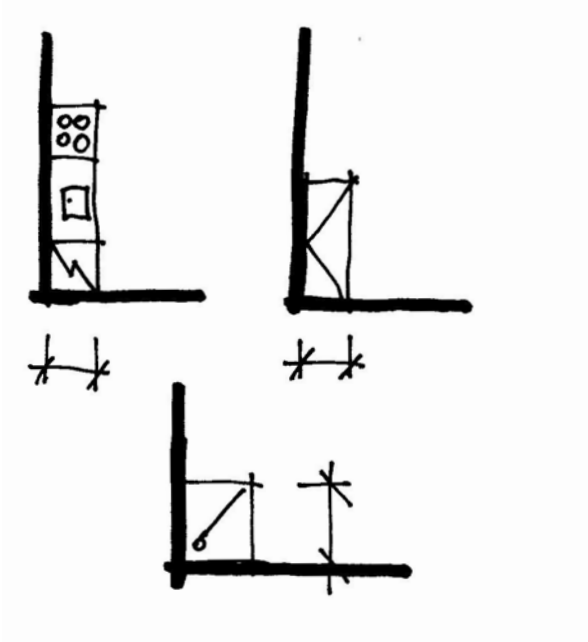
Drawings of building façades should include eaves, gutters and downpipes, and rainwater drainage fittings, yet they are often omitted. Of course, if you drain the roof with internal downpipes, they will not appear on the facade. The downpipes can be designed so as to be well integrated into the design of the facade.



56

If there are people in my elevations, does it matter where I put them?

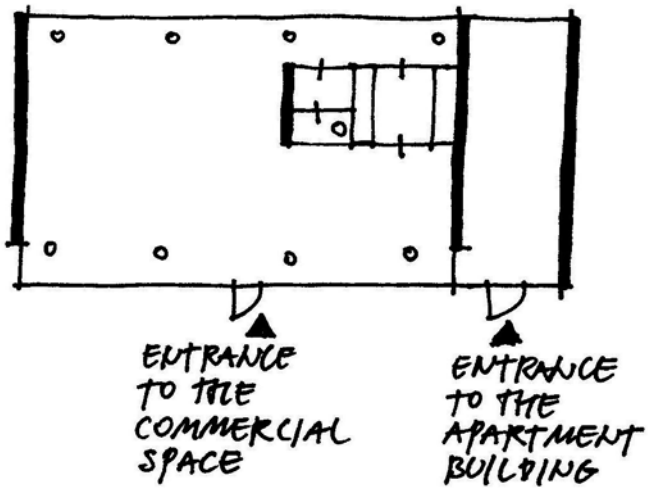
Do not place figures and other staff age, greenery, cars, public lighting poles, etc. either at the edge of the facade nor in the center – that is, not on the axis of the front of the house.



57

How am I supposed to know how big the floor plan is? There is no drawing scale!

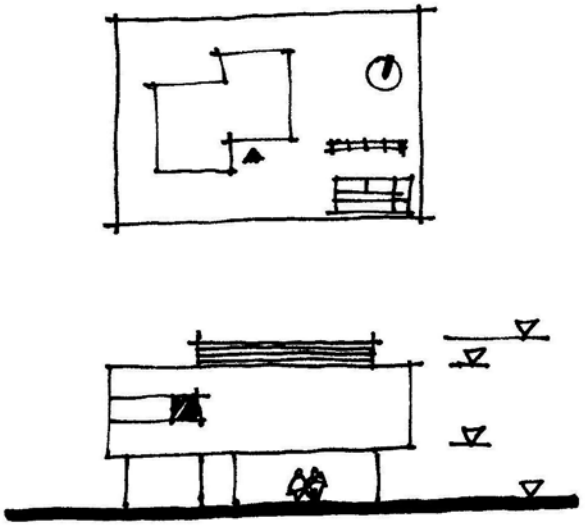
You can determine the size of the floor plan by measuring the width of the kitchen counter, the wardrobe or the shower stall. The width of the kitchen counter is generally the same internationally.



58

Why should I place a toilet on the ground floor of an apartment building where no one will live and where there will be only shops?

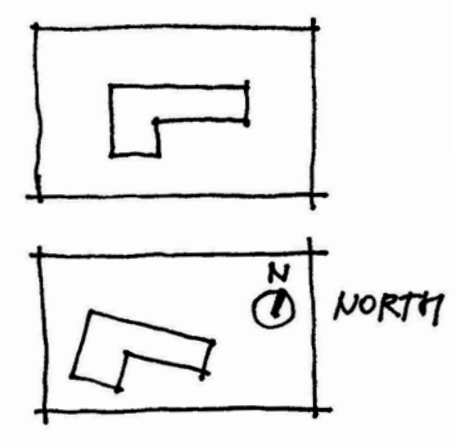
Spaces intended for commercial use must be equipped with at least one toilet with a sink, possibly also with a tea kitchen. You must not forget to include connections to the building services taking into consideration the paths of the service cores. The service cores pass vertically through the whole building and include the ground floor, where the commercial spaces will be located.



59

What should I dimension?

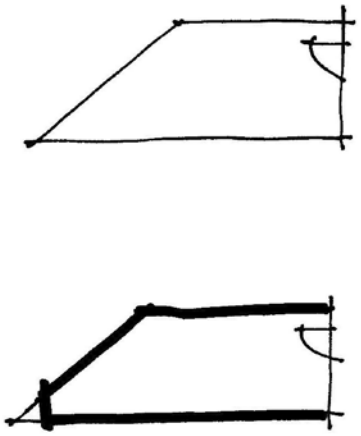
Architectural drawings are not to be dimensioned, if so only minimally. Drawing scale and the north arrow are to be shown. You should only add important height dimensions on sections and elevations.



60+

Does the drawing have to show the north arrow?

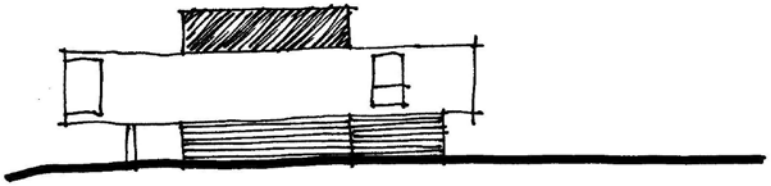
The north, or north arrow, is used on site plans and floor plans. You do not need to mark the drawing with a north arrow if you follow the established rule: for us, inhabitants of Europe, the north is up. Therefore, if you do not mark the drawing with a north arrow, it is assumed that the north is towards the top edge of the drawing. Conversely, if the north is other than the top edge of the drawing, you do need to draw on the north arrow. The same rule applies to our maps. They are mostly issued following the rule that the north is up.



1

How do you resolve corners with very acute angles?

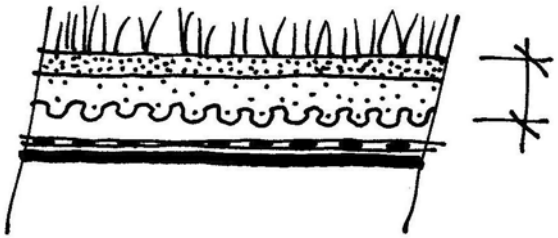
A corner in a room, where the walls form a very sharp angle, will in most cases be terminated by a short cross wall. Without it walls would form a sharp inside corner where, for example, it would be impossible to apply plaster finish or to place furniture.



2

Which color is most suitable for facades for kindergartens?

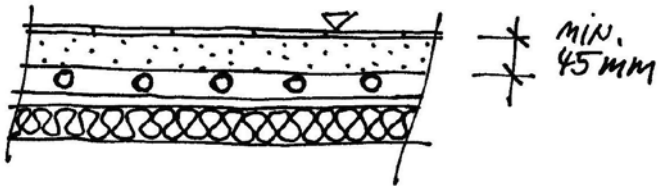
Any color of a façade is suitable. A color scheme for a kindergarten building need not create an infantile impression. The extreme use of colors does not provide much benefit and children will surely appreciate quality architecture without eccentric colors.



3

How do you make a green roof that doesn't occupy too much height?

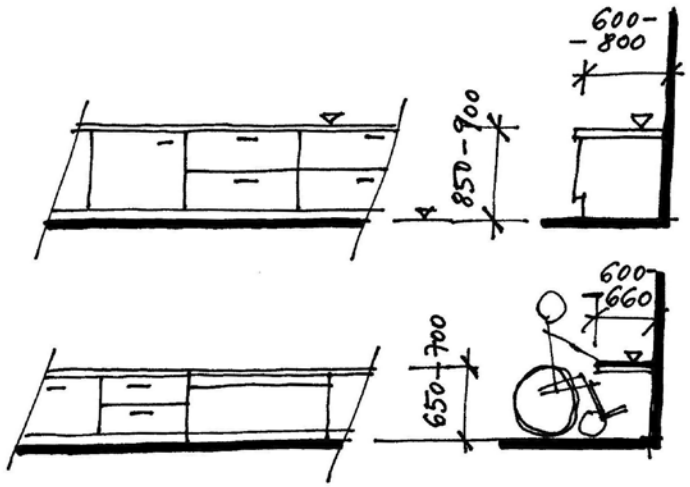
If a minimal thickness of the green roof stack in the design of a building is required, you should use so-called extensive greenery. That is a natural form of undemanding vegetation: xerophytic plants such as stonecrop, mosses, also herbs and grasses, for example. The height of the stack ranges from 8 cm to 15 cm.



4

Which flooring is appropriate and which is inappropriate for floor heating?

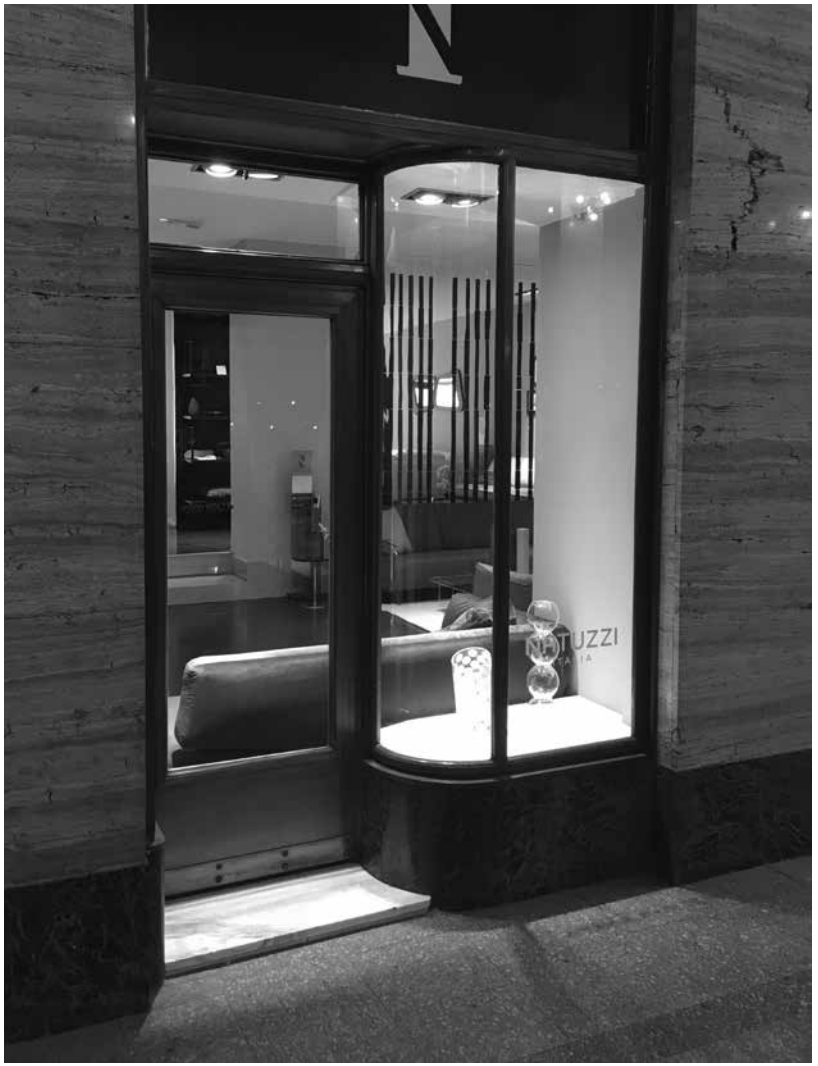
The important factor in the design of floors with underfloor heating is the thermal conductivity and resistance of the selected flooring material. Ceramic or stone tiles, laminated vinyl flooring or laminated floors are suitable materials. Wood flooring can be used as well, though it depends on the type of wood. However, do not use carpets with felt and high pile or massive oak floors as they can interfere with proper heating function.



5

What is the optimal height for the kitchen counter (or a kitchen island)?

The optimal height of the kitchen counter varies from 850 mm to 900 mm above floor level. With population growing taller the height keeps changing and also varies depending on the type of users. A basketball player will require a kitchen counter height corresponding to his own height and a disabled person moving around in a wheelchair needs a kitchen counter height of 770 mm to 850 mm above the floor. However, do not forget to allow wheelchair access under the countertop, and likewise under sink and stove.

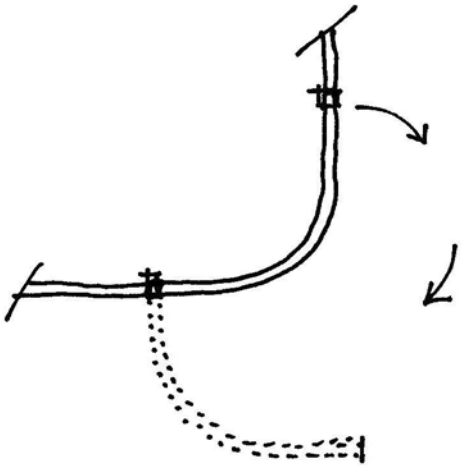


Curved glass shop window,
Vodičkova street, Prague

6

How do you show the door opening if the glass partition is curved?

Drawing the direction and way of opening of curved glass partitions in the floor plan is the same as drawing an opening of a door panel or of cabinet doors.



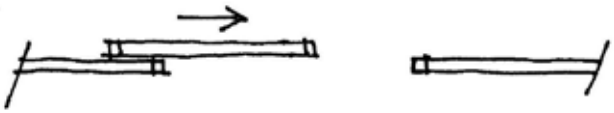
Sliding glass wall, house Měník,
Milan Stránský Building Company,
Czech Republic

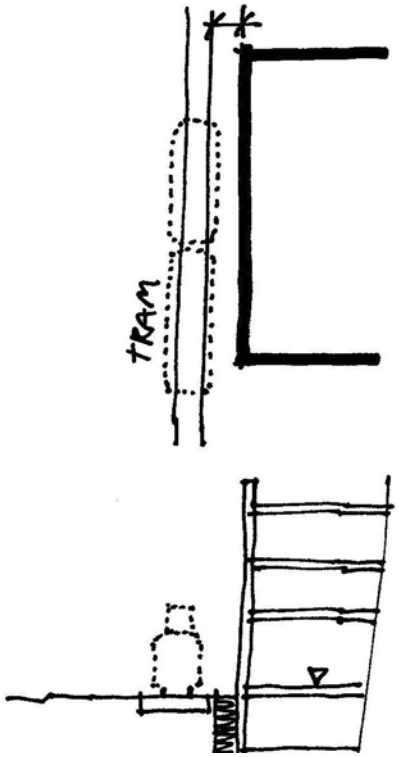
7

How do you show a glass partition with sliding doors?

In floor plan drawings, the glass partition is drawn as a window at a given thickness and showing the number of sheets of glass.

The arrow indicates the direction of sliding or, as with door leaves, the direction of opening. The sill must be shown if in some areas the glass partition isn't level with the floor.





8

How close to the buildings can we place the tram line?

The tram line can be placed immediately next to the proposed building/development. However, a number of conditions must be met. For example, the pass-through road clearance profile of vehicles must be kept. Vibrations of passing trams must not transfer from rails onto the building, the structure of the building must be able to withstand stray currents from the overhead contact line, and last but not least, the building must meet the sound insulation requirement to withstand the noise generated by passing trams.

9

What height of chairs is used for children of different age groups?

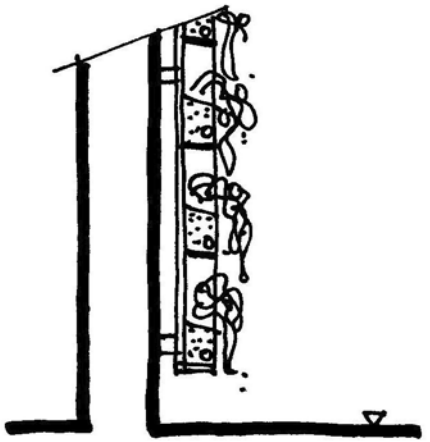
It is possible to acquire seating furniture for children of every age group, so that a seat corresponds to the child's age, or to obtain chairs and armchairs which can be adjusted to the required height.

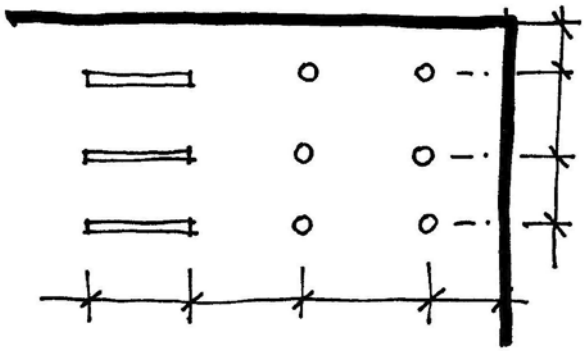
Vertical garden on the facade of the building,
Pasaje Gordón, Málaga, Spain

10

How do you make a vertical garden?

Vertical gardens consist of a supporting structure, a vegetation panel and an irrigation system.
The gardens can be hung directly from facades or interior walls. The main component of the vertical garden is a vegetation panel. It consists of a system of pockets made of geotextile, supported by a rigid plate. The pockets are filled with a substrate into which plants are planted. The garden is equipped with an automatic irrigation system, preferably using rainwater.

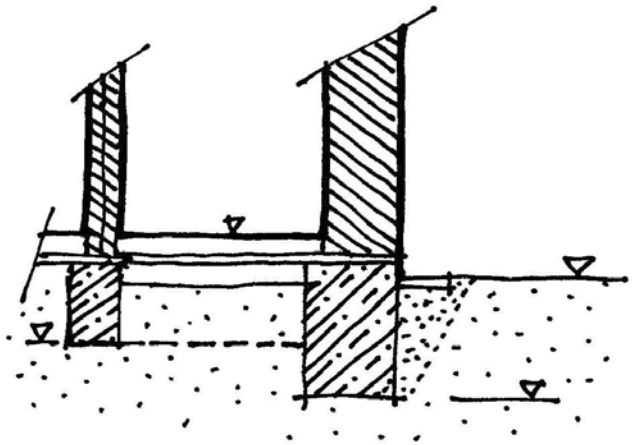




11

How do you draw lamps in the floor plan?

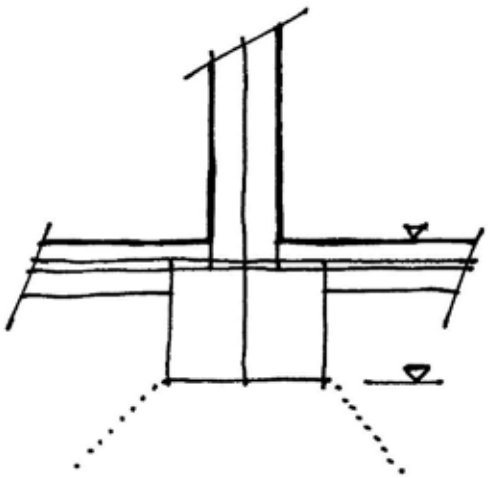
The lights are plotted on reflected ceiling plans. The layout of the lights in the rooms under design is drawn in the scale of the plans, reflecting their actual production size. The proposed lights are also drawn into elevations and drawings of sections. Lights should be dimensioned or the size of the light should be included in the legend. In the reflected ceiling plans dimension the axes of the lights' distribution layout



12

Why do footings project to different depths in a foundation?

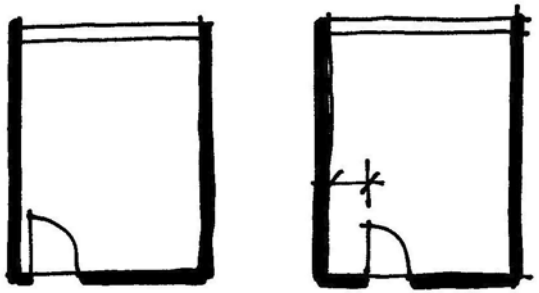
In addition to the design construction parameters, the so-called frost line depth also plays a role in the foundation level. It usually ranges between 800 mm and 1100 mm below finished ground level, depending on the type of soil. Since the foundations under the internal load-bearing walls are not exposed to frost, they do not need to be laid below the frost line. It is therefore very uneconomical to base the entire foundations at the same depth.



13

Why should the foundations of adjacent buildings be laid at the same depth, so that the bottoms of the footings are at the same level?

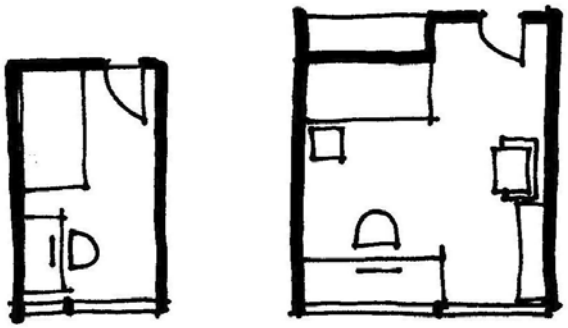
Foundation structures of adjacent objects interact structurally with each other and may therefore be pressing against each other, or affect each other in another way. If they are placed at the same footing bottom level, their mutual forces are in equilibrium and the distribution surfaces counter-balance each other. Other construction arrangements of foundation structures are possible, but usually require complicated structural safeguards.



14

Why is it not appropriate to place the door in the immediate vicinity of the adjacent perpendicular wall?

If we install the door in the interior so that the open door panel is immediately adjacent to the wall, we create a blind wall. Then we cannot place any furniture, a shelf or a coat hanging rack behind the door. It is very difficult to design a quality interior if one corner of the room is strangely cut off by an inaccessible space.



15

Why is it not appropriate to design room areas and window areas of minimal parameters?

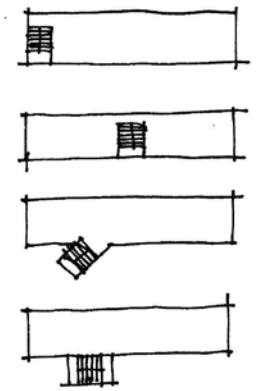
Standards, regulations and building codes specify minimum parameters for room and window design in order to clearly define needs for intended functions. However, it is necessary to realize that these are minimum requirements, that is, that they can no longer be any smaller. From this it follows that we usually propose areas of larger-than-minimum requirements as a part of quality design and for user-friendliness.

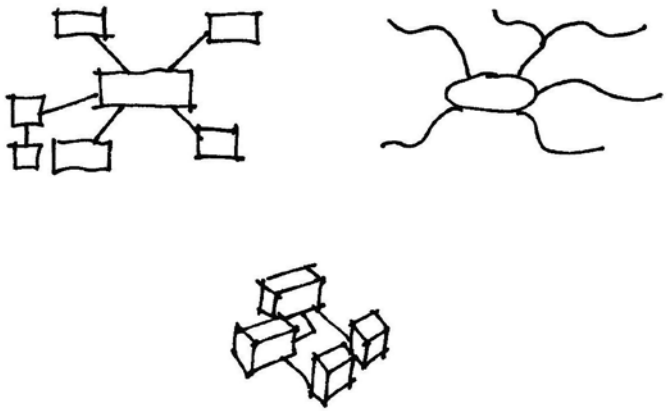
Stairs on the embankment Dalmannkai,
Hafen City, Hamburg, Germany

16

Does an architect have to be able to design staircases?

The correct positioning and choice of the shape of the staircase has a fundamental impact on the quality of the overall architectural design of the building. In retrofits and alterations to the buildings, changing the shape and location of the staircase becomes very difficult and therefore the staircase clearly defines quality options of possible long-term use of the premises or flexibility of changes to the function of buildings. It therefore falls upon the architect to have a clear idea and vision of the shape, structure and location of vertical circulation functions.

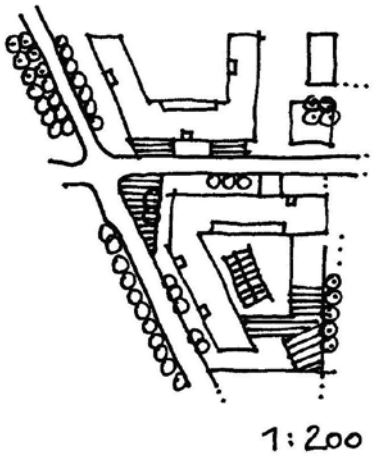




17

What is the schematic diagram of the project?

The idea (Greek ιδέα) is the original thought that formed the basis of project activities. The basing of architectural creativity on a supra-material (over engineered) factor determines its intellectual value. The process of creative thinking, going beyond the conventional understanding of function, materiality and form, distinguishes architecture from engineering. The schematic diagram is a graphic illustration of the creative thought process. It can be expressed using a pictogram, diagram, mind map, spidergram...



18

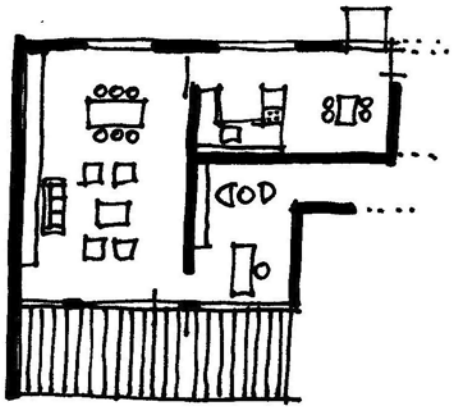
Do I have to draw a 1:500 site layout plan if I draw a 1:200 accurate spatial plan for the building plot?

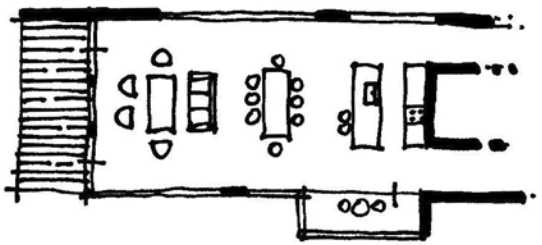
The site layout plan on a scale of 1:500 is used to determine the location of the building on the site, the distance of the building from the plot limits, entries, construction works and technical networks. The 1:200 scale site plan is a detailed development plan of the surroundings of the house, including greenery, pavements, surfaces. The situational plan is ultimately meant to be agreed with local authorities, who will check compliance with the local development plan. The development design serves to make elements of greenery, pavement and small architecture (urban details).

19

Does respecting the urban context preclude design invention?

We understand respect for the context in many ways. It can mean inspiration with form and material or construction that is characteristic for the region, surrounding area or neighborhood. Context doesn't refer to just buildings but also to nature, culture and history. Taking into account only the shape of neighboring buildings and their details is a naive understanding of the meaning of context. Conscious, modern design is based on intelligent interpretation of the context, using the language of modern architecture, respecting the neighborhood and respecting nature. In this way, we always keep individual characteristics of the designer in the design.

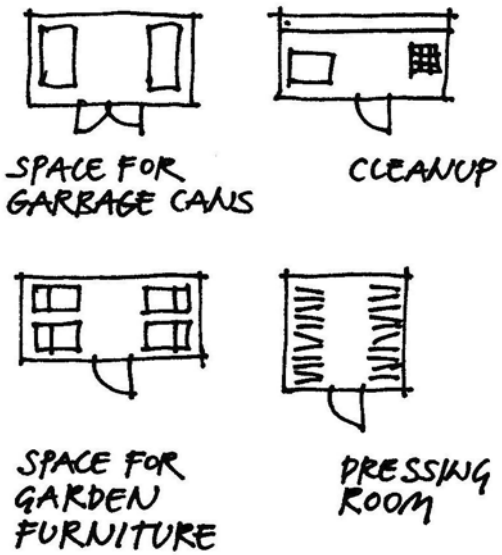




20

Should the kitchen be consolidated with the living room or should it be designed as a separate space?

The house should be designed in such a way that the choice belongs to the user. Houses are designed not only for an intentional investor (a later user), but often for a developer who sells them to the user. The home user and his family can have different lifestyles. The kitchen can therefore be both: a place to prepare meals for a large family, where work takes place for a large part of the day, but it can also be a place for short-term preparation of meals. This applies to people who because of work, a family model, lifestyle, etc. use semi-finished food products or eat out. Designing transformable, flexible interiors will allow the user to decide to combine the kitchen with the living room and the location of the dining room.



21

What spaces do designers usually forget about?

Designers usually forget about technical spaces, rooms for storage of cleaning equipment, washing and drying (having a laundry basket on display in the guest toilet is inelegant), rooms for storing garden tools and garden furniture for the winter...

60/21

60 questions are answered by:

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Silesian University of Technology,
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Once, during a design studio, I was enquiring about how far students progressed with their design assignments since our last session.

I received a variety of answers from bachelor's degree or master's degree students. Here are some of them:

I did not have time to prepare for the studio...

I forgot it at home...

I don't have it, I have a different laptop with me today...

I forgot to bring it...

I spilled something over it yesterday...

I accidentally grabbed a different bag in the morning...

I thought about it, I just couldn't find a place to print it at...

My computer crashed, I lost everything...

I emphasized to my students that preparing for the studio is the same as if one is preparing for a meeting with a client. If you make excuses like these in front of a client, it might be the last time you will see him.

Recommended Literature

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Regulation No. 62/2013 Coll., *Documentation of Buildings*

Czech Technical Standards, Single Parking, Row Parking and Multi Story Parking, ČSN 73 6058 (September 2011)

FAQ by Students of Architecture

Sixty/twenty-one most frequently asked questions
by students in the studios of architectural studies

assoc. prof. Ing. arch. Jindřich Svatoš

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