



زانكۆی سه‌لاحه‌دین - هه‌ولێر
Salahaddin University-Erbil



SITE ANALYSES

Architectural Design second year

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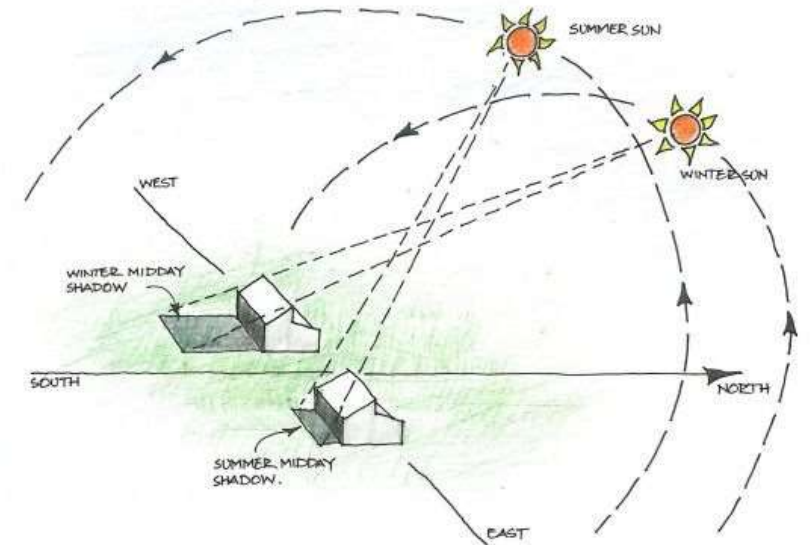
18/9/2022

Objective

- Become familiar with Site analyze features.
- To learn how to analyze slope site.
- To learn how to select best design for slope site.
- To learn how to select best form for slope site.

Advantages of site analysis

It allows us to understand the existing opportunities, or problems in a site, and make informed decisions on how to respond to our findings. (design alternatives). This response could be that the designed building reflects the surrounding context and is designed to be in sympathy.





Why do you carry out an architectural site analysis?

- Prior to starting any design, **your client will want to know whether construction on the site is viable**. Carrying out an extensive site analysis will assess whether development is financially feasible, and establish parameters to implement the best design that responds to the physical and environmental features of the site.
- **A contextual analysis** is a research activity that looks at **the existing conditions of a project site**, along with any imminent or potential future conditions. The purpose is to inform us about a site prior to the start of our design process so that our initial design thinking about a site can incorporate considered responses to the external conditions.
- An architectural site analysis will look **at issues such as site location, size, topography, zoning, traffic conditions and climate**. The analysis also needs to consider any **future developments**, or **changes to the sites surroundings**, such as a change of roads designations, changing cultural patterns, or other significant building developments within the area

The major role of contextual analysis in design is that of informing us about our site prior to **beginning our design concepts** so that our early thinking about our building can incorporate **meaningful responses to external conditions**.

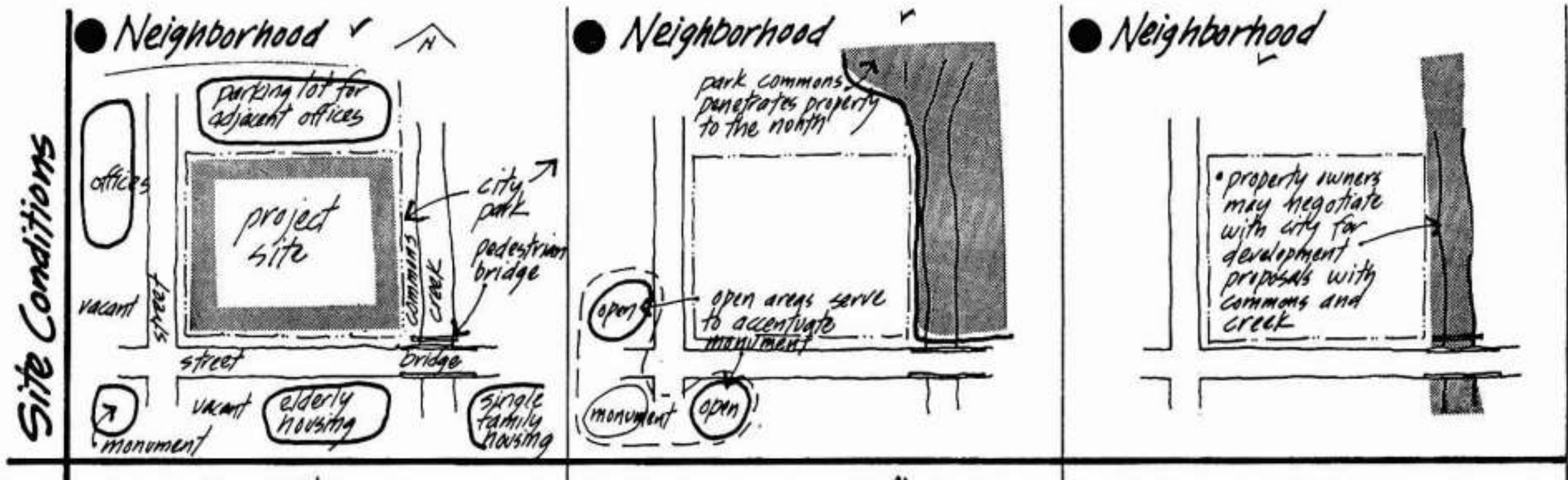
Context is defined in the dictionary as the "whole situation, background or environment relevant' to some event or product." The derivation of the word means to "**weave together**."

It behooves us to not only know something about the compositional characters **of buildings, people and contexts** but also about how they affect themselves and each other.

What kind of information are we collecting?

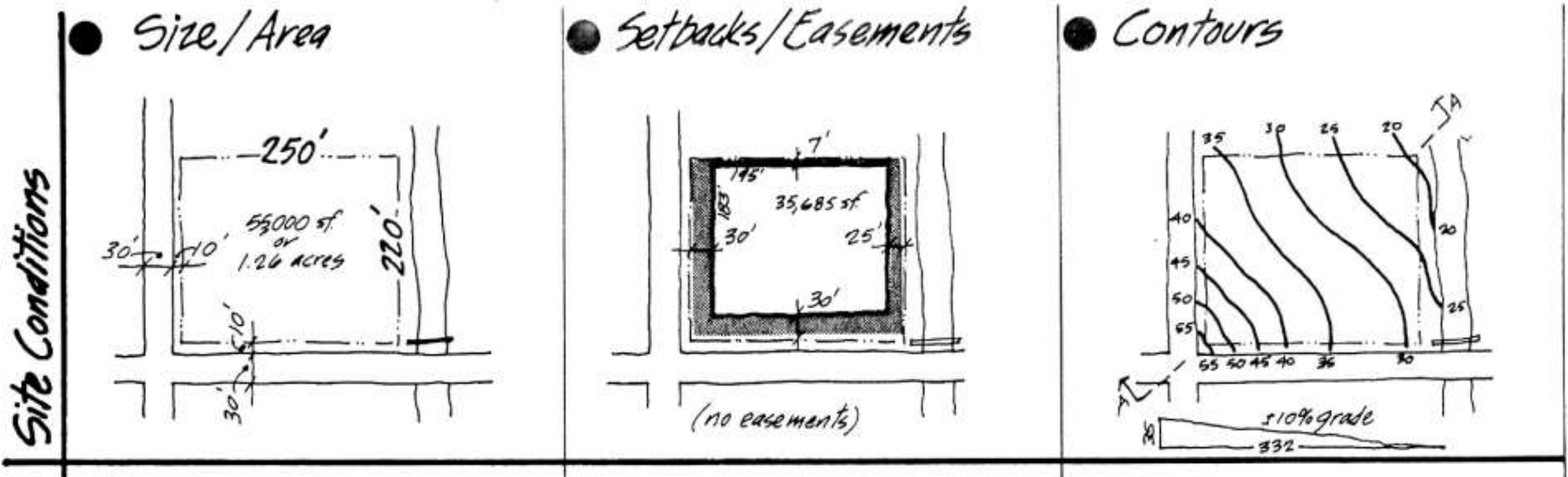
1. Site Location
2. Neighborhood Context
3. Size And Zoning
4. Natural Physical Features
5. Circulation
6. Climate
7. Sensory
8. Legal
9. Man-made Features
10. Utilities
11. Human And Cultural





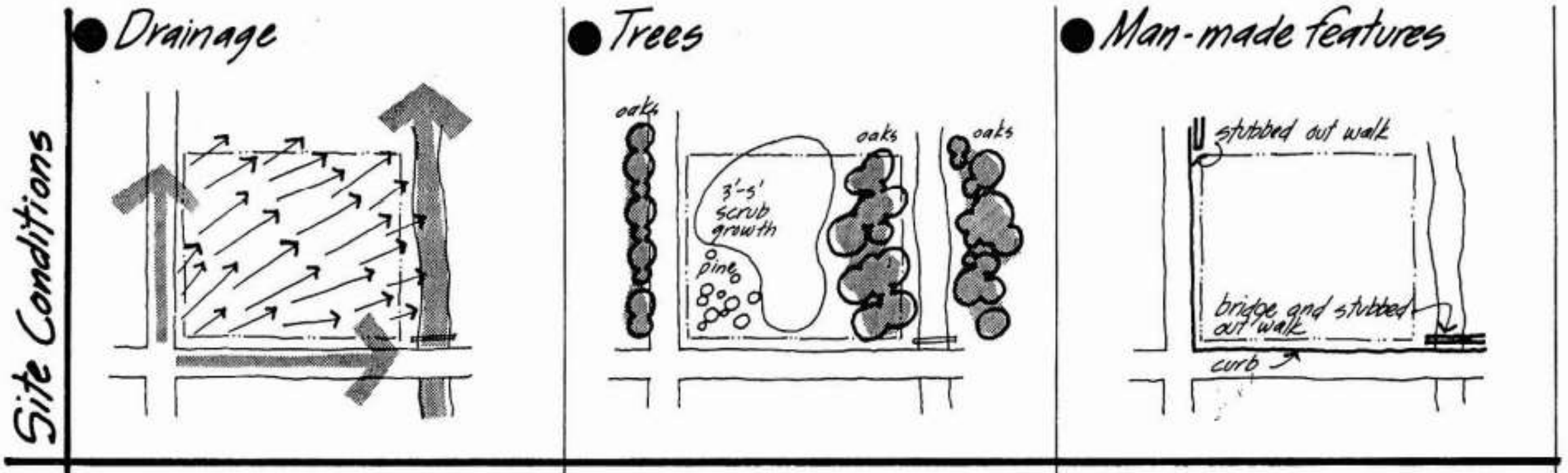
1. Site Location (forest, hill, mountain, sub urban, neighborhood, city. Etc)

2. Neighborhood Context (show existing and projected uses, buildings, zoning. Etc.)



3. Size And Zoning (Documents all the dimensional aspects of the site including boundaries, location. Etc.)

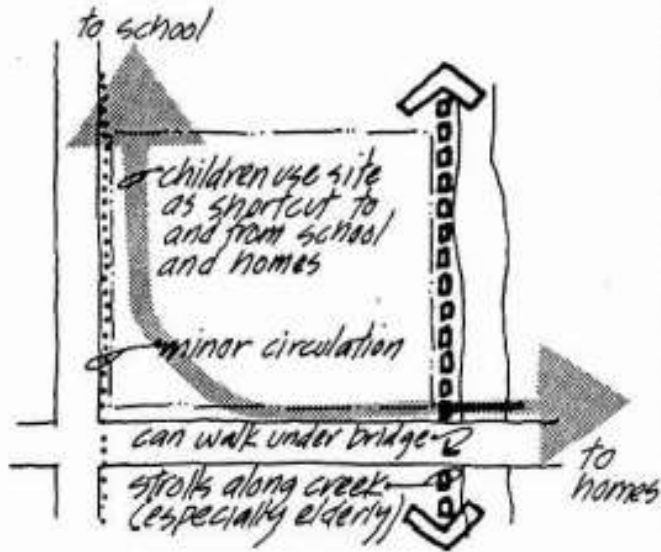
4. Natural Physical Features (includes contours, drainage patterns, soil type and bearing capacity. Etc.)



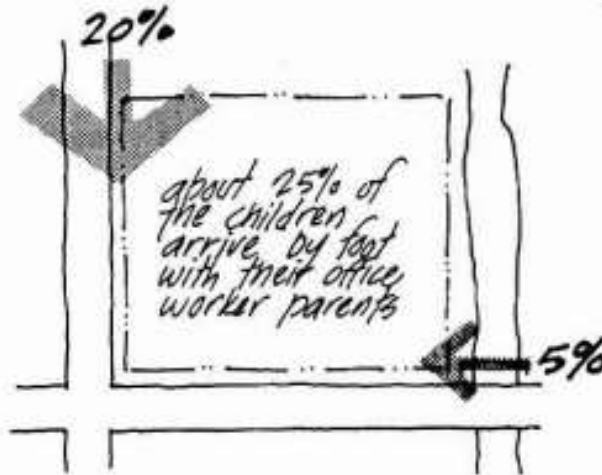
8. Legal (the legal description of the property, covenants and restrictions, present ownership, present governmental jurisdiction (city or county))

9. Man-made Features (Documents on site conditions such as buildings, walls, drives, and paving patterns)

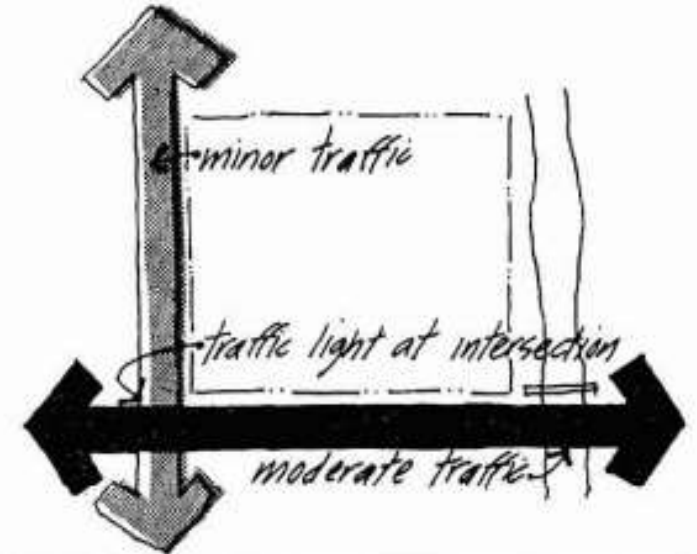
● Pedestrian circulation



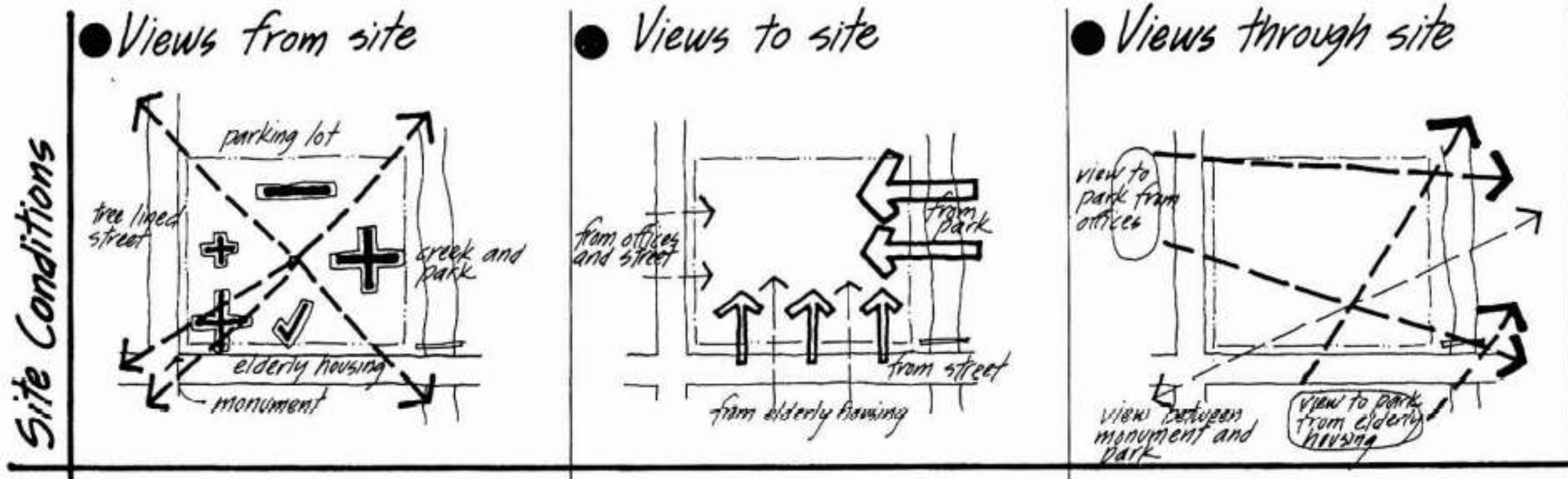
● Pedestrian circulation



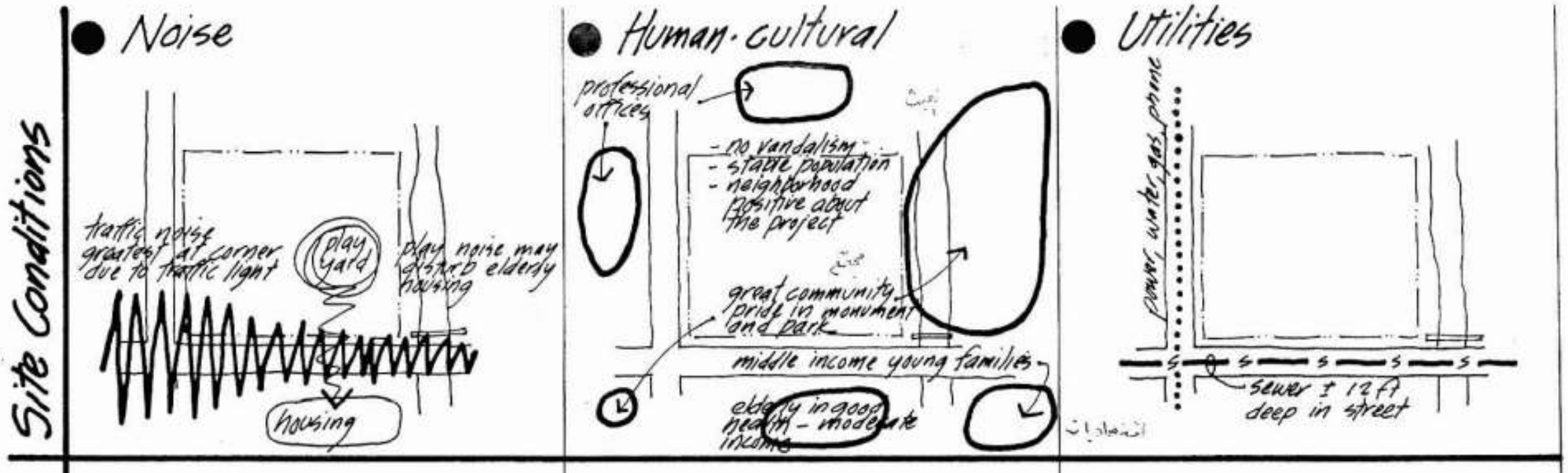
● Vehicular circulation



5. Circulation (Presents all vehicular and pedestrian movement patterns on and around the site)



7. Sensory (Documents the visual and noise generated around the site)

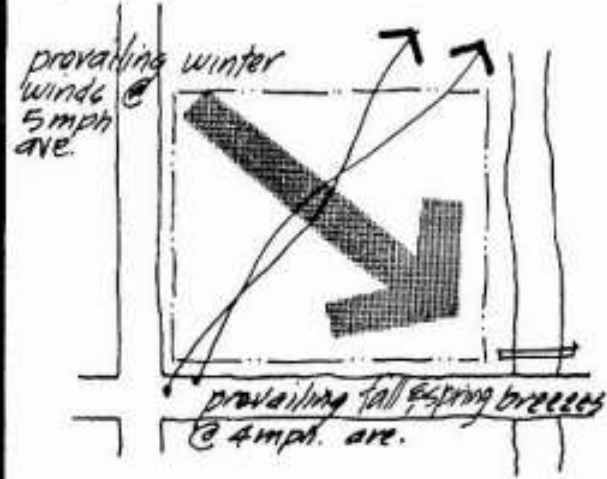


10. Utilities (include electricity, gas, sewer, water and telephone.)

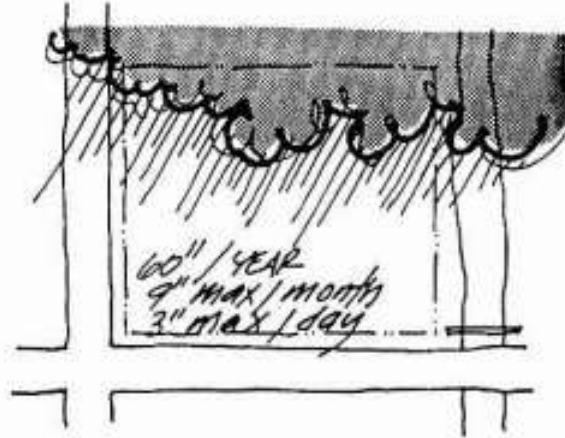
11. Human And Cultural (Includes analyses of the surrounding neighborhood in terms of cultural, psychological, and It is of behavioral and sociological aspects)

Site Conditions

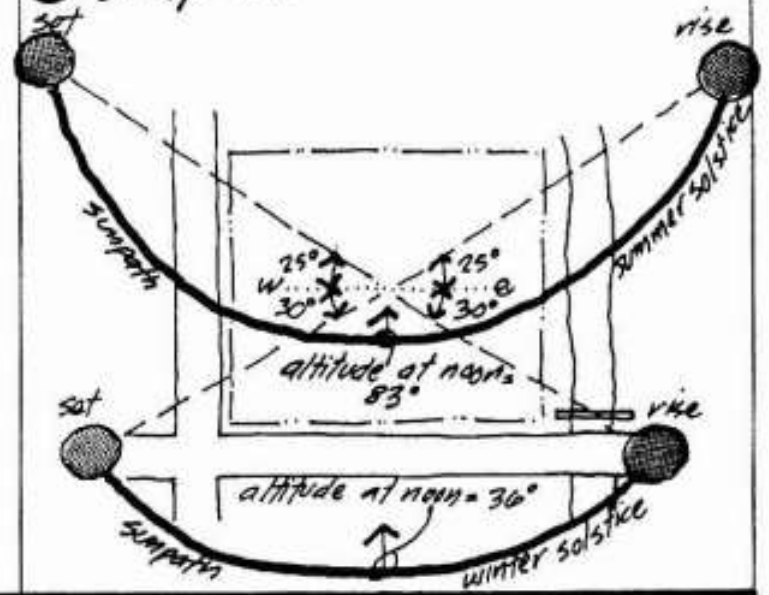
● Wind



● Rainfall

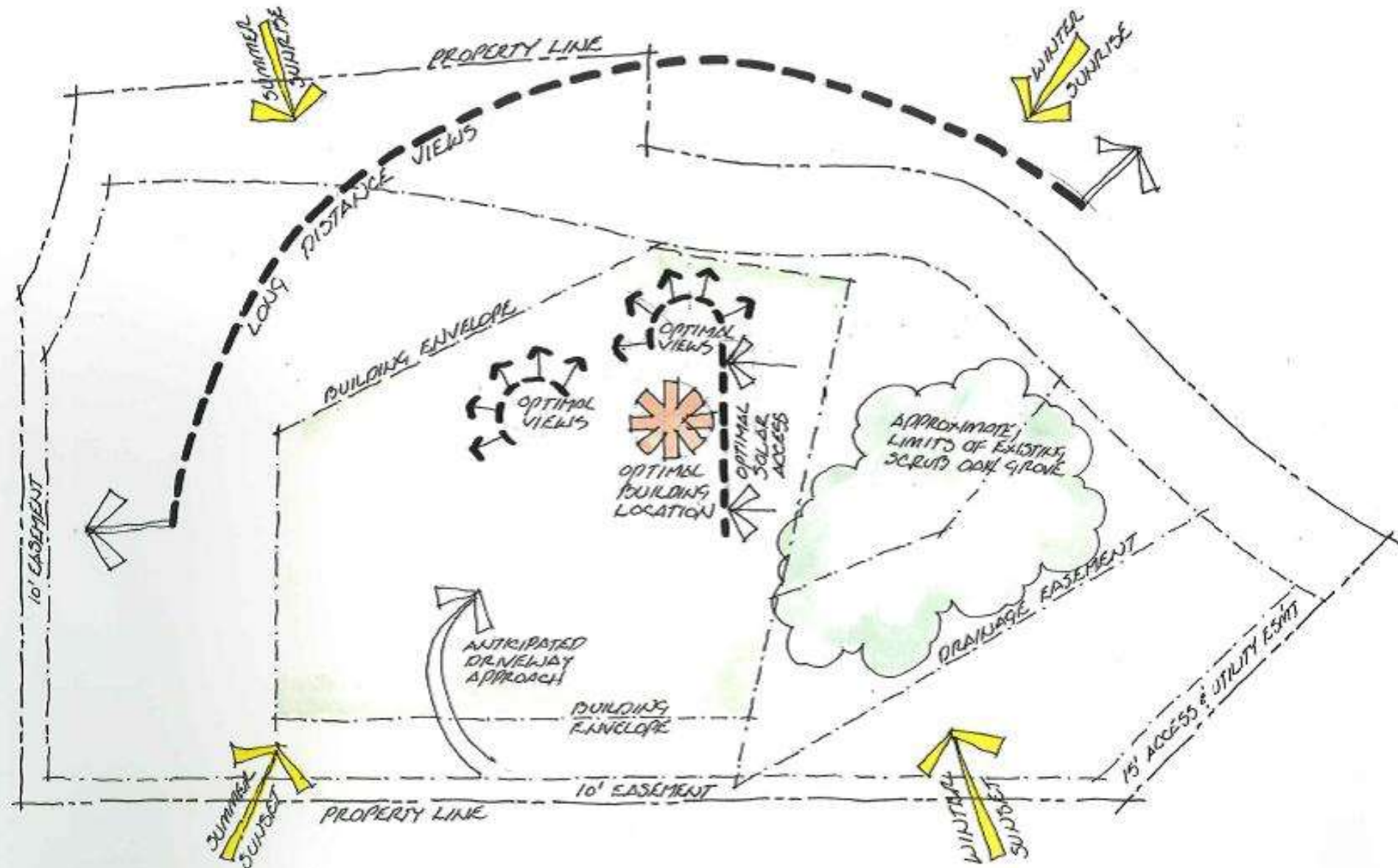


● Sunpath



6. Climate (climate conditions such as rainfall, snowfall, humidity and temperature ,prevailing wind directions, sun-path)

Site analysis by sketch





Site analysis (Building on slope site)

An analysis of the site should identify important physical characteristics to take into consideration in the building design.

- **The degree of the slope**
- **The type of slope**
- **Solar orientation**
- **Direction of prevailing breezes/ Rain water**
- **The best advantage and viewpoints**

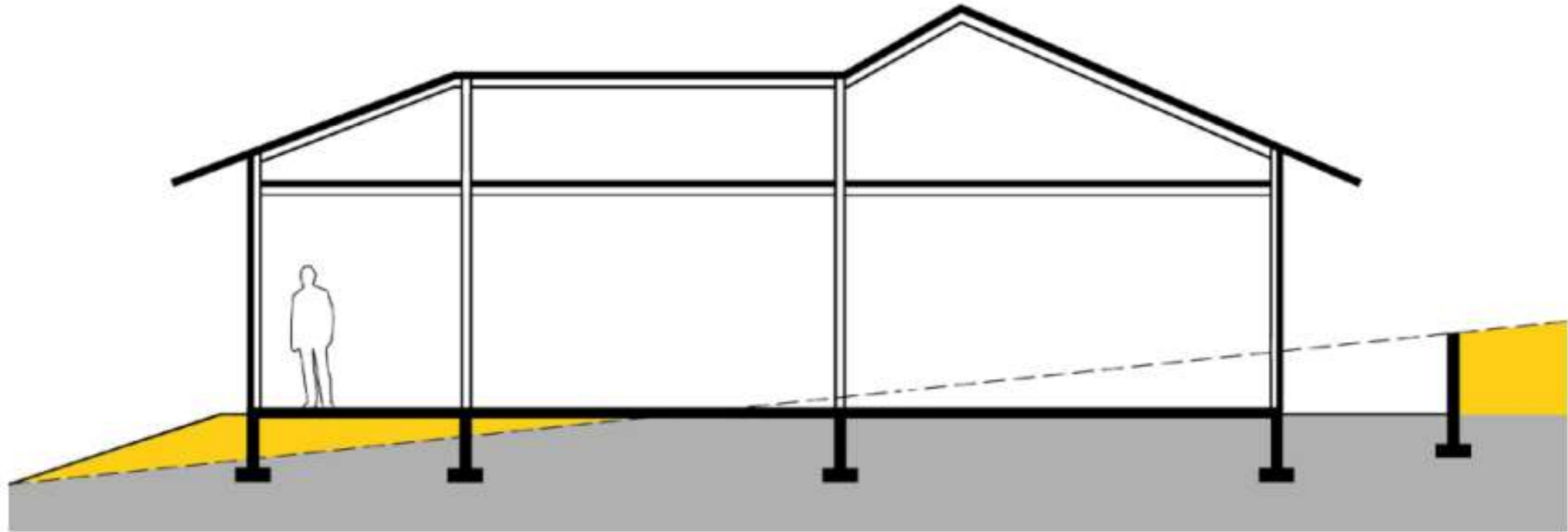
Also there are other tips such as; Surrounding, Plants material , vegetation, soil, topography, geographical location, climate ,water.



Important tip should be taken in consideration during design and construction:

- A well designed building on a sloping block should have minimal excavations
- A well designed building on a sloping block should have attractive retaining walls
- A well designed building on a sloping block should have no ongoing stormwater or maintenance problems

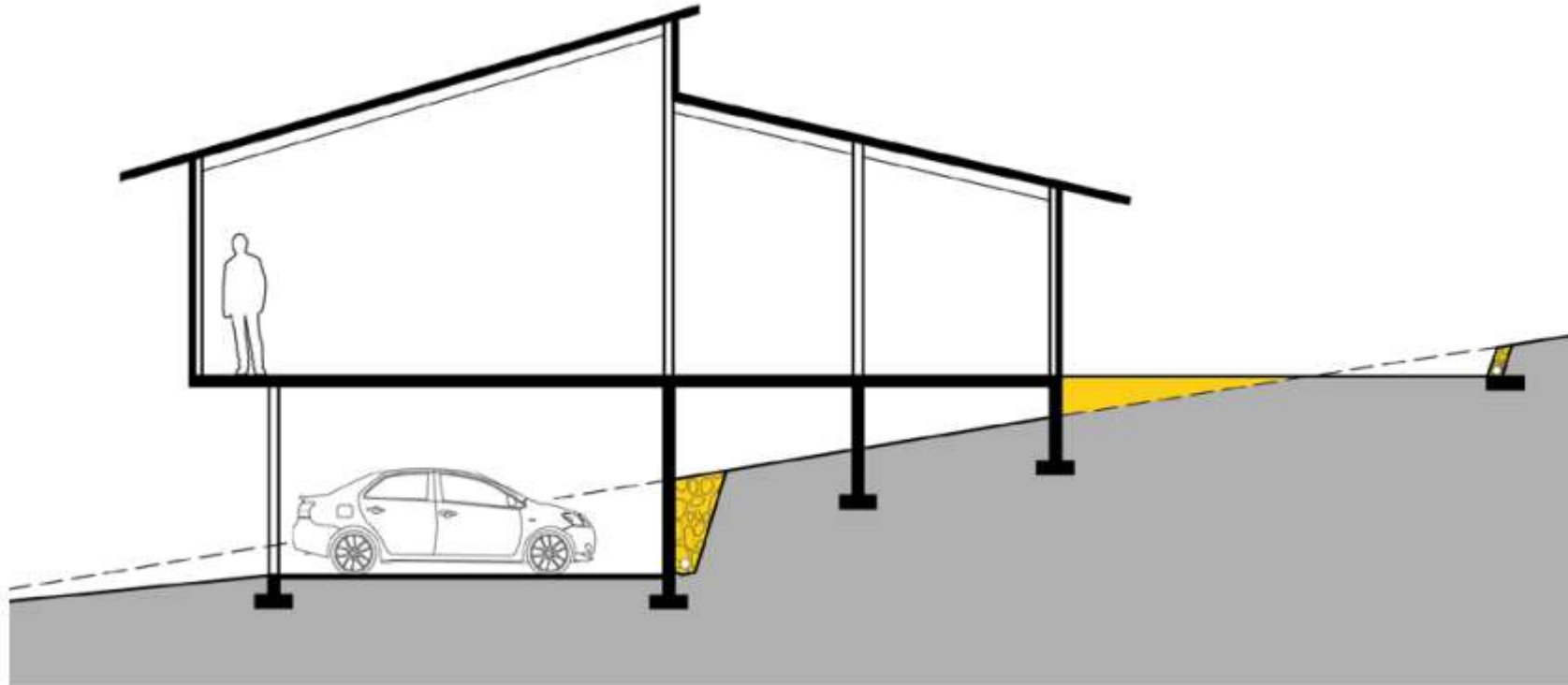
Matching building design to suit the degree of slope



Flat to slightly sloping sites

Slopes between seven and 10 per cent should accommodate some level change within the building footprint.

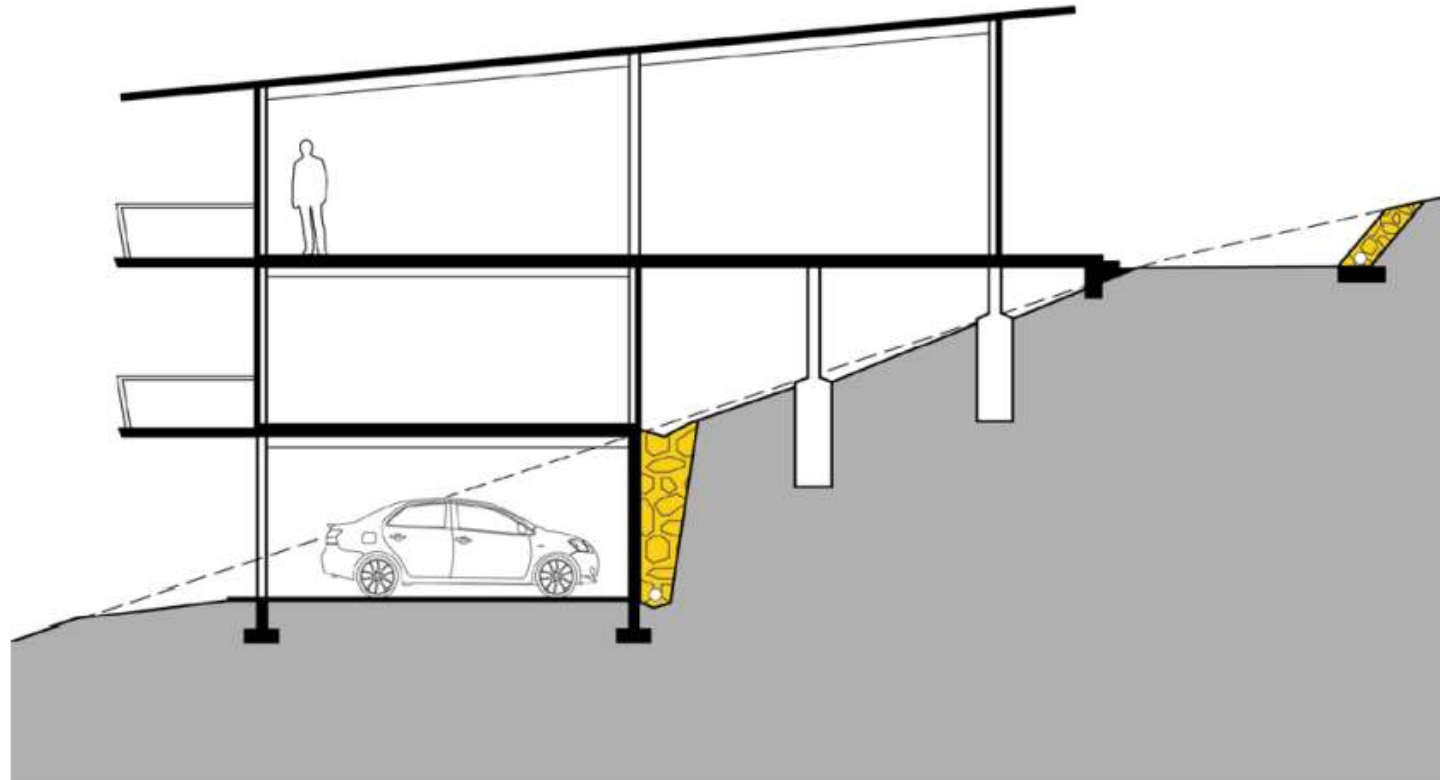
Matching building design to suit the degree of slope



Moderate slope

For slopes between seven and 20 per cent stepping two or more slabs or using part slab/part post or beam construction would be suitable to handle the slope. Single slab on ground construction is not recommended.

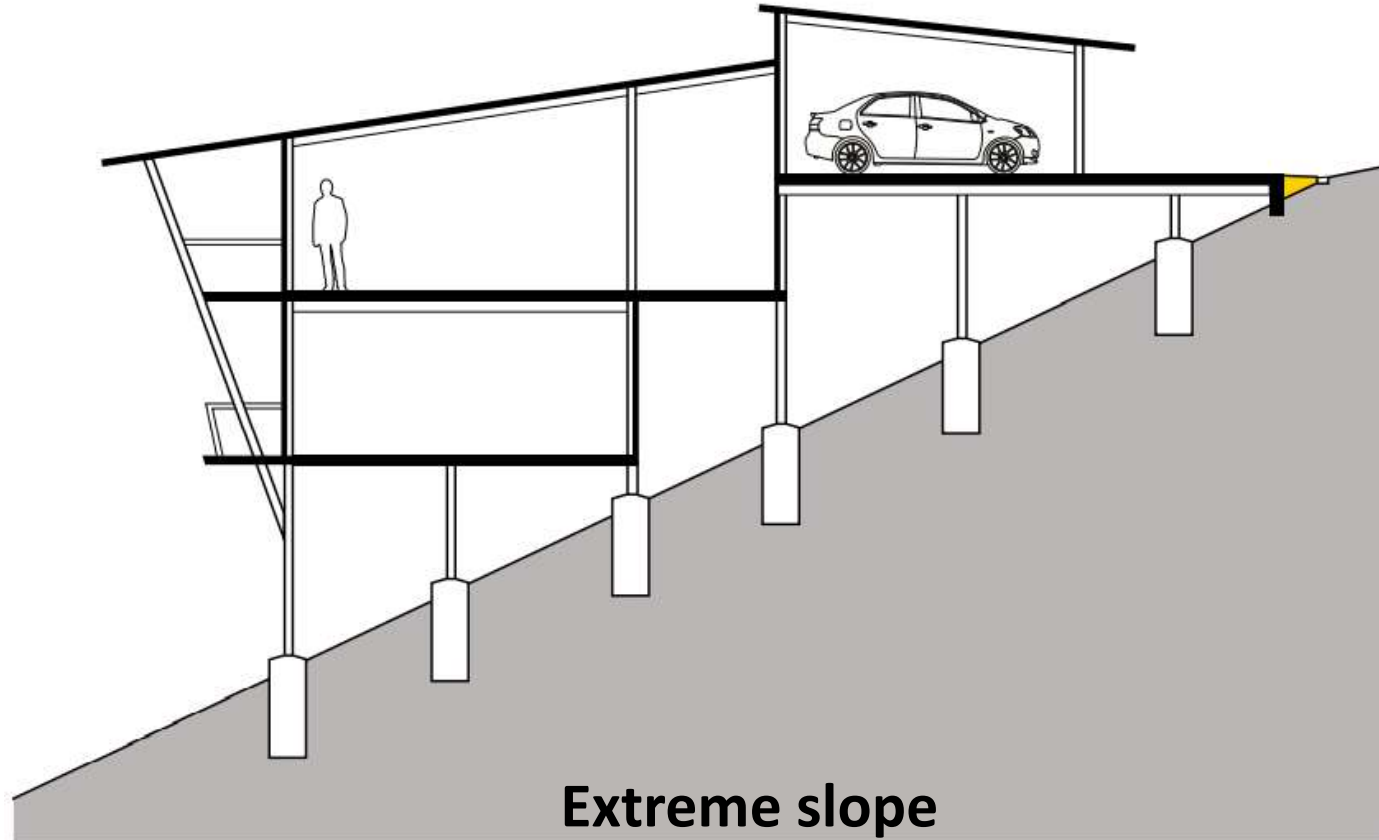
Matching building design to suit the degree of slope



Steep slope

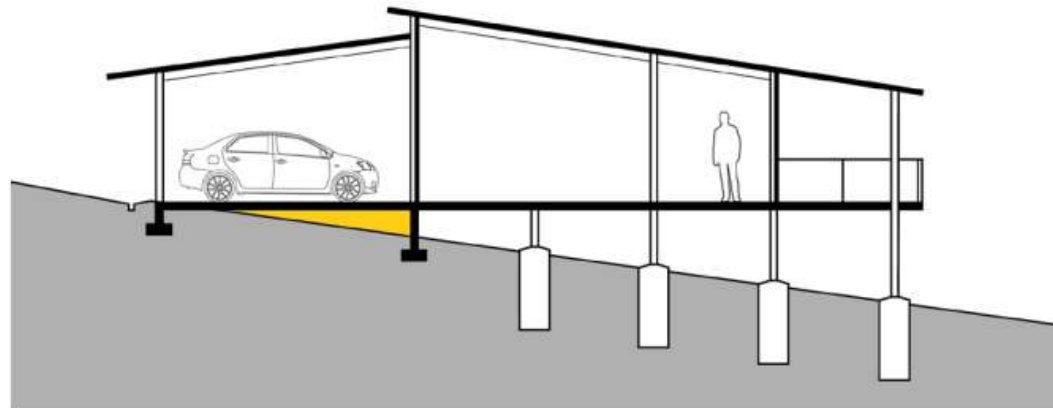
For slopes between **20 and 33 per cent**, post and beam construction should be used which steps with the site. This may include a lower part level with a concrete slab. Single slab on ground construction should not be used.

Matching building design to suit the degree of slope



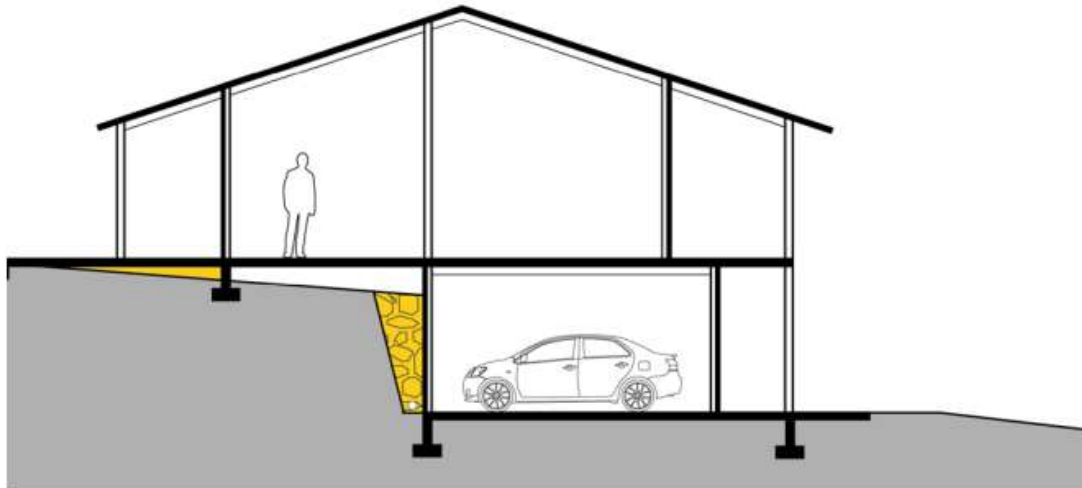
For slopes more than 33 per cent, , suspended or pole construction techniques are required. This degree of slope is more suited to a downslope configuration. Driveway access is generally too difficult on steep upslope lots which require large batters/retaining walls and sometimes a curving driveway

Building ideas for different slope types



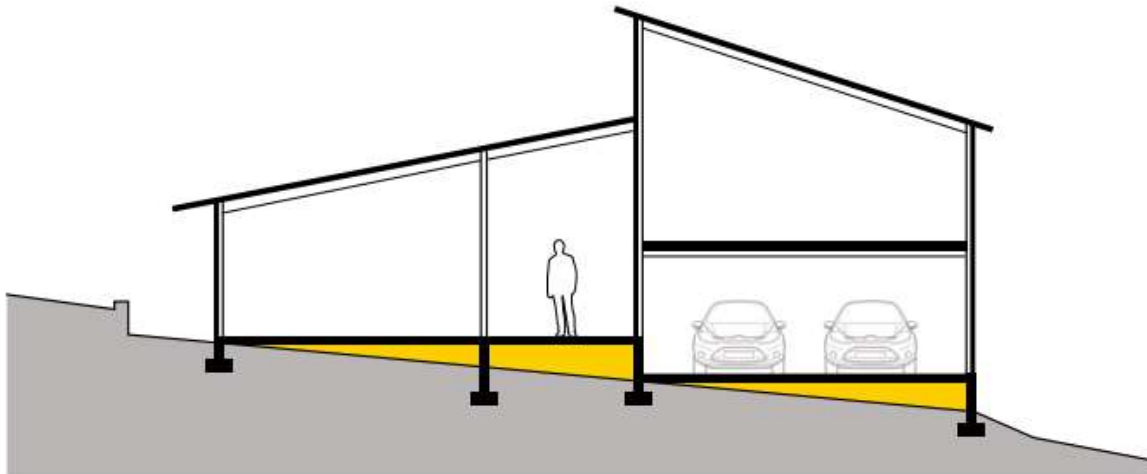
Typical house design for a down slope site

Building ideas for different slope types



Typical house design for an up slope site

Building ideas for different slope types



Typical house design for a side slope site

Dealing with surface and sub-surface drainage



Good design will minimize future surface and sub-surface drainage and maintenance problems common to building on a sloping site. Understanding the effects of water on your site in both dry and wet seasons can be challenging.









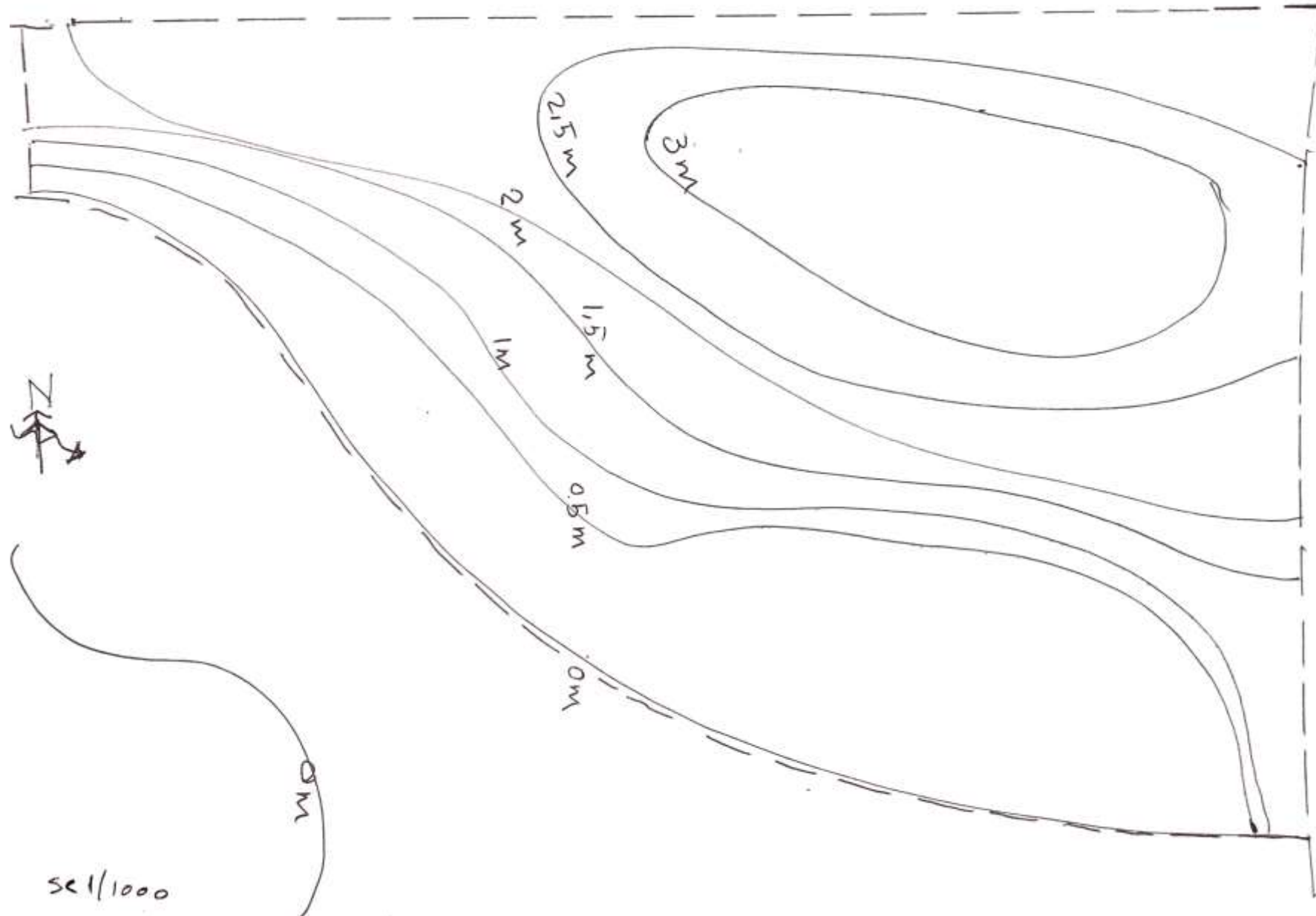


Summary

- Analysis of site slope determining its type and degree before design is important. Also analysis physical characteristics of site plan.
- The degree of slope percentage effect on construction and form of design.
- The type of slope due to street effect on space layout and form buildings design.

Reference book : Site Diagramming Information For Architectural Design Analysis -
Edward T. White Professor Of Architecture Florida A&m University

Site plan



ANY
QUESTIONS?

