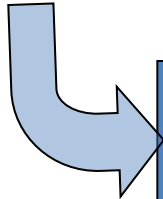


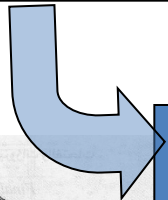
Lay out & Architectural Drawings

Preparing the Lay out & architectural drawings:

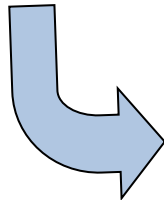
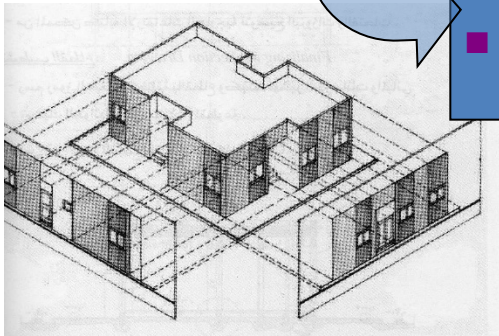
□ Location plan



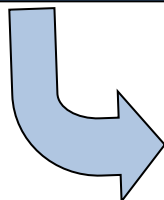
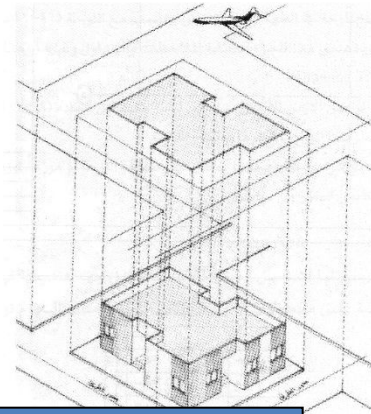
□ Site plan



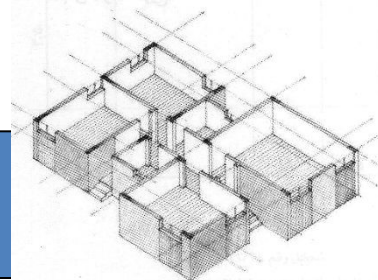
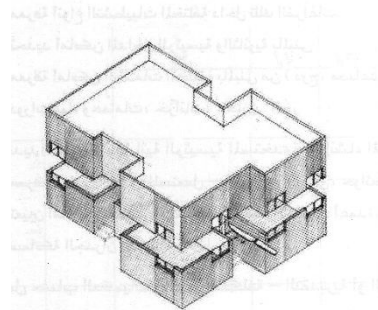
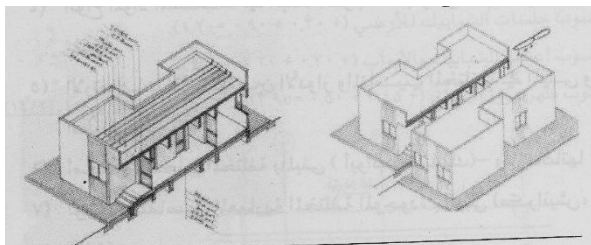
■ Plans



■ Elevations



■ Sections



Introduction

- A building or construction project requires a complete set of lay out & architectural drawings.
- These drawings are used by the local planning department, site engineer and building contractor.

Types of Lay out plans

- Location plans
- Site (block) plans

Location Plan

- It identifies the location of the proposed new building within its surroundings.
- It also helps the architect/engineer to plan the layout of a new building scheme.
- It is required by the local government planning department to decide the approval of project.

Location Plan



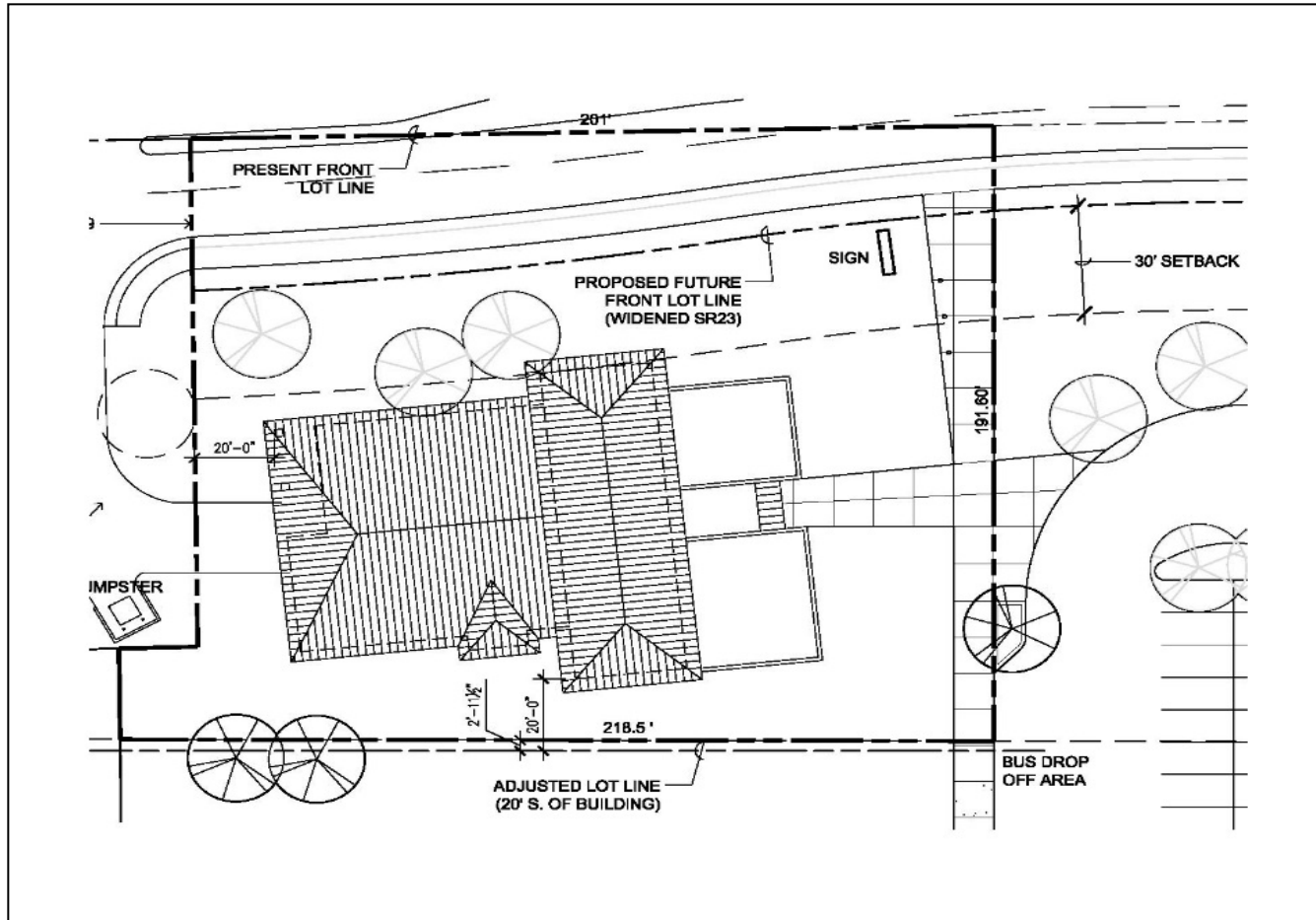
Location Plan

- Neighbouring buildings and their boundaries are also shown, as roads, street names and fields.
- The **scale** of the drawing depends on the size of the whole building scheme but is normally **1:1000**

Site plan

Site plan is a view looking down at a building from above, illustrating its location & orientation on a plot land & providing information about the site's topography, landscaping utilities, and site work.

Site (Block) Plan



Site (Block) Plan

The importance of site plan:

- It illustrates the existing natural & built features.
- A site plan (also known as a block plan) shows the site boundary and the outline of the new building which are highlighted in the location plan.

Site (Block) Plan

The importance of site plan:

- Paths, roads and neighbouring plots are also shown. This type of plan enables the builder to mark out the site, lay drainage pipes and build manholes.
- It is also submitted to the local planning department for approval.

Site (Block) Plan

A site plan shows:

- Existing trees
- The building outline, including the roof
- The main dimensions of the house and site
- Drainage system

Site (Block) Plan

A site plan shows:

- The position of the house on the site
- Contour lines which show the slope of the land
- The scale of a site plan depends on the size of the building. For houses and small buildings a **1:200** scale is used.

Architectural drawing

Definition A sketch, diagram, plan, or schematic used to design, construct, and documentation of buildings and other structures.

Architectural drawing of building consists of following:

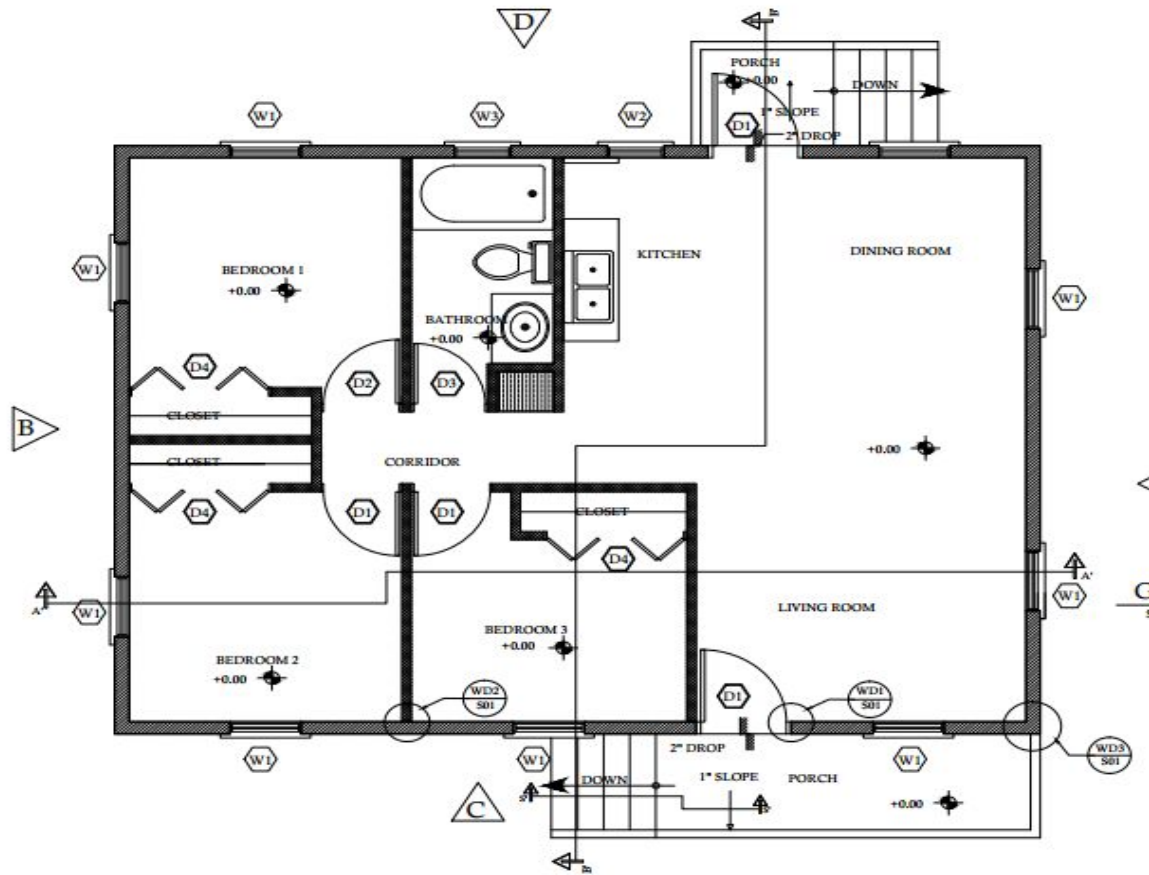
- 1- Building Plan (Floor wise)
- 2- Elevation
- 3- Section

Building Plan (Floor wise)

The term "**plan**" may casually be used to refer to a single view, sheet, or **drawing** in a set of **plans**. More specifically a **plan** view is an orthographic projection looking down on the object, such as in a floor **plan**.

- **Orthographic Projection:** A system that allows you to make a two-dimensional drawing of a three-dimensional object

Building floor Plan



The floor plan

□ The floor plan is a view looking down/ a horizontal plane is cut through a building from above about 1.5m, illustrating it's the horizontal dimensions of a building spaces, the thickness & construction of vertical walls & columns that define these spaces.

The importance of plans

1. Define the spaces & its functional relationship.
2. Illustrates places of openings (doors-windows)
3. Finishing.
4. Entrance (main- secondary)
5. Utilities (stairs- elevators- mechanical room- toilet- stores....)

The importance of plans

5. Structural system:
 1. R.C.C Frame structure, load bearing wall.
 2. Columns, beams, slab.
 3. Thickness of walls (exterior & interior)
6. Measurement and cost (quantity survey)

Floor Plan

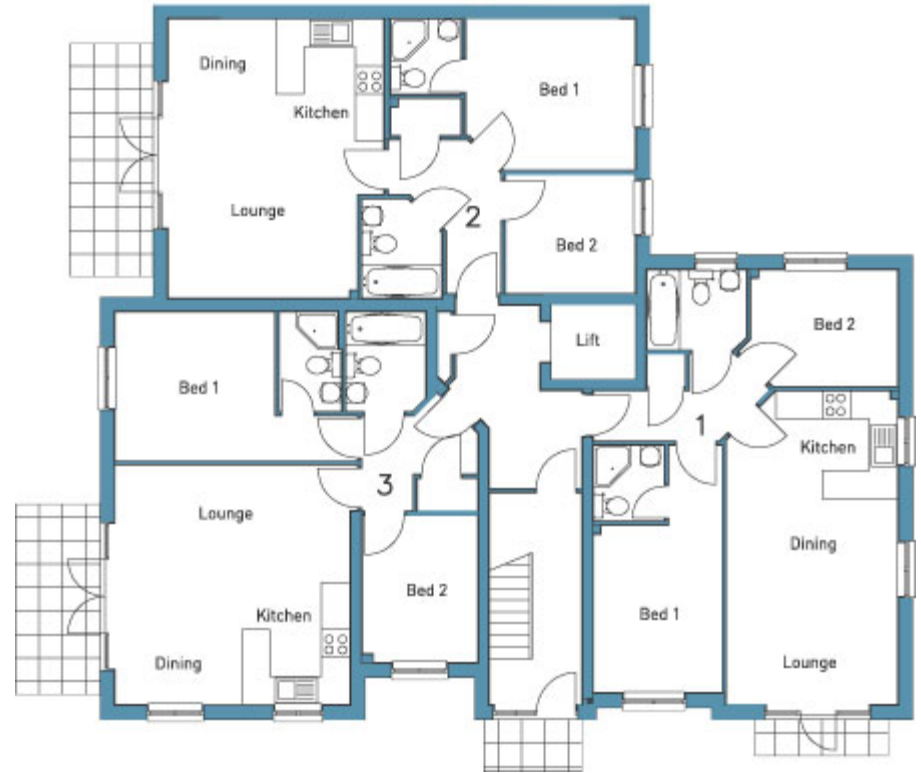
It shows:

- The arrangement of rooms
- The positions of windows and doors
- The types of internal and external wall



Floor Plan

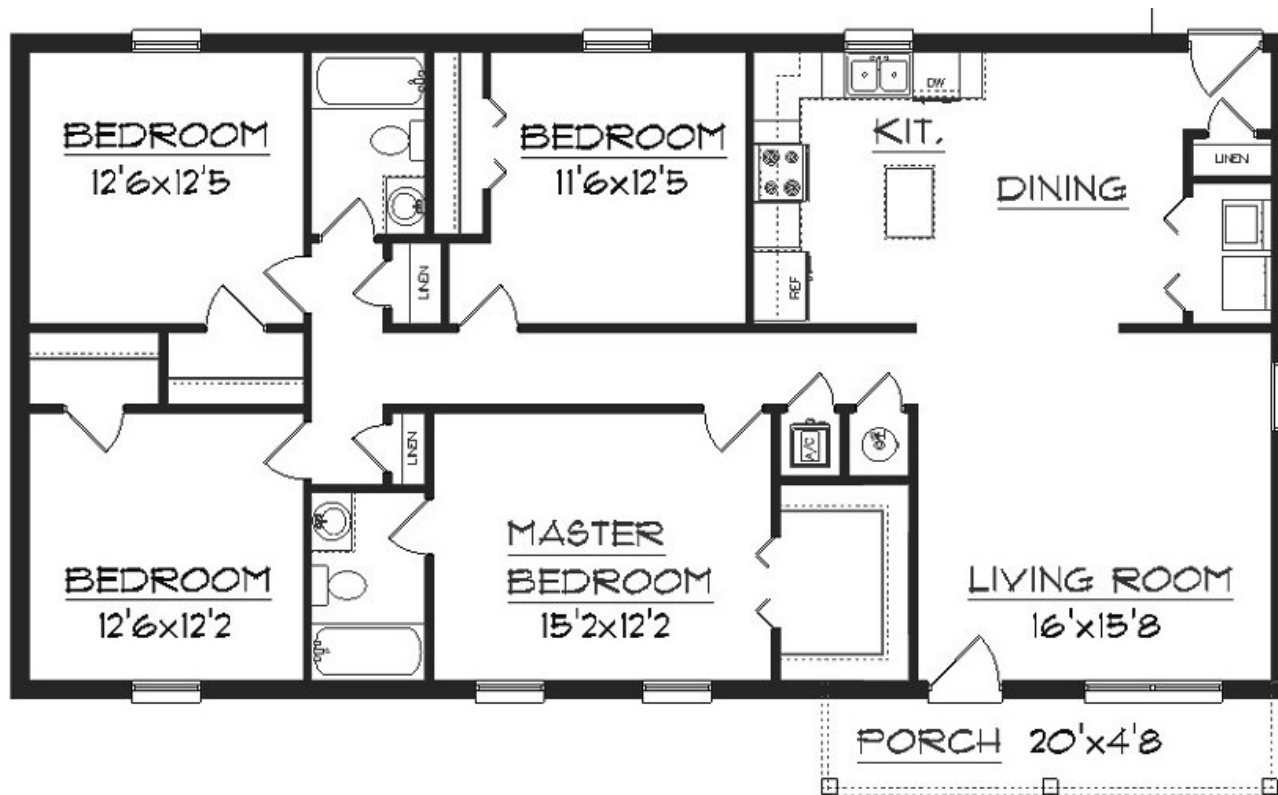
The scale of a floor plan depends on the size of the building but for most domestic buildings a scale of **1:50** is used



Floor plan can also include: the dimensions of each room & the exact positions of doors & windows the layout of water pipes (plumbing) the layout of electrical cabling and positions of sockets, switches etc.

Architectural Plans – Floor Plan

- Dimensions are usually drawn between the walls to specify room sizes and wall lengths.
- Floor plans will also include details like sinks, water heaters, wash basin, toilet seats etc.



Brick Walls Thickness

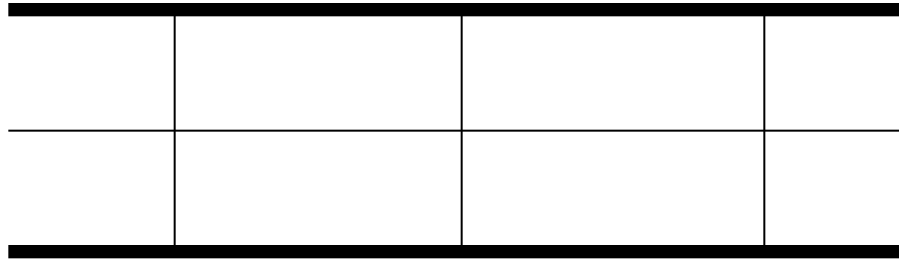
115 mm

(1/2 brick)



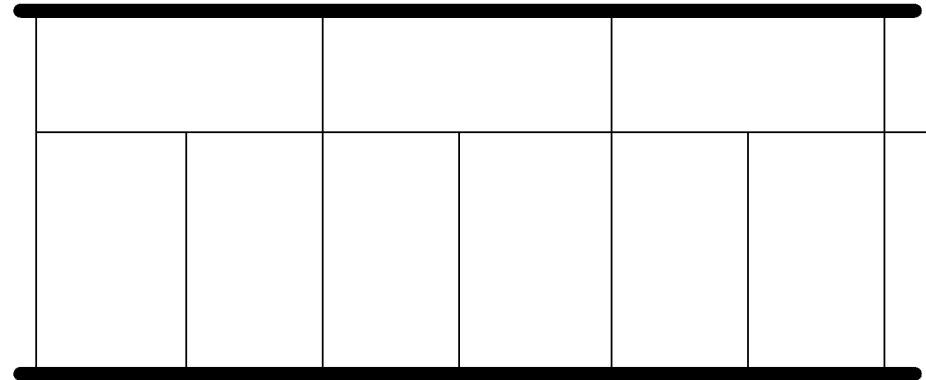
230 mm

(1 brick)



345 mm

(1 1/2 brick)



Architectural Plans – Floor Plan

- Some of the symbols used in floor plans.



Window



Pair of Windows



French or Twin Doors



Sliding Doors



Pocket Doors

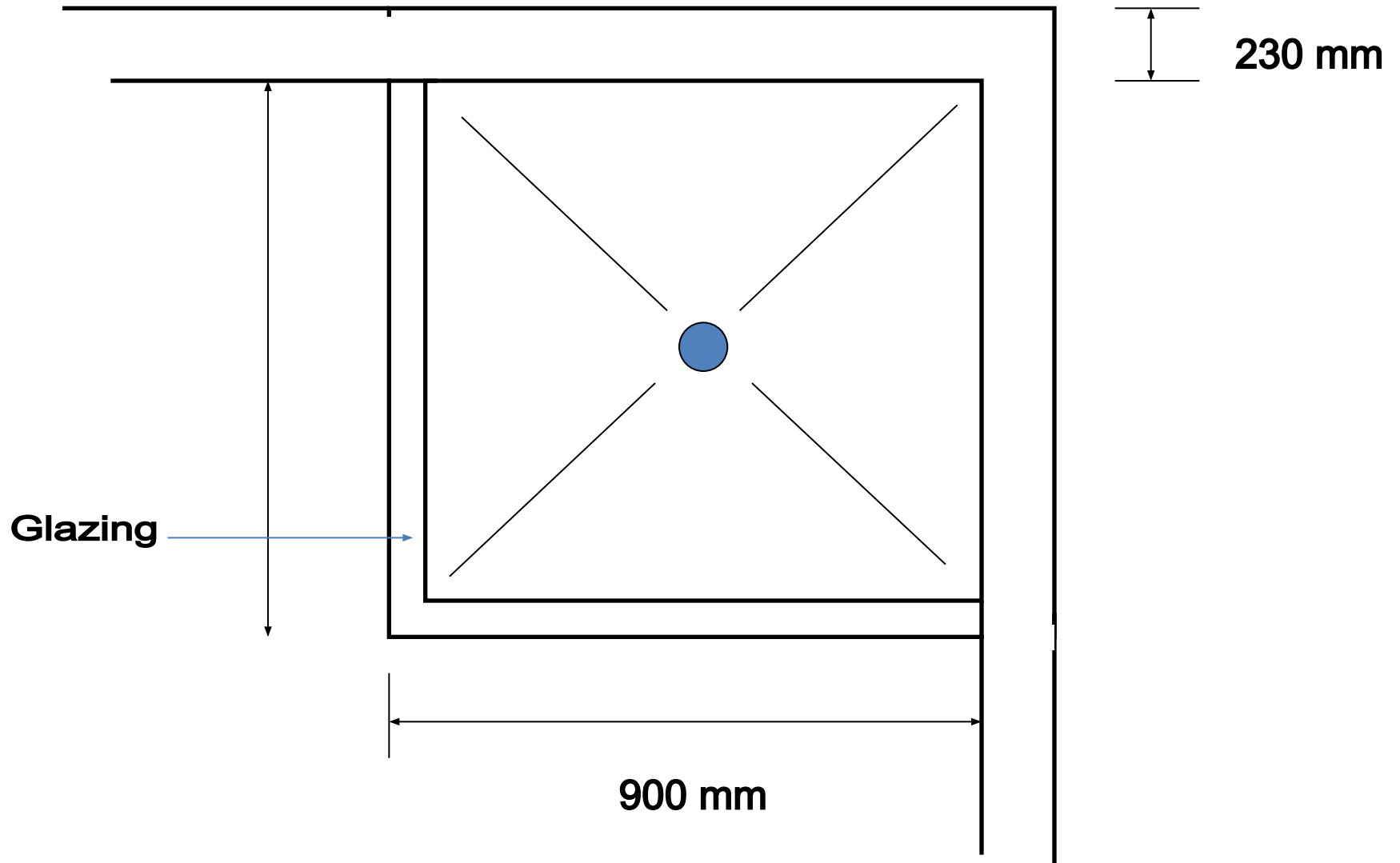


Bi-Fold Doors

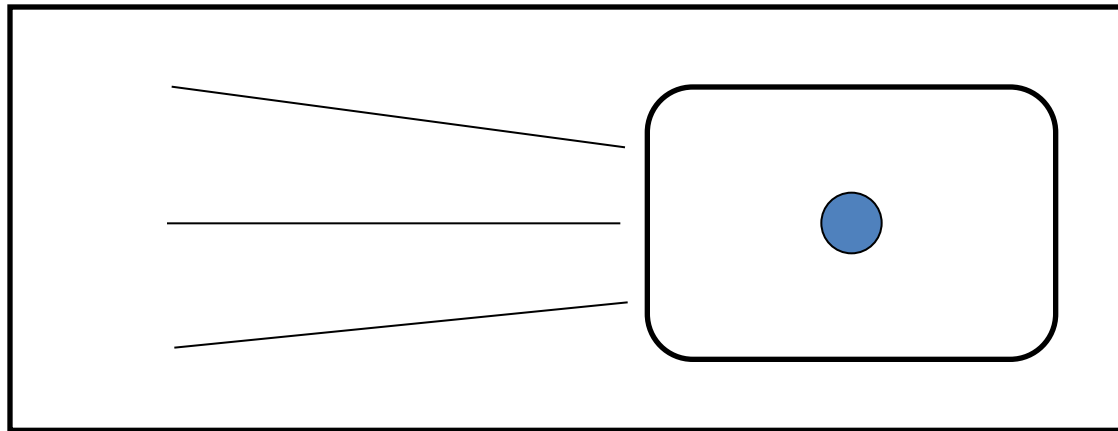


Regular Doors

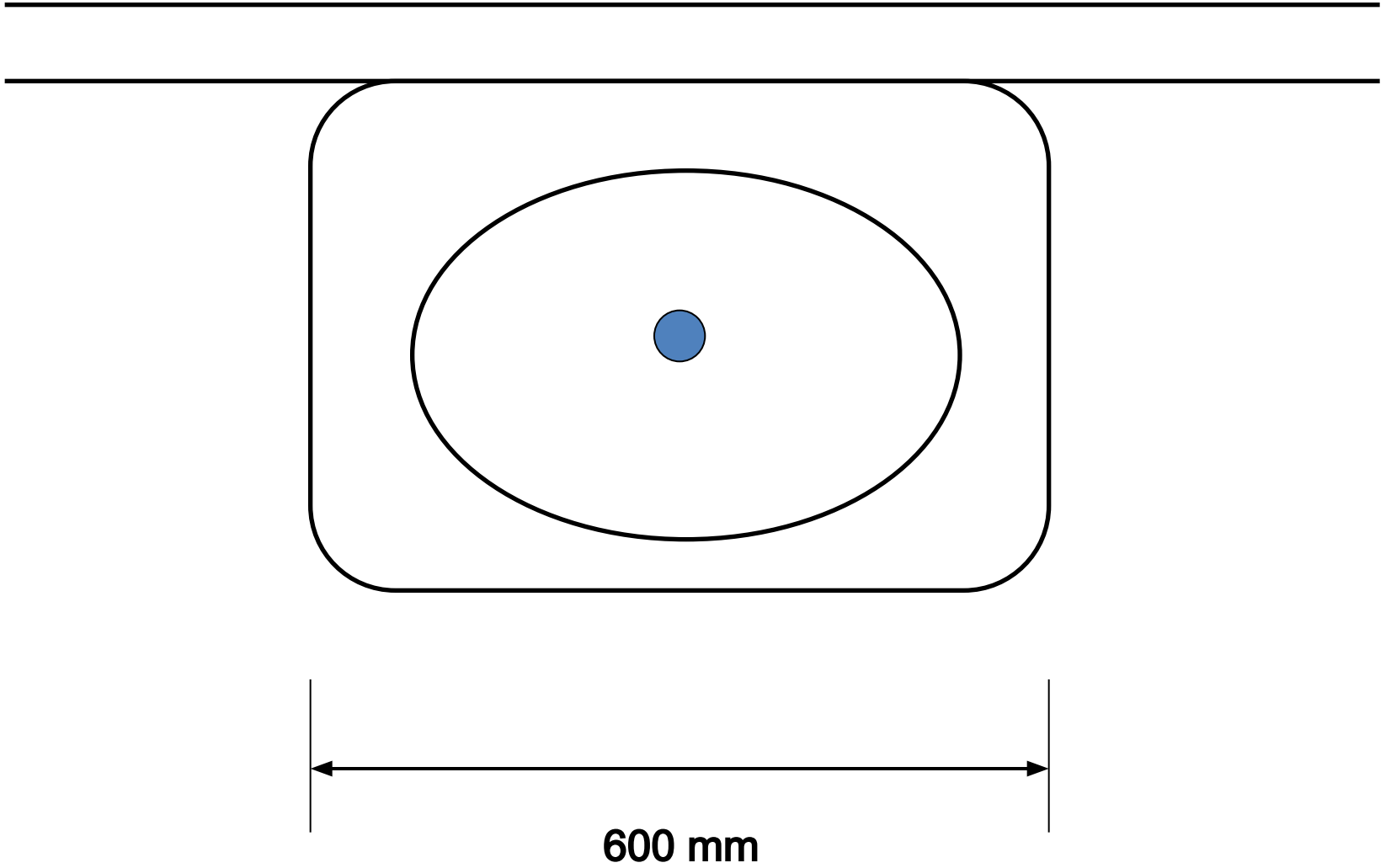
Shower /Bath area



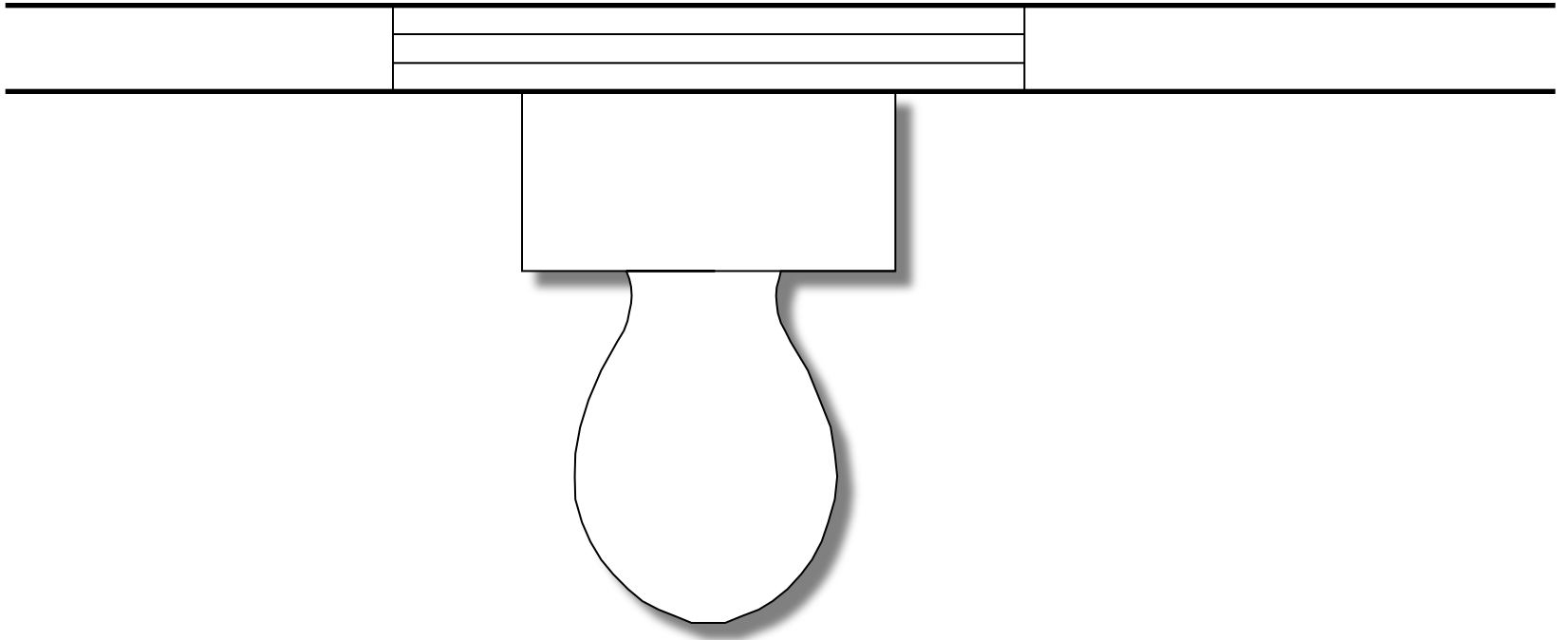
Kitchen Sink with drain board



Wash Basin

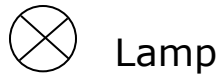


Toilet

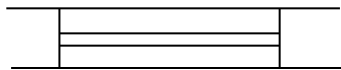


Fixtures, Appliances and Symbols

- More detailed floor plans show the layout of kitchens and bathrooms, since these are rooms which have fixtures and appliances. These symbols are used to simplify the drawing of common features.



Lamp



Window



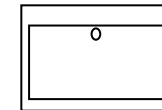
Sink



Switch



Door



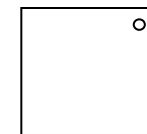
Washbasin



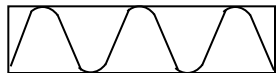
Socket



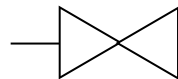
Radiator



Shower tray



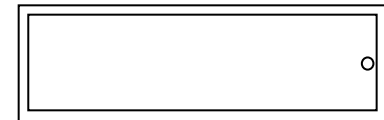
Insulation



In-line valve



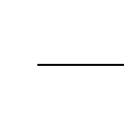
Brickwork



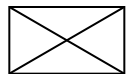
Bath



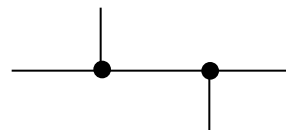
Concrete



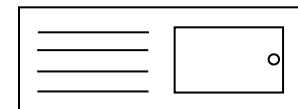
Crossover



Sawn wood

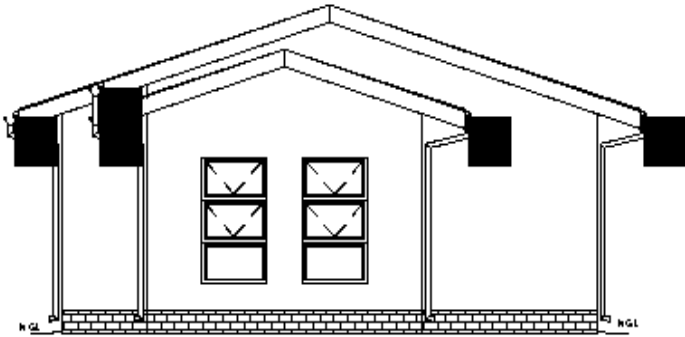


Junctions

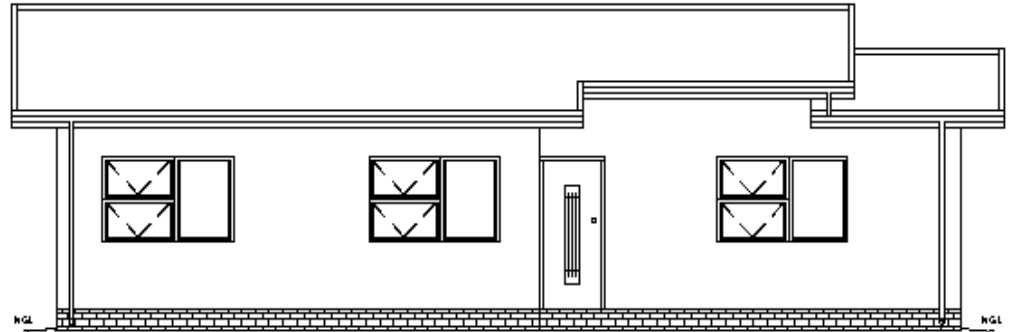


Sink top

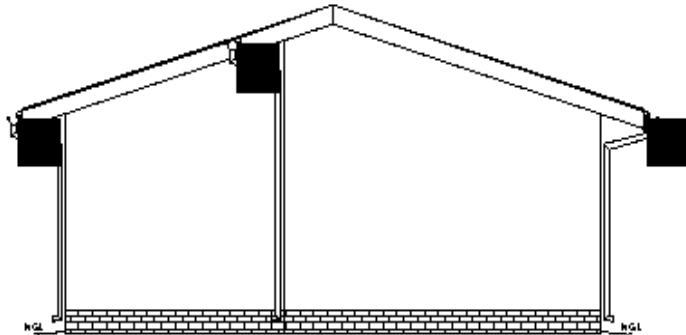
Elevations



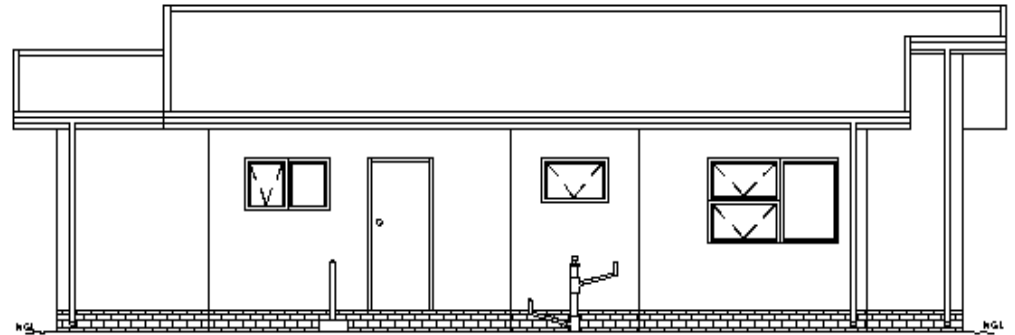
NORTH ELEVATION
SCALE 1:100



EAST ELEVATION
SCALE 1:100



SOUTH ELEVATION
SCALE 1:100



WEST ELEVATION
SCALE 1:100

Elevation

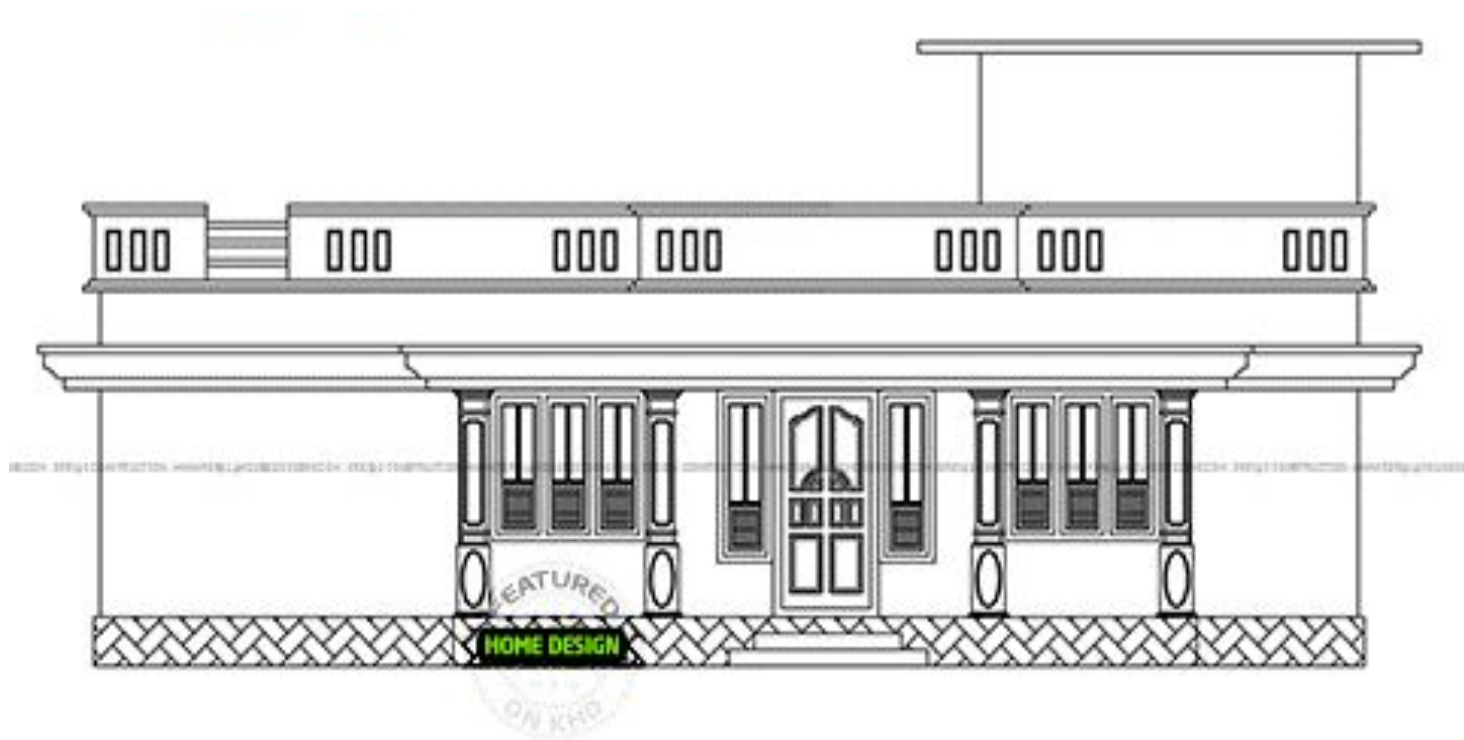
An **elevation** is a view of a building seen from one side, a flat representation of one facade.

- **Facade:** A **facade** is generally one exterior side of a **building**.

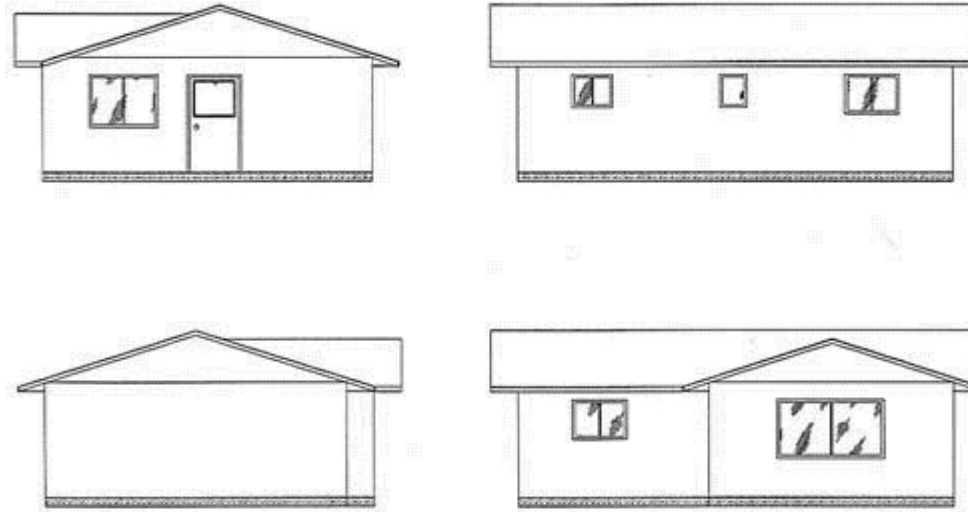
In its broadest sense, the term '**façade**' can refer to any predominantly vertical face of a building envelope, such as an external wall.

2. Architectural drawing

Elevation



Elevations



- Elevations are required by the local planning department to assess whether the style and proportions of the proposed building are appropriate for the location. Builders also need a picture of what the house will look like from the outside.

The importance of the Building Elevation

1. Aesthetic view
2. Finishing
3. Openings
4. Size, shape , materials of exterior surfaces
5. Size proportion
6. Heights of the building
7. Measurements

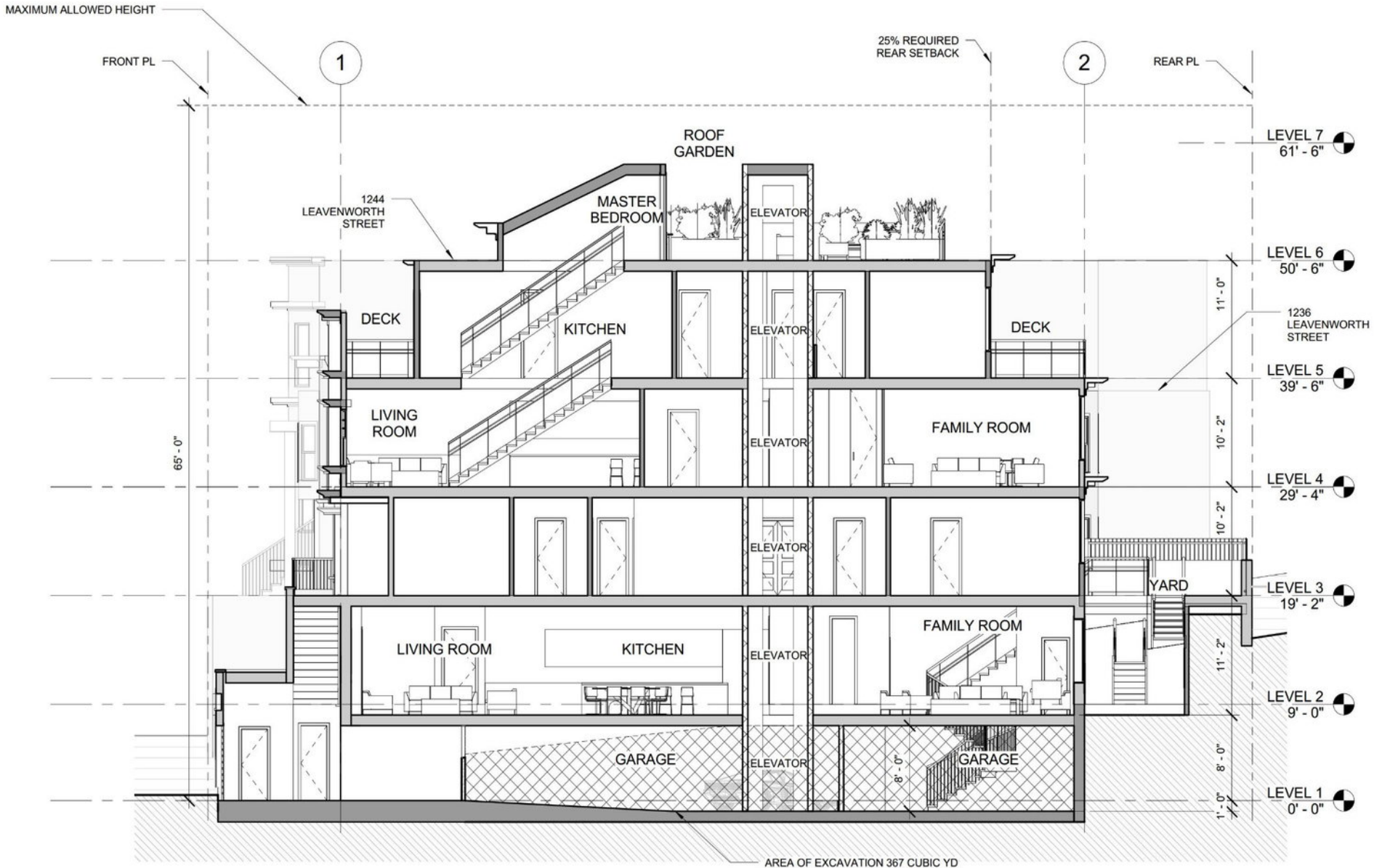
Front Elevation



Section

- In terms of design, the term '**section**' typically refers to a view of a structure as though it has been sliced in half or cut along another imaginary plane, which is generally, but not always a vertical plane.

Section



The building section

Building section is a vertical plane cut through a building.

Sectional View

- A cross-section showing a slice through the wall gives a great deal of information about how the house should be built,
- Sections can be shown through any part of the building and normally a scale of 1:20 is used.
- Sectional views and floor plans are required to assess the quality of construction.



The importance of the Building Section

1. Illustrate building construction.
2. Technical implementation (precast-pre-stress concrete section)
3. Types of slab (roof plate) solid slab, hollow block, flat slab)

The importance of the Building Section

4. Types of slab (roof plate) solid slab, hollow block, flat slab)
5. Building material (block, stone, concrete)
6. Height of the building and levels.
7. Details and finishing.
8. Measurements.

Architectural Plans – Section Drawing

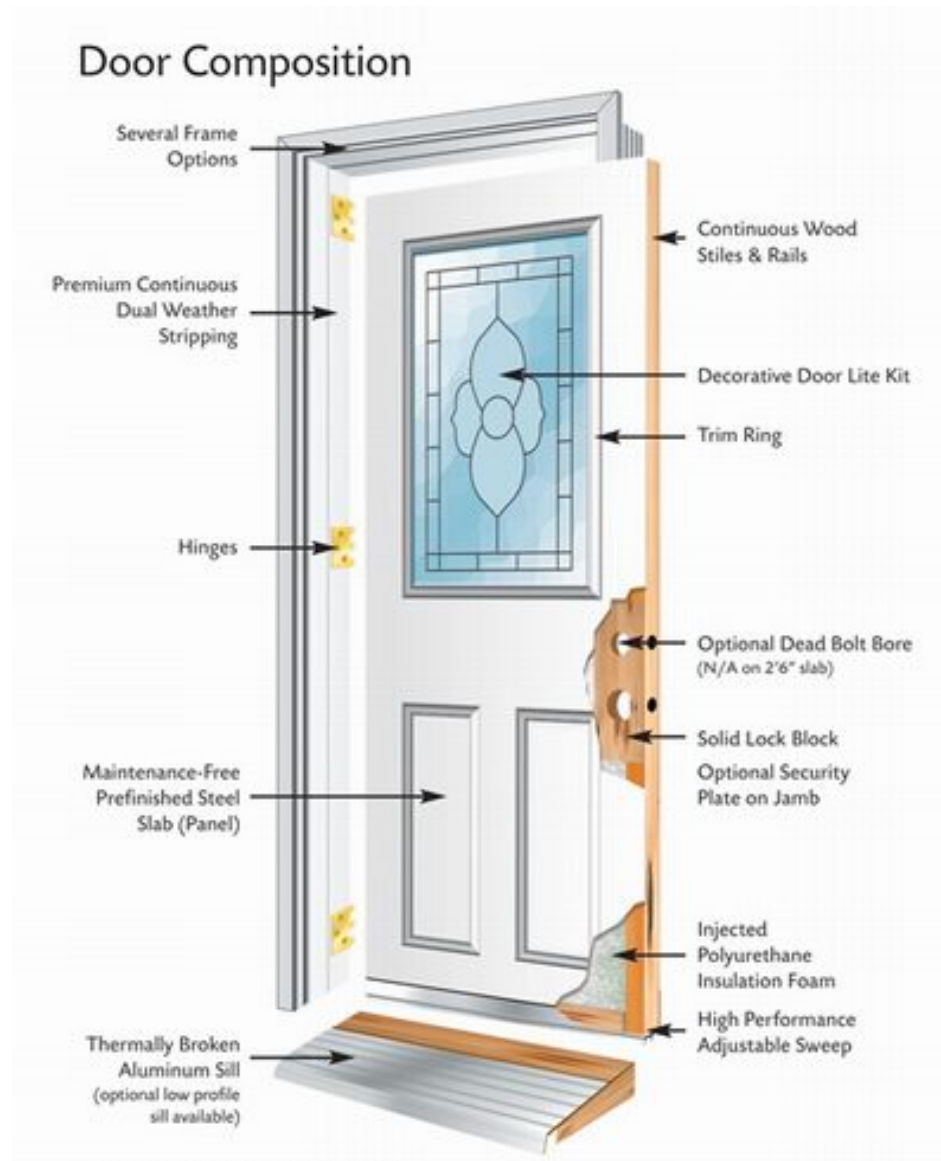
1. Green Roof
2. Typical Unit
3. Parking Garage
4. Courtyard
5. Elevator Tower
6. HVAC Unit
7. Commercial Space
8. Fairfax Ave.



Section Drawing

View from the front where you can see through the walls into the house or building.

Sectional view of Doors



Note: 2'6" & 2'8" slabs are 2 3/8" backset;
2'10" & 3'0" slabs are 2 3/4" backset.

Architectural Drawings used for

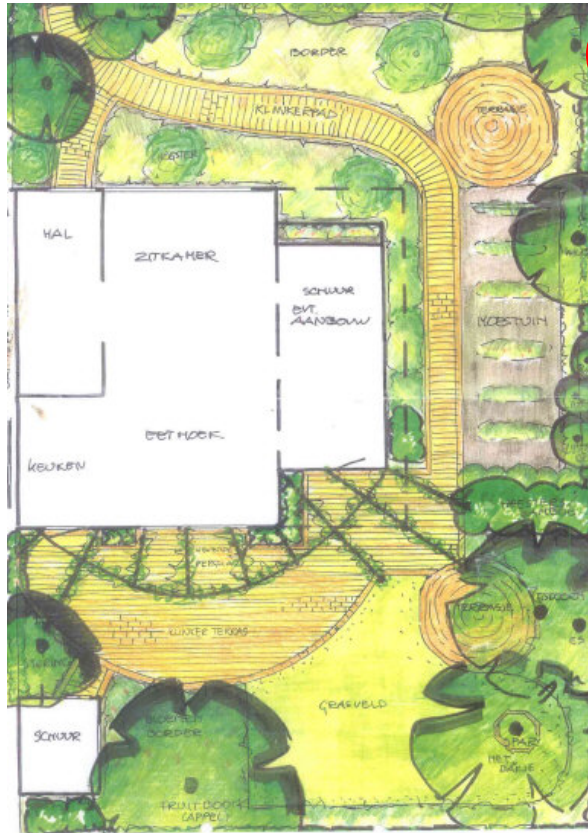
1. Building elements seen in true size, shape, orientation . ”scale”
2. Describe form & construction of building component.
3. It is the base drawings for other construction works.” electrical, sewage, mechanical...”

As-built drawing

- **Definition:** Architectural drawings that reflect changes made during the construction process, recording differences between the original design and the completed structure.

Other Types of Architectural Plans

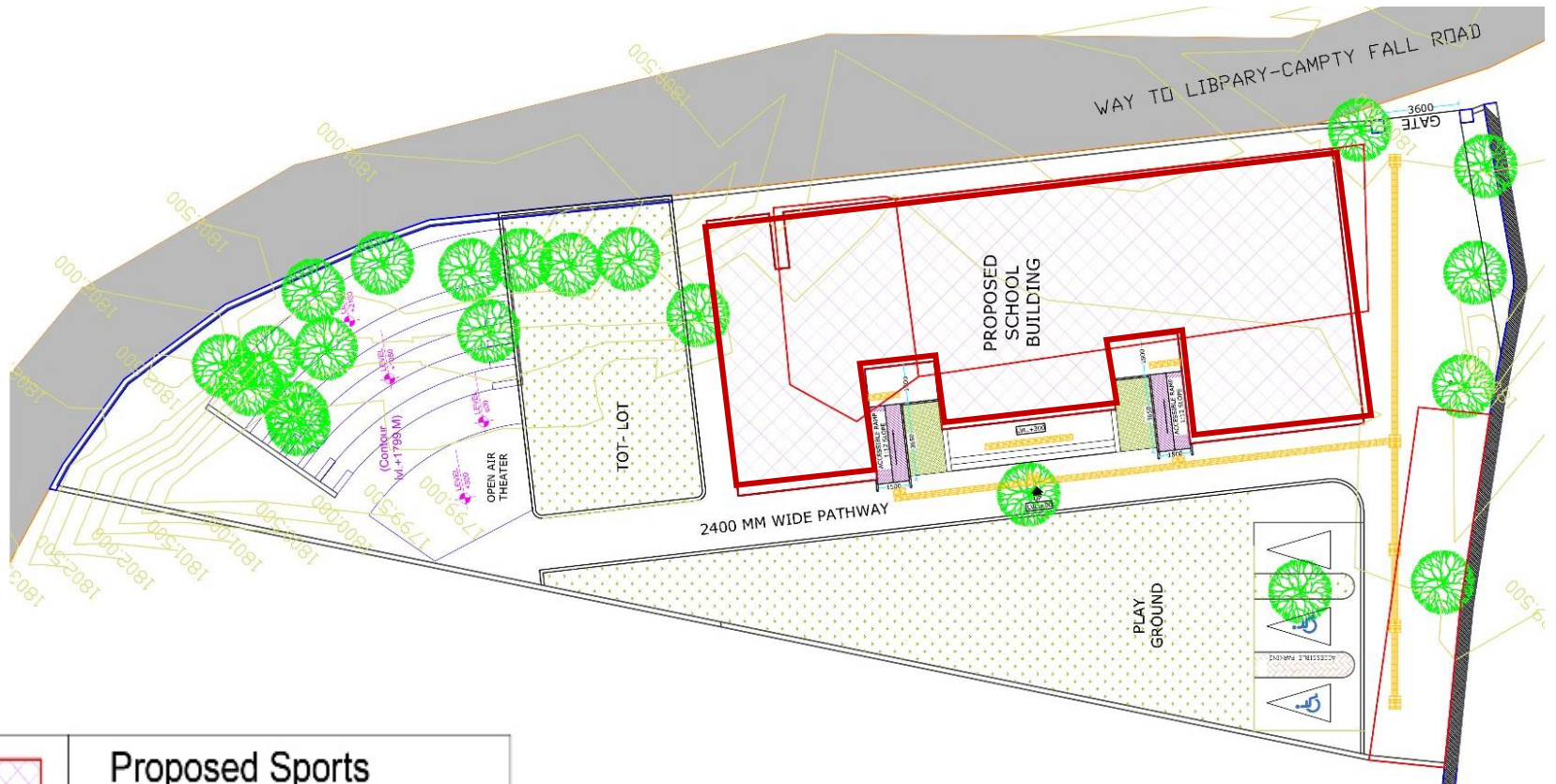
- Garden design and landscape planning is the art of designing and creating plans for the layout of plants, gardens and landscapes.





- Most professional garden designers are trained in principles of design and in horticulture, and have an expert knowledge and experience of using plants.
- Some professional garden designers are also landscape architects.

**CASE STUDY
OF
PRIMARY SCHOOL**

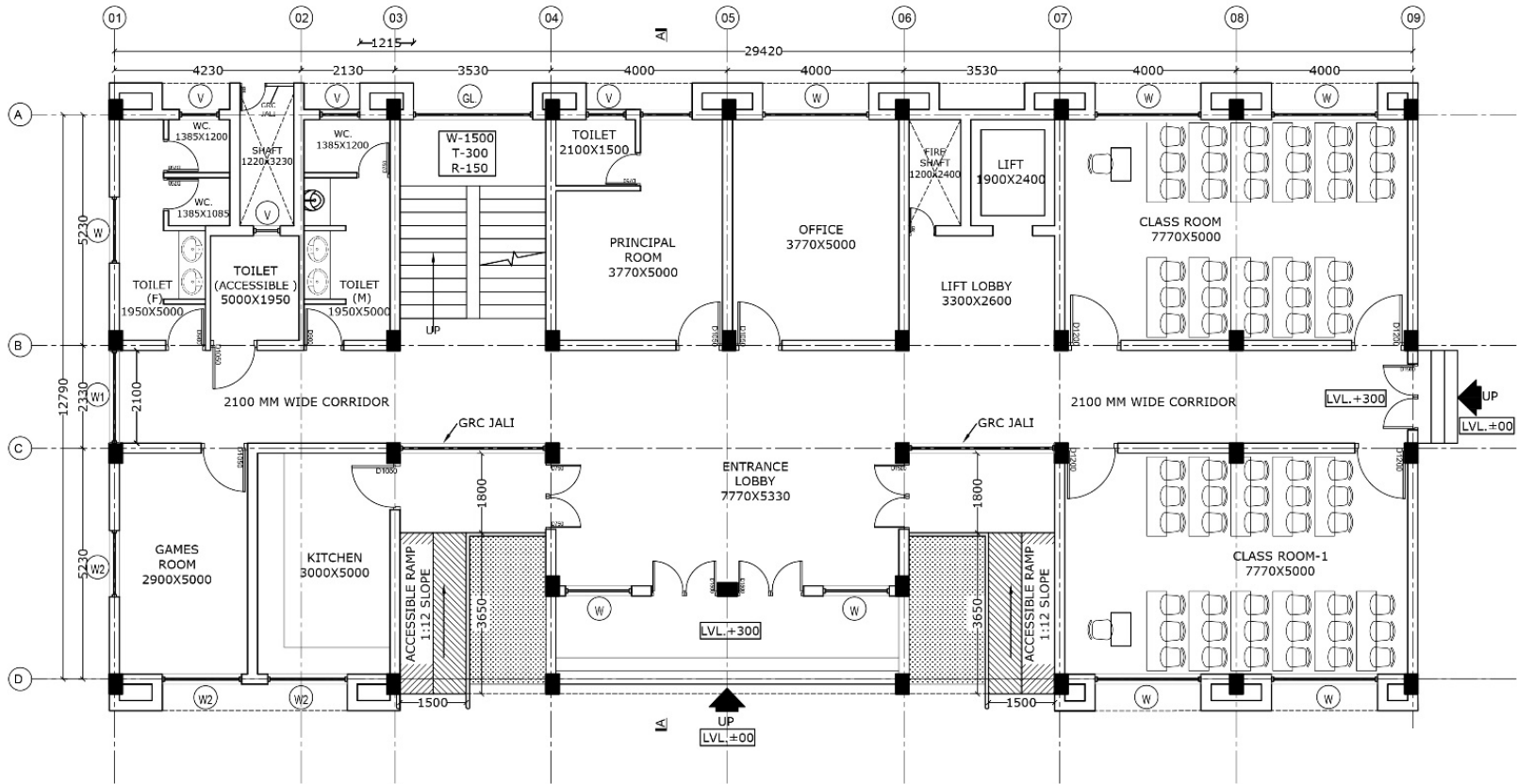
PRIMARY SCHOOL



	Proposed Sports Complex
	Building to be Demolished

SITE LAYOUT PLAN

PRIMARY SCHOOL

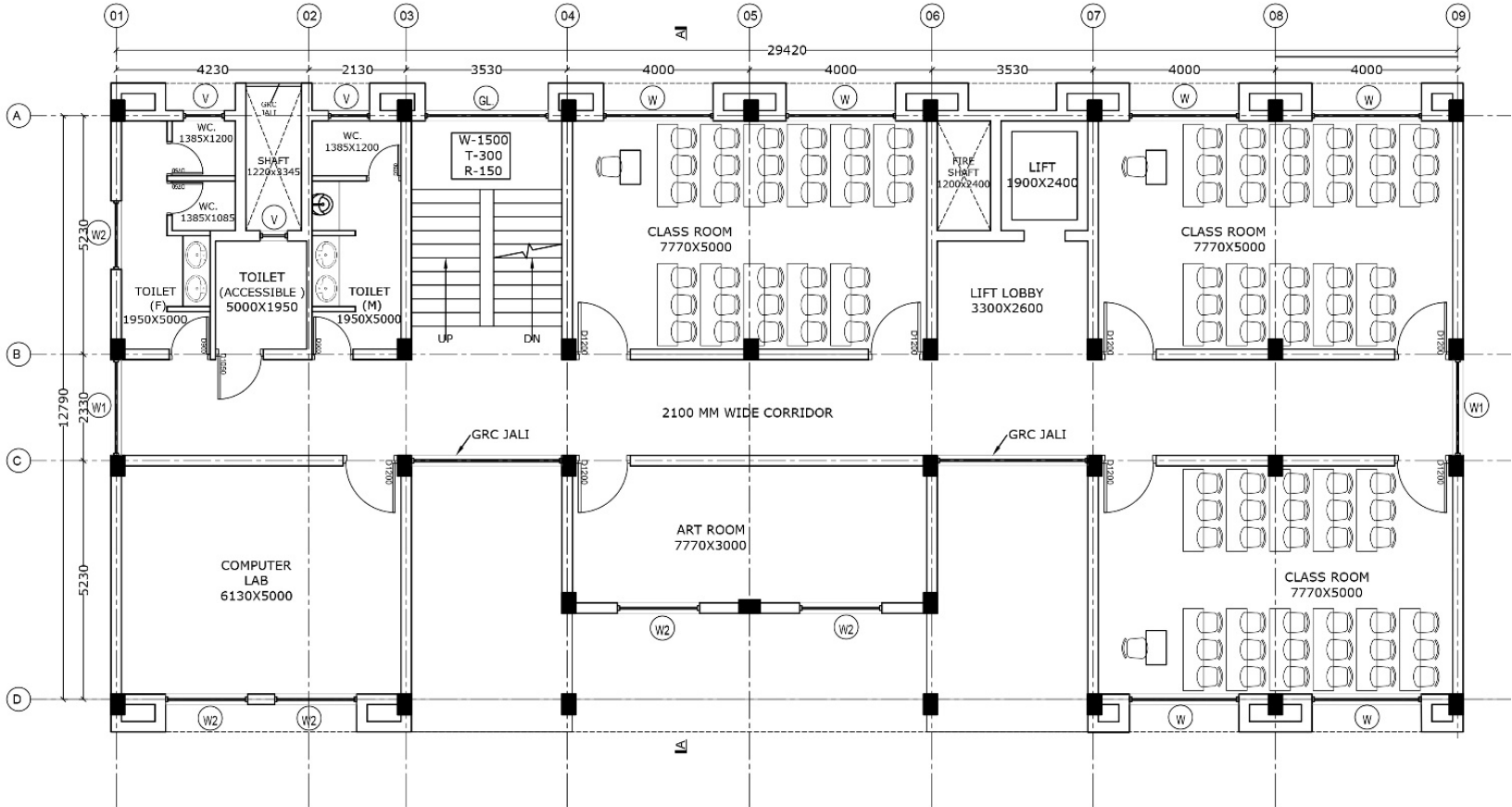


GROUND FLOOR PLAN

AREA STATEMENT-

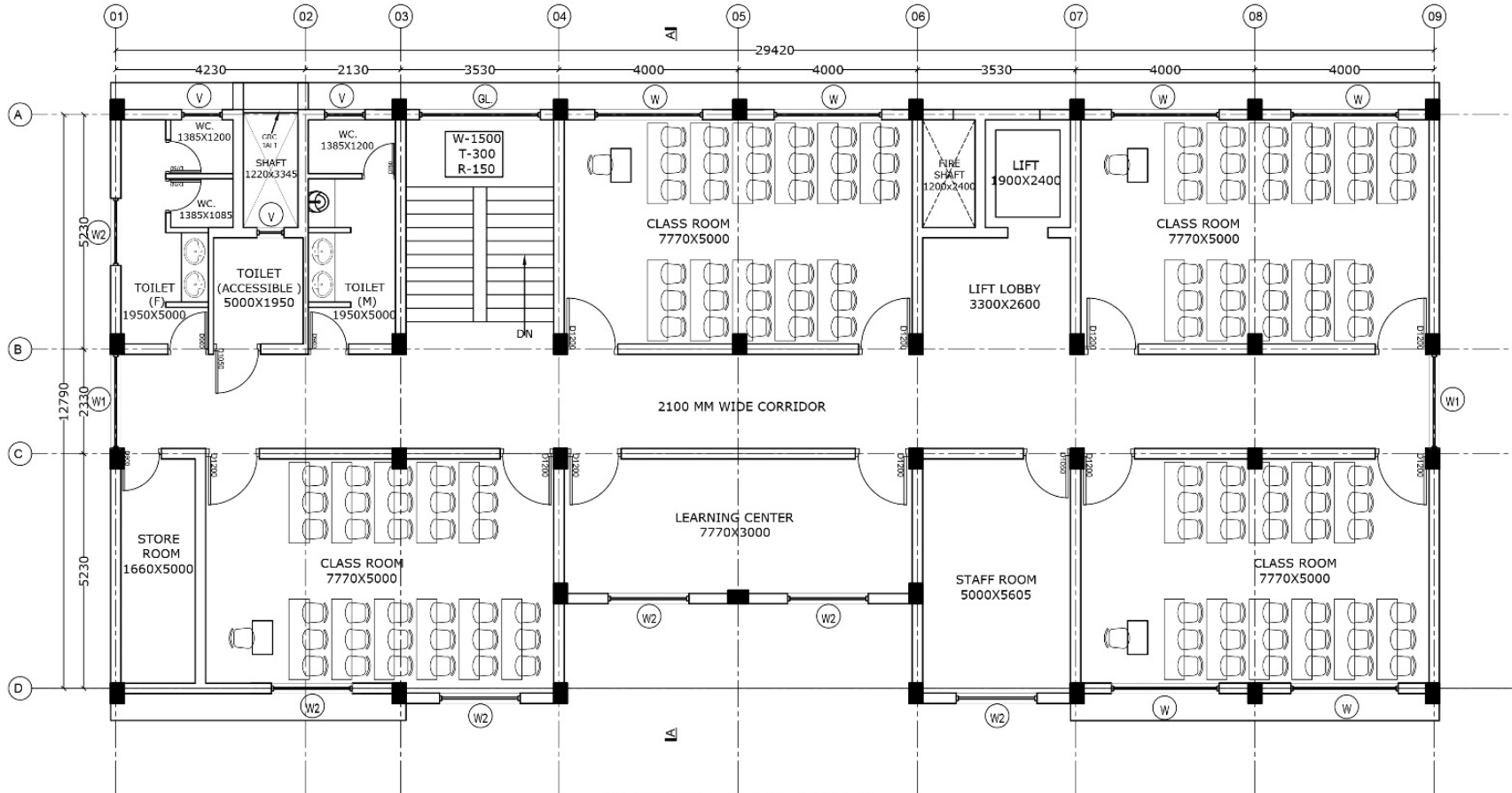
GROUND FLOOR PLAN	-331.85 SQ.M.
FIRST FLOOR PLAN	-329.05 SQ.M.
SECOND FLOOR PLAN	-366.14 SQ.M.
TOTAL BUILTUP AREA	-1027.04SQ.M.

PRIMARY SCHOOL



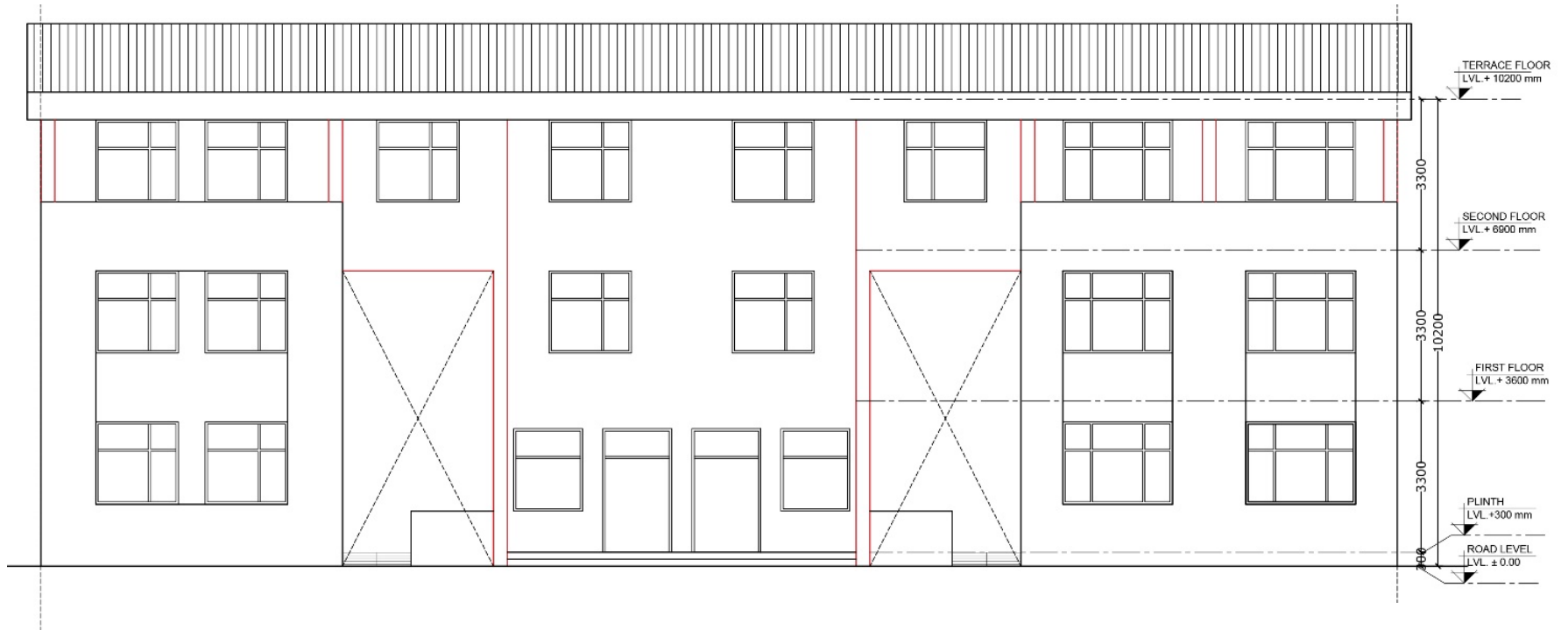
FIRST FLOOR PLAN

PRIMARY SCHOOL



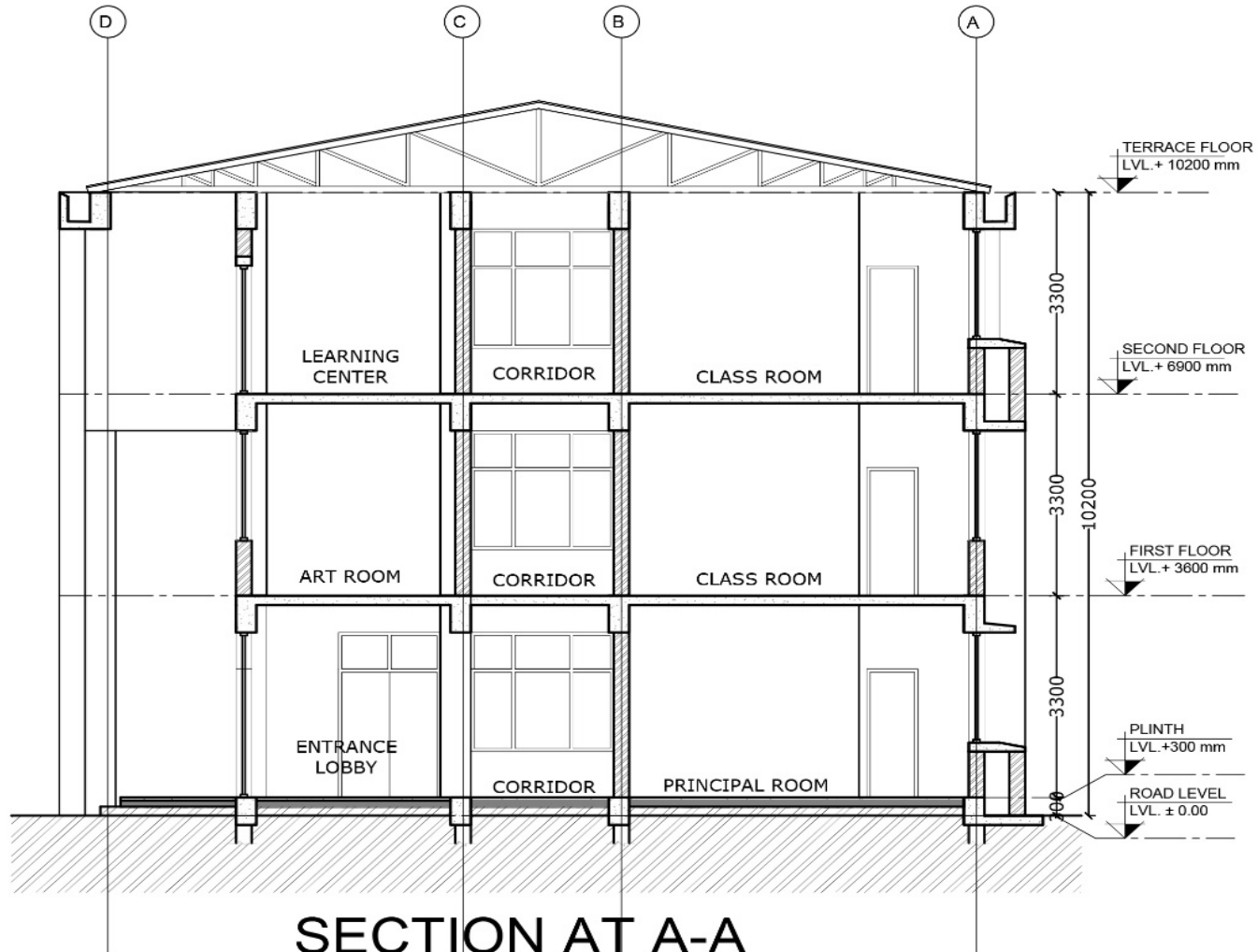
SECOND FLOOR PLAN

PRIMARY SCHOOL

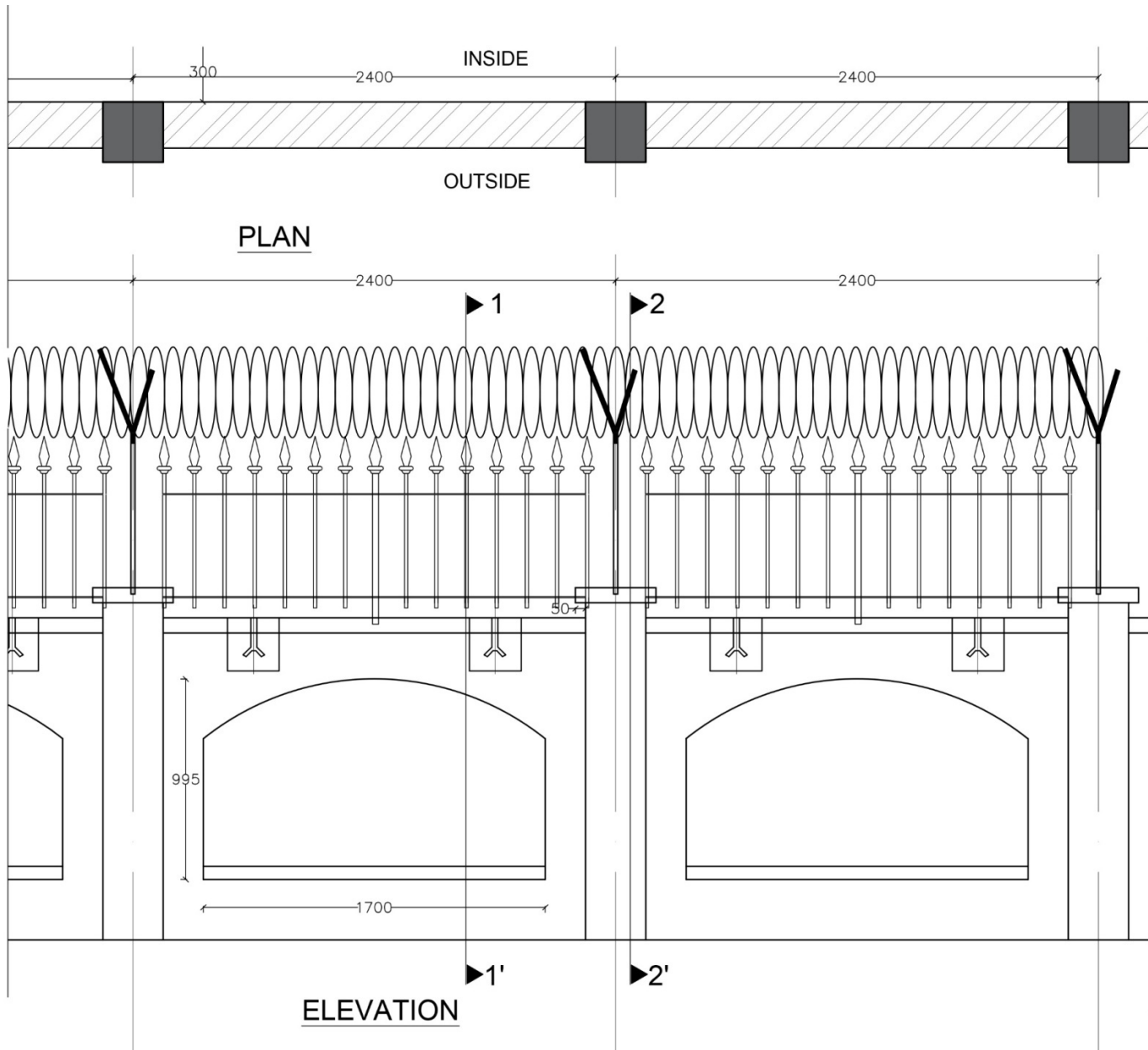


FRONT ELEVATION

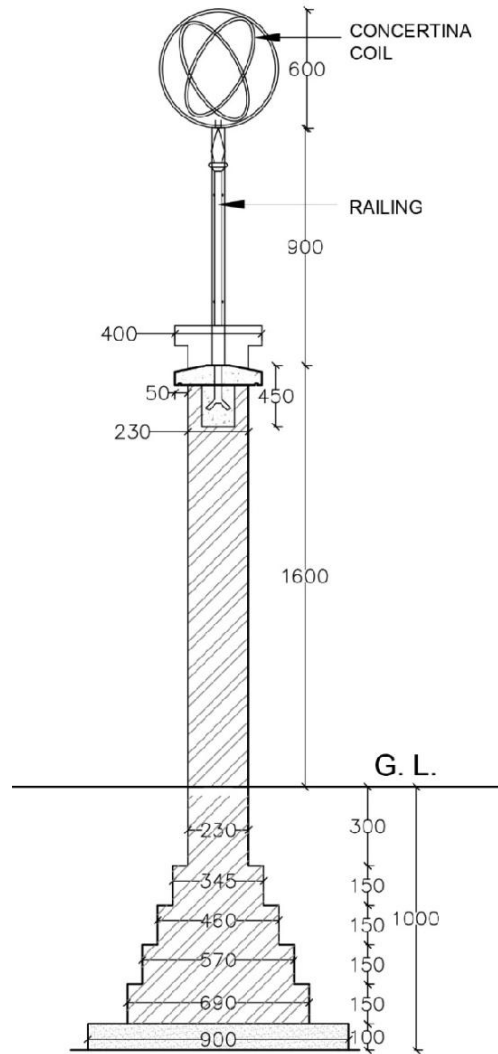
PRIMARY SCHOOL



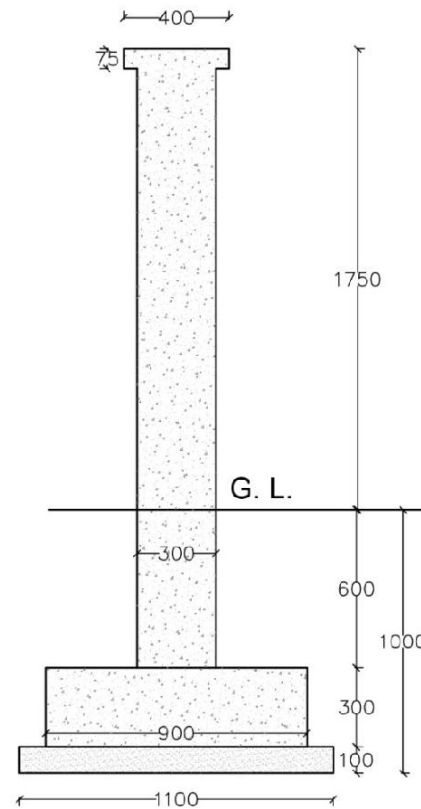
Boundary Wall



Boundary Wall



SECTION 1-1'
(Scale -1:25)



SECTION 2-2'
(Scale -1:25)

Thank You.....