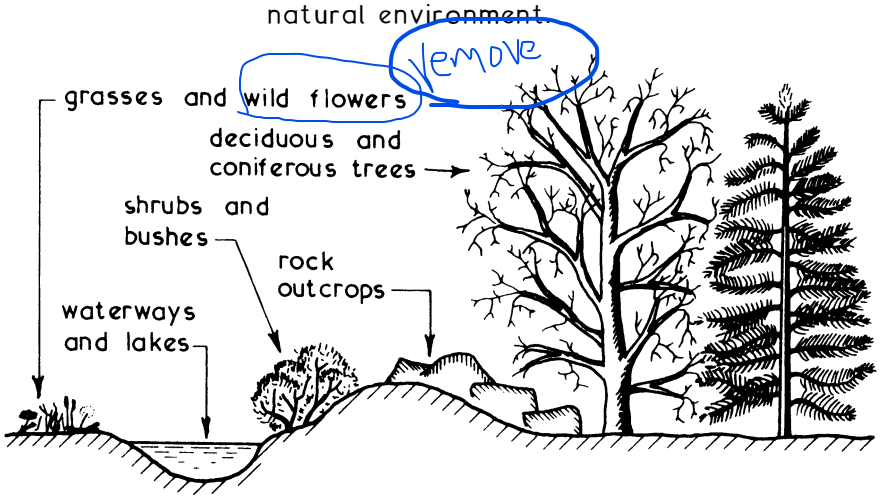
1 GENERAL

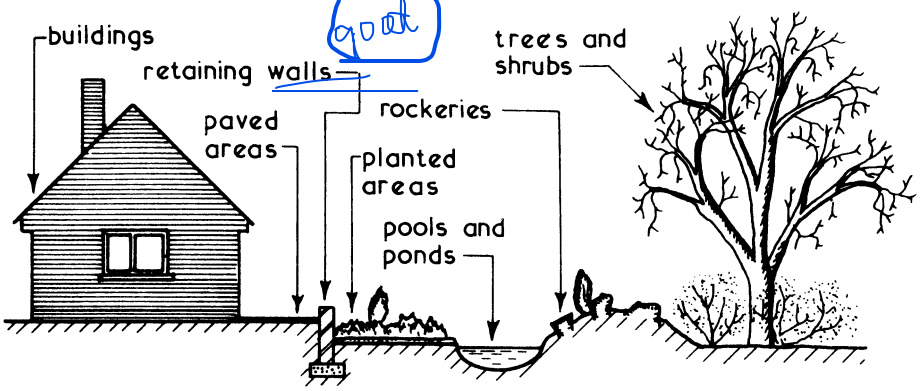
BUILT ENVIRONMENT
THE STRUCTURE
PRIMARY AND SECONDARY ELEMENTS
CONSTRUCTION ACTIVITIES
CONSTRUCTION DOCUMENTS
CONSTRUCTION DRAWINGS
BUILDING SURVEY
CDM REGULATIONS
SAFETY SIGNS AND SYMBOLS
PLANNING APPLICATION
MODULAR COORDINATION
CONSTRUCTION REGULATIONS
BUILDING REGULATIONS
BRITISH STANDARDS
EUROPEAN STANDARDS
CPI SYSTEM OF CODING
CI/SFB SYSTEM OF CODING

Environment = surroundings which can be natural, man-made or a combination of these.

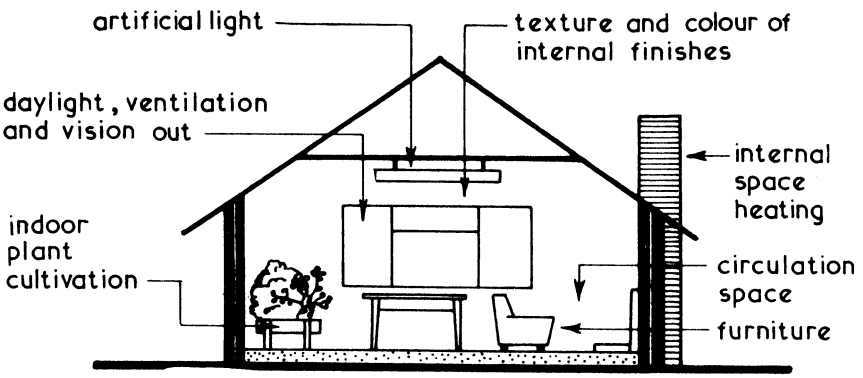
Built Environment = created by man with or without the aid of the natural environment.



ELEMENTS of the NATURAL ENVIRONMENT



ELEMENTS of the BUILT ENVIRONMENT (EXTERNAL)

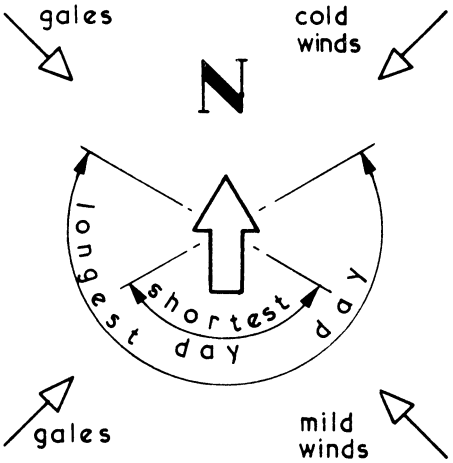


ELEMENTS of the BUILT ENVIRONMENT (INTERNAL)

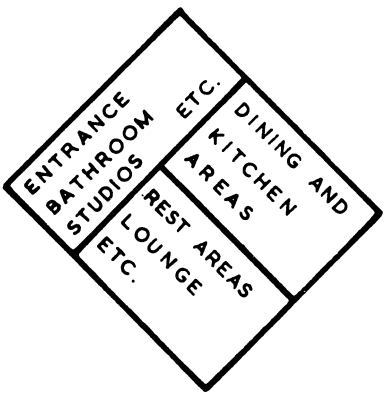
Environmental Considerations

1. Planning requirements.
2. Building Regulations.
3. Land restrictions by vendor or lessor.
4. Availability of services.
5. Local amenities including transport.
6. Subsoil conditions.
7. Levels and topography of land.
8. Adjoining buildings or land.
9. Use of building.
10. Daylight and view aspects.

Examples :~

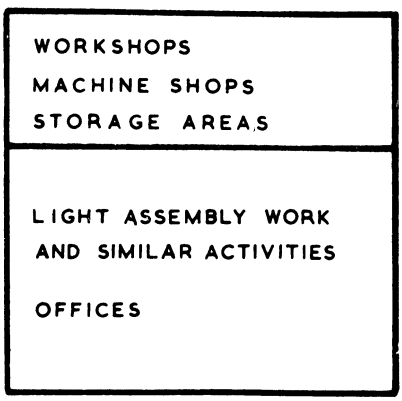


ORIENTATION ASPECTS

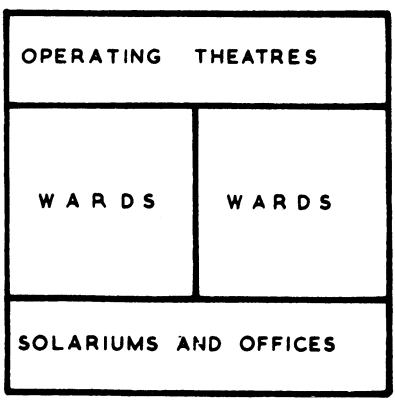


HOUSES

SCHOOLS



FACTORIES

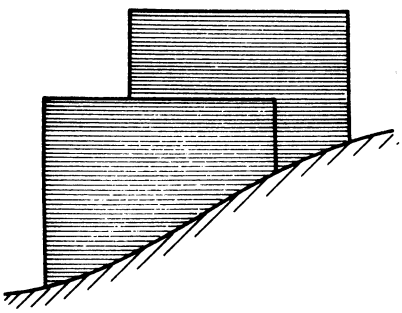


HOSPITALS

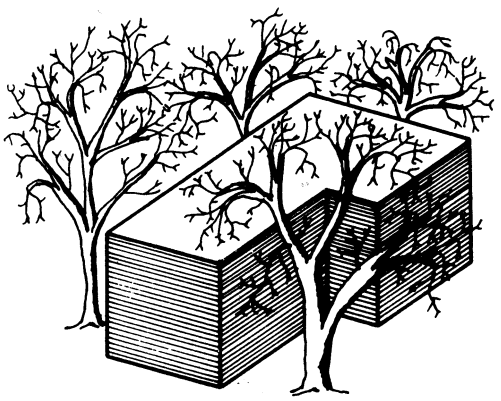
Physical considerations

1. Natural contours of land.
2. Natural vegetation and trees.
3. Size of land and/or proposed building.
4. Shape of land and/or proposed building.
5. Approach and access roads and footpaths.
6. Services available.
7. Natural waterways, lakes and ponds.
8. Restrictions such as rights of way; tree preservation and ancient buildings.
9. Climatic conditions created by surrounding properties, land or activities.
10. Proposed future developments.

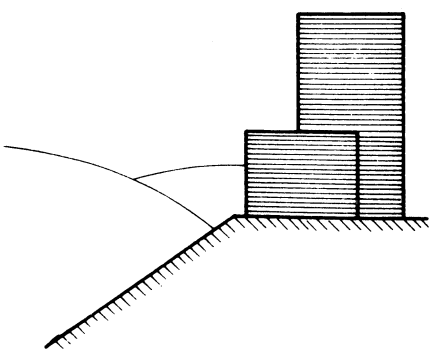
Examples:~



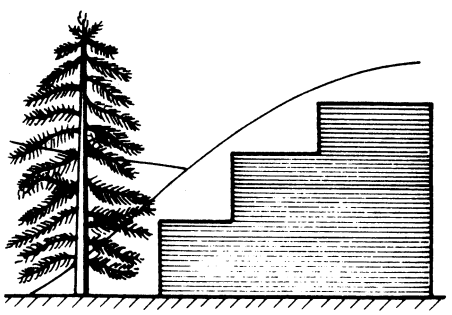
Split level construction to form economic shape.



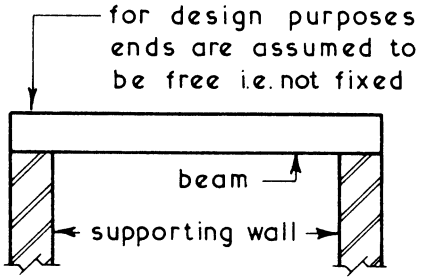
Shape determined by existing trees.



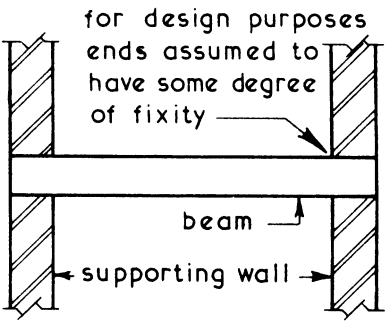
Plateau or high ground solution giving dry site conditions on sloping sites.



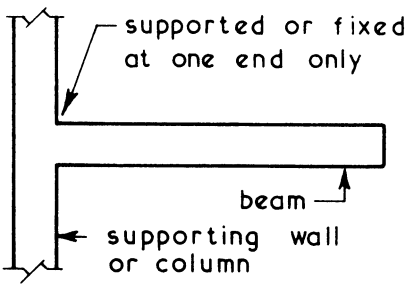
Stepped elevation or similar treatment to blend with the natural environment.



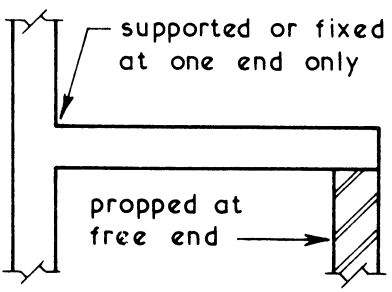
SIMPLY SUPPORTED BEAM



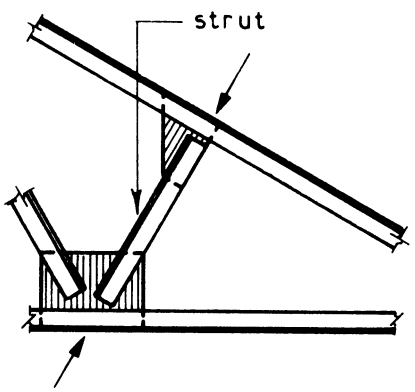
BUILT-IN BEAM



CANTILEVER BEAM

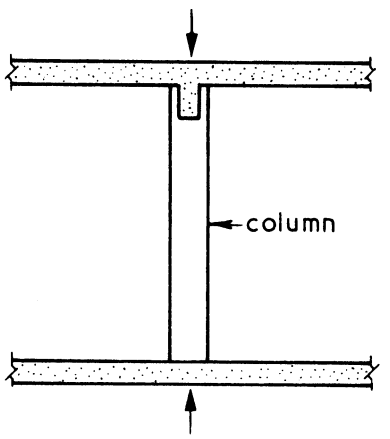


PROPPED CANTILEVER



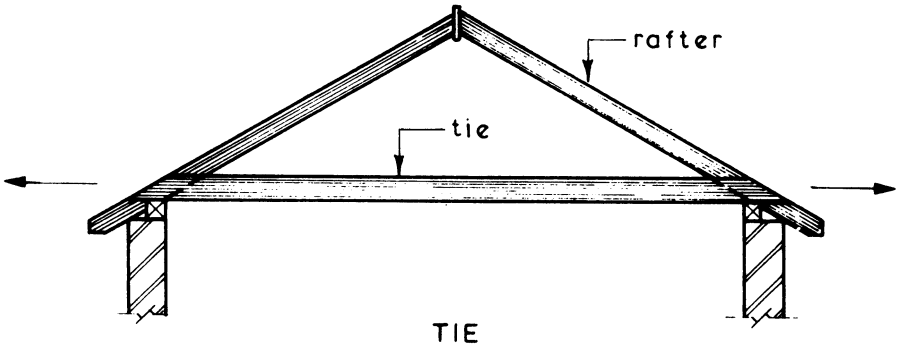
STRUT

structural member which is subjected mainly to compression forces



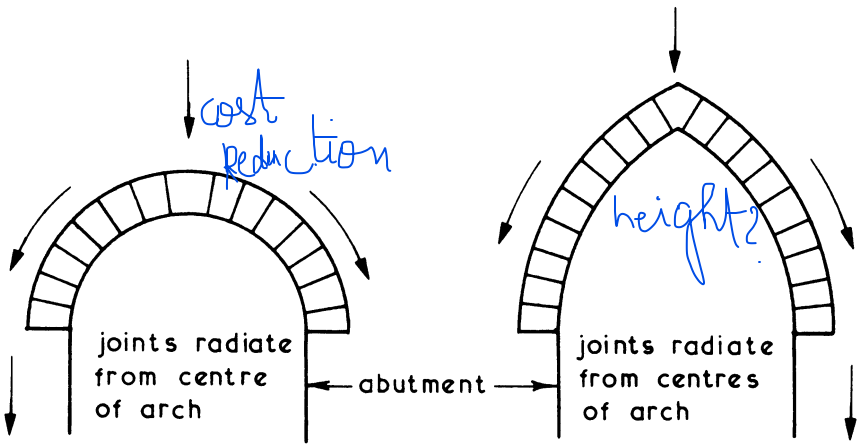
VERTICAL STRUT

usually called a column stanchion or pier



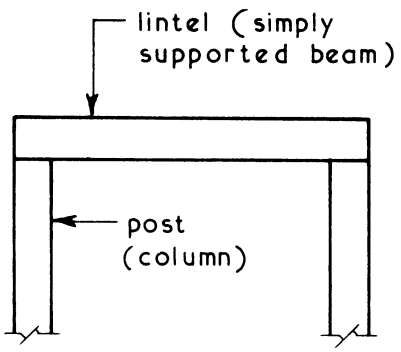
TIE

a structural member which is subjected mainly to tension forces

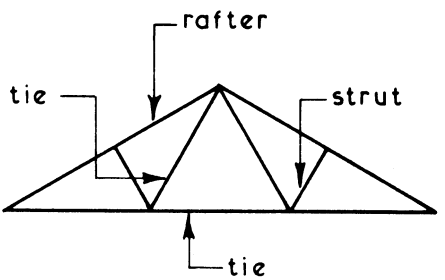


ARCHES

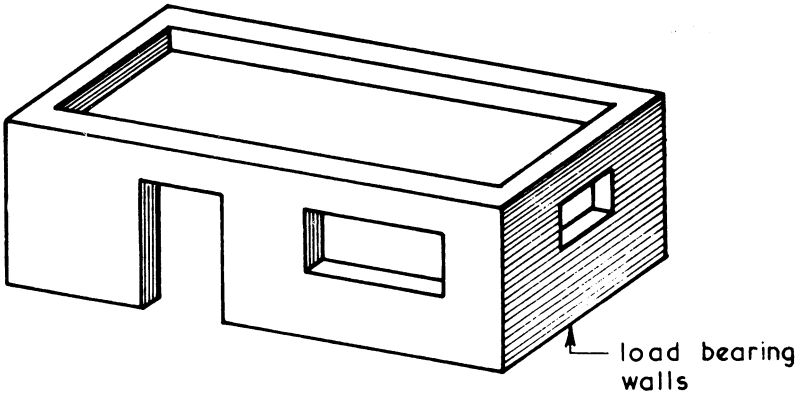
loads are transmitted around arch to the abutments



POST AND LINTEL

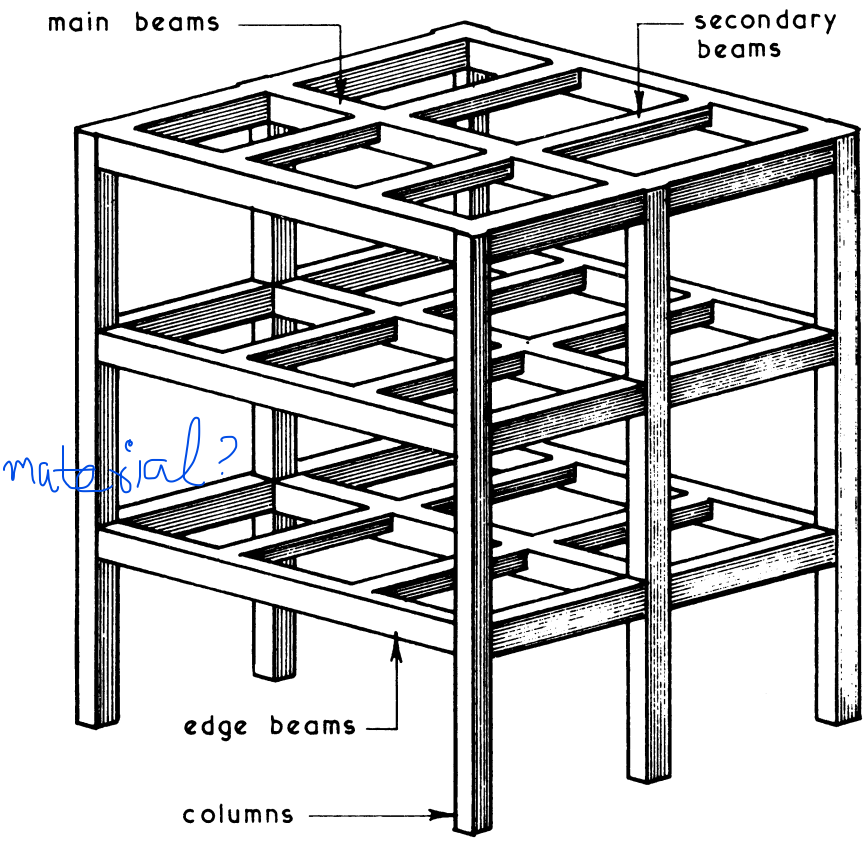


PLANE FRAME

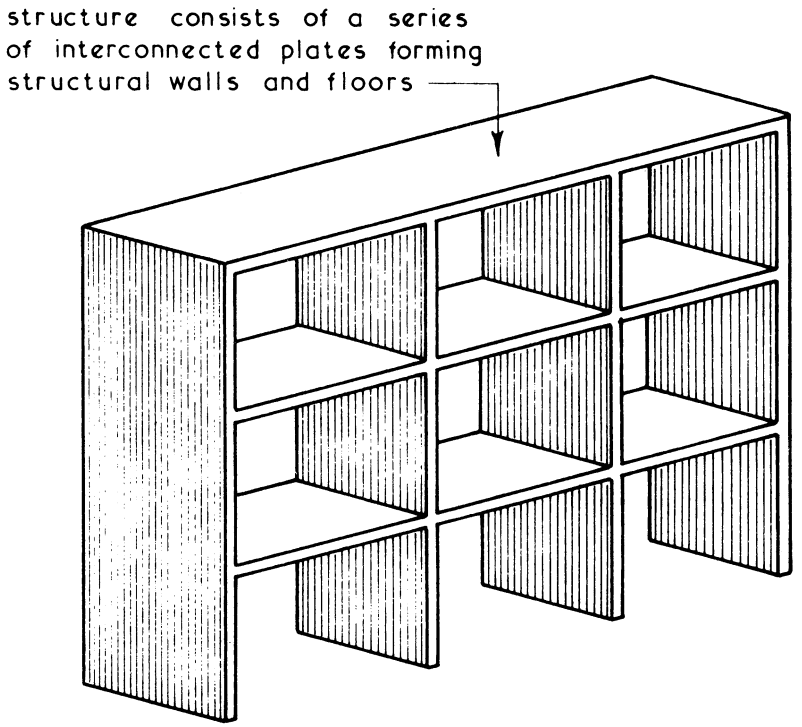


SOLID CONSTRUCTION

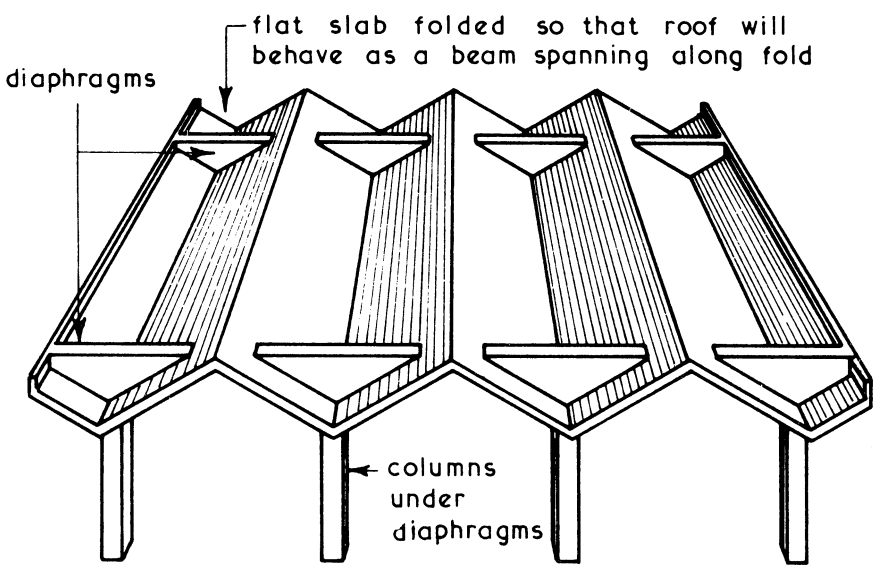
structurally limited confined usually to buildings of low height and short spans



FRAMED OR SKELETAL CONSTRUCTION



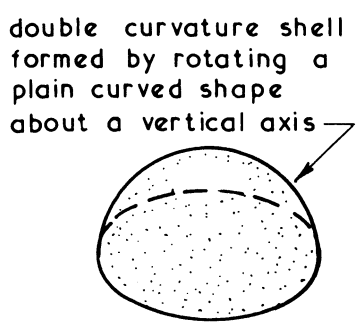
PANEL OR BOX CONSTRUCTION



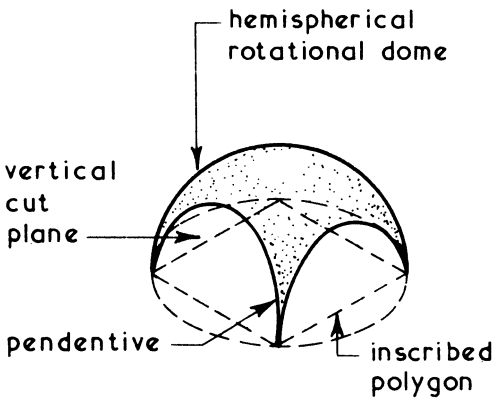
FOLDED PLATE CONSTRUCTION

Shell Roofs ~ these are formed by a structural curved skin covering a given plan shape and area.

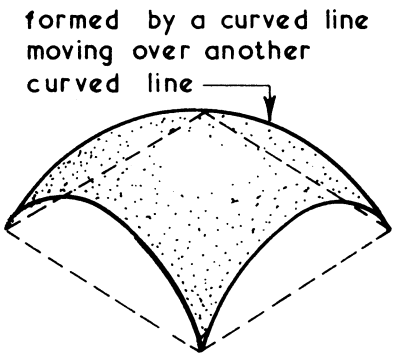
Examples ~



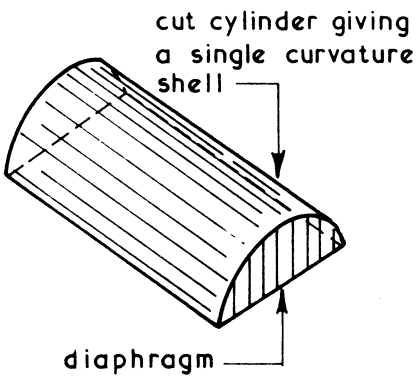
DOME OR ROTATIONAL SHELL



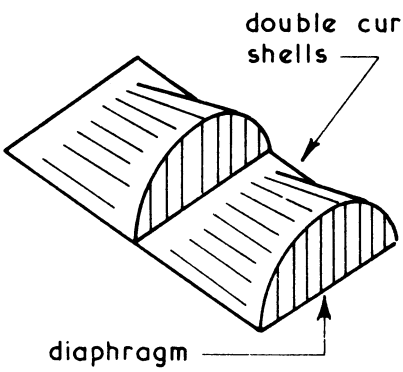
PENDENTIVE DOME



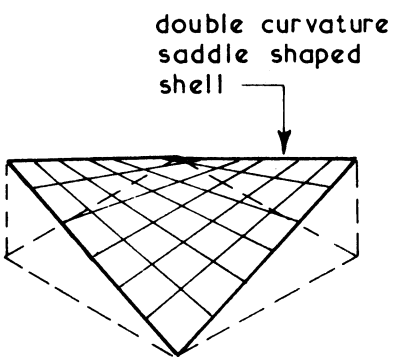
TRANSLATIONAL DOME



BARREL VAULT

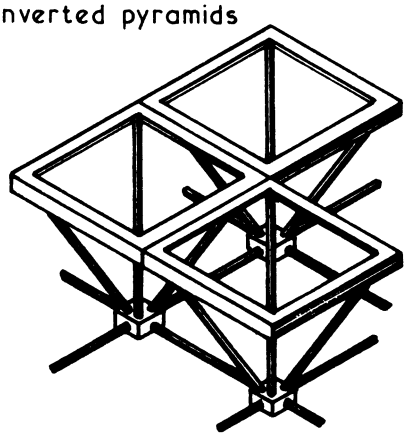


CONOID SHELLS



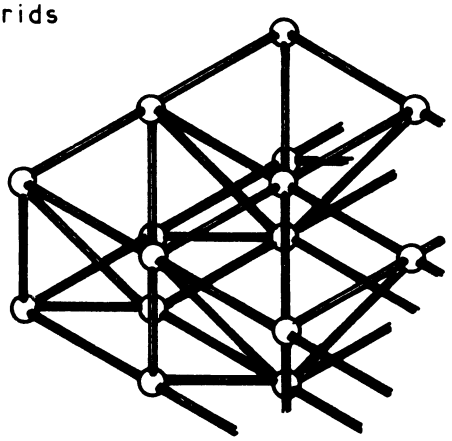
HYPERBOLIC PARABOLOID

a series of interconnected inverted pyramids



SPACE DECK

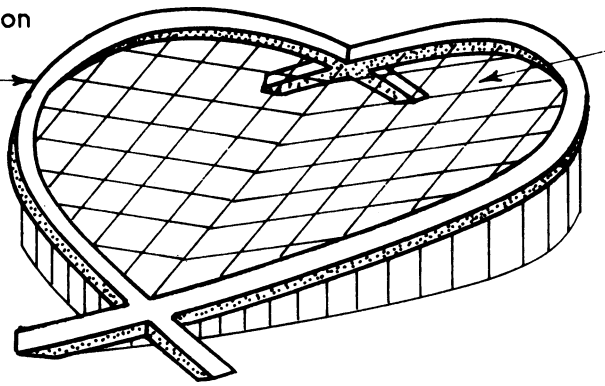
a series of interconnected grids



SPACE FRAME

compression arch system

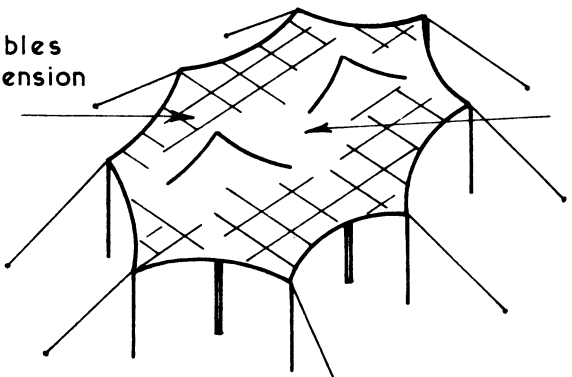
tension cables to support coverings



TENSION CABLE STRUCTURE

net of cables forming tension membrane

coverings supported by membrane



TENSION MEMBRANE STRUCTURE

Substructure ~ can be defined as all structure below the superstructure which in general terms is considered to include all structure below ground level but including the ground floor bed.

Typical Examples~