



UNIT-1



SITE INVESTIGATION



DEFINITION

SCOPE AND OBJECTIVE



- The Process Of Determining the Layers Of Natural Soil Deposits That Will Underlie A Proposed Structure
- The physical Properties Referred To As Site Investigation.



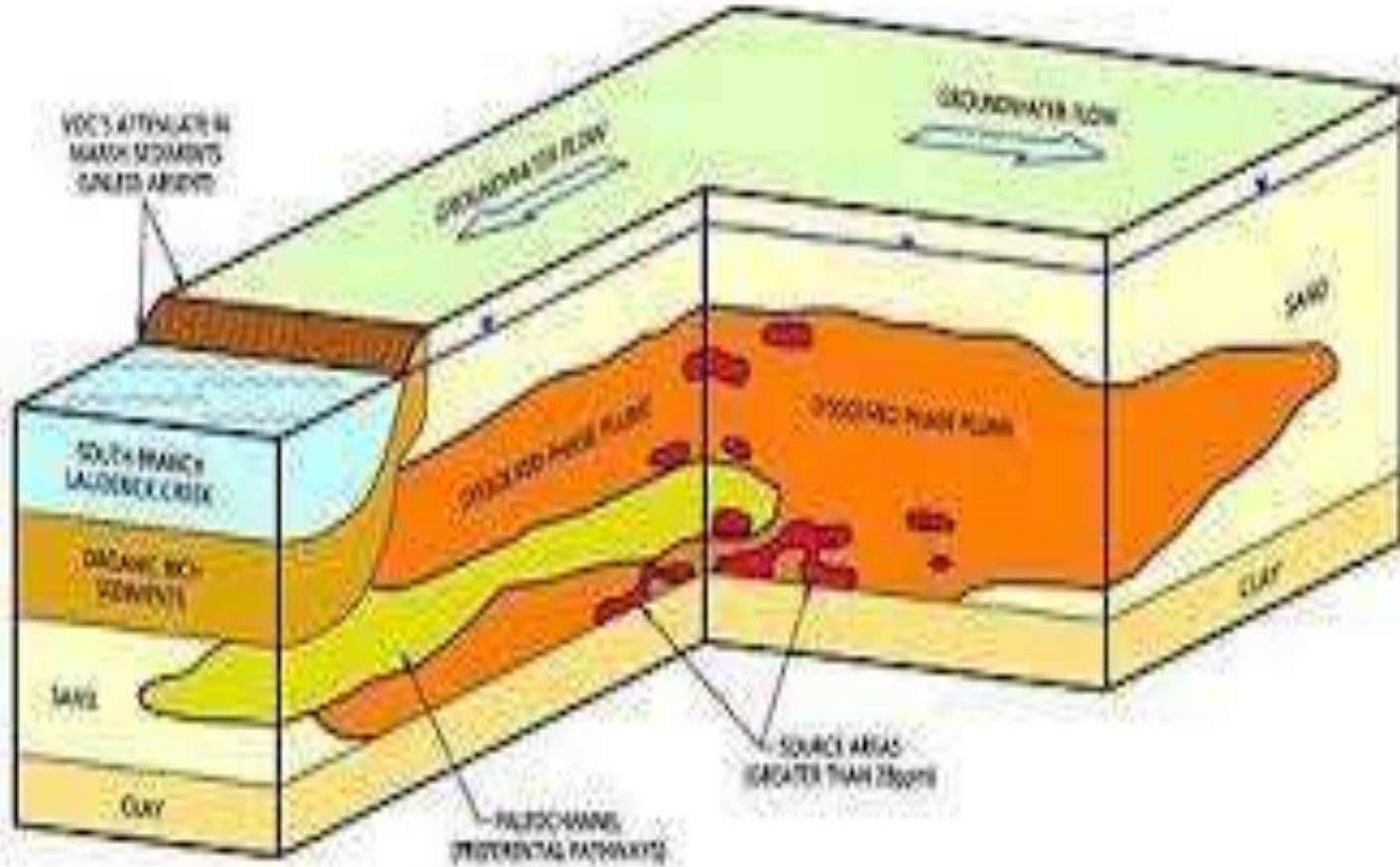
Purpose



1. Selection of the type and the depth of foundation suitable for a given structure.
2. Evaluation of the load-bearing capacity of the foundation.
3. Estimation of the probable settlement of a structure.
4. Determination of potential foundation problems (for example, expansive soil, collapsible soil, sanitary landfill, and so on).
5. Establishment of ground water table.
6. Prediction of lateral earth pressure for structures like retaining walls, sheet pile bulkheads, and braced cuts.
7. Establishment of construction methods for changing subsoil conditions.



Steps Of Subsurface Exploration Program



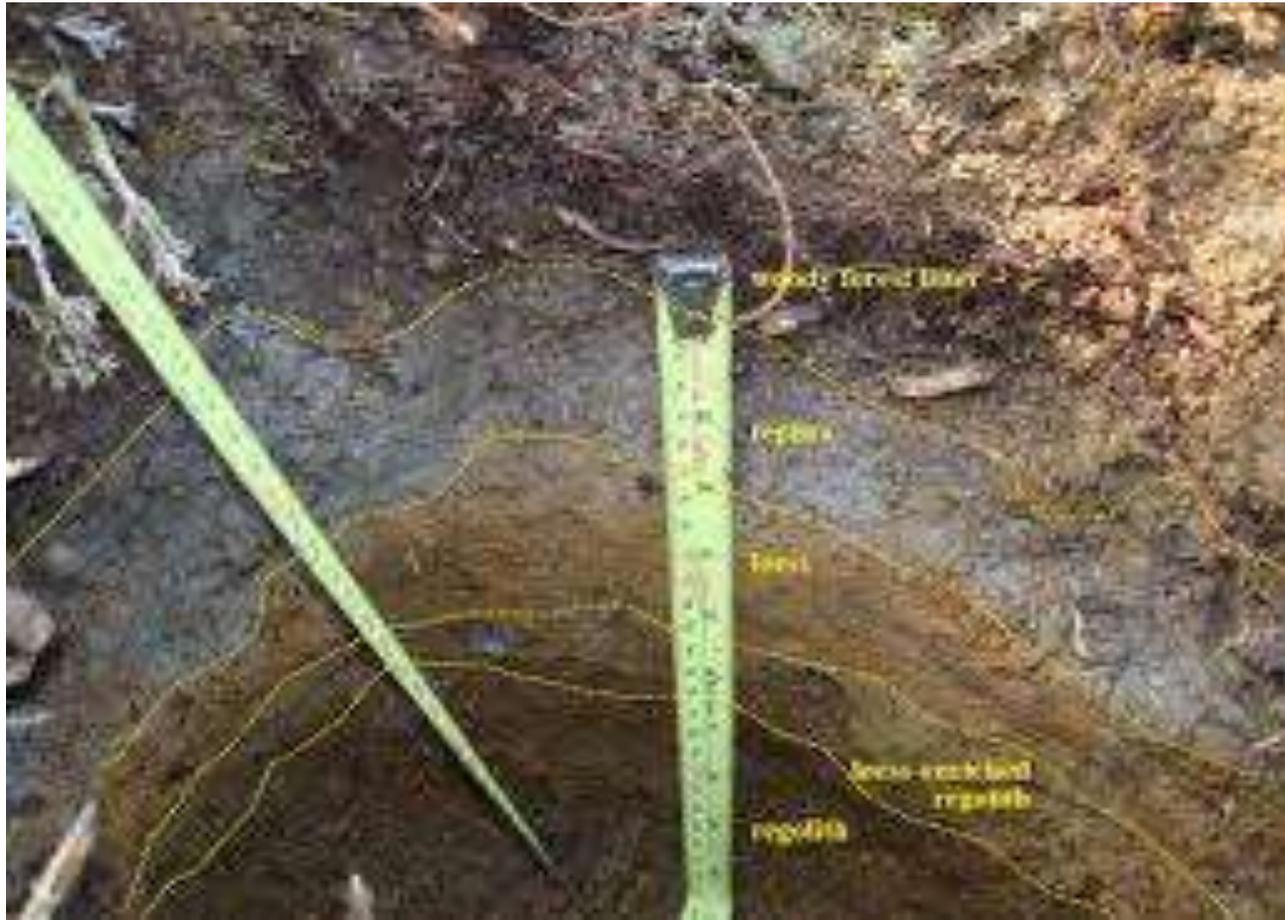


Steps Of Subsurface Exploration Program

- Assembly of all available information on dimensions, column spacing, type and use of the structure, basement requirements, and any special architectural considerations of the proposed building.
- For bridges the soil engineer should have access to type and span lengths as well as pier loadings.



Reconnaissance of the area





Steps Of Subsurface Exploration Program



Reconnaissance of the area:

- This may be in the form of a field trip to the site which can reveal information on the type and behavior of adjacent structures such as cracks, noticeable sags, and possibly sticking doors and windows.
- The type of local existing structure may influence, to a considerable extent, the exploration program and the best foundation type for the proposed adjacent structure.



Steps Of Subsurface Exploration Program



A detailed site investigation:

- Where the preliminary site investigation has established the feasibility of the project, a more detailed exploration program is undertaken.
- The preliminary borings and data are used as a basis for locating additional borings, which should be confirmatory in nature, and determining the additional samples required.