



SNS COLLEGE OF TECHNOLOGY



AN AUTONOMOUS INSTITUTION

**Approved by AICTE New Delhi & Affiliated to Anna University Chennai
Accredited by NBA & Accredited by NAAC with “A+” Grade, Recognized by UGC**

COIMBATORE

DEPARTMENT OF CIVIL ENGINEERING

**23CEB202 - SURVEYING
II YEAR / III SEMESTER**

Unit 1 : Chain and Compass Surveying

Topic 2 : Classification of Surveying



What is Classification?

How to classify?



Surveying

Surveying may be classified on the following basis:

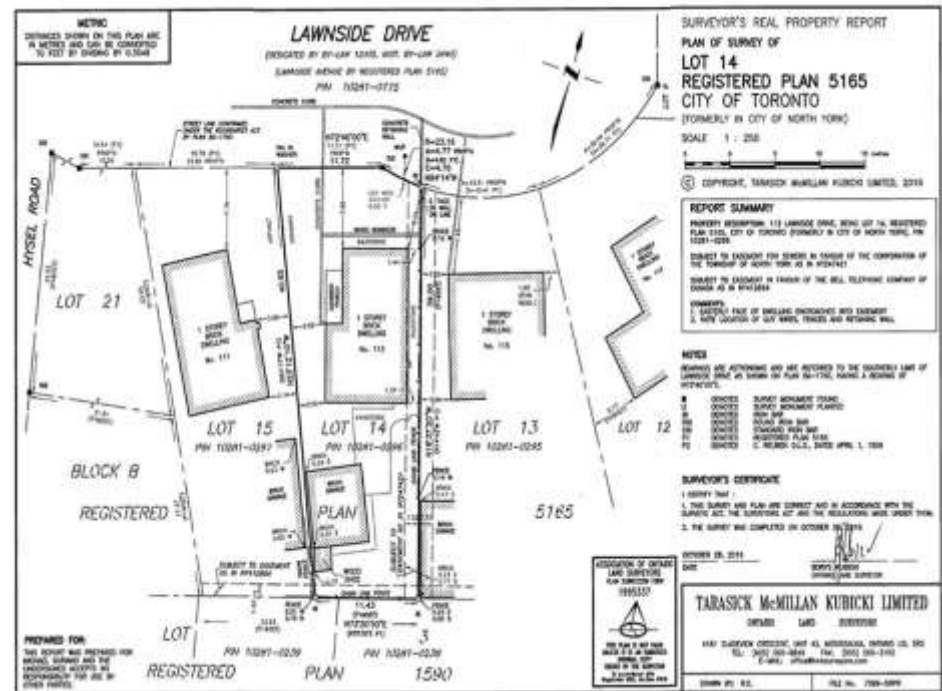
1. Nature of the survey field
2. Object of survey
3. Instruments used and
4. The methods employed



Classification Based on Nature of Survey Field



- ❖ land survey - It involves measurement of various objects on land
- ❖ marine or hydraulic survey and
- ❖ astronomical survey.





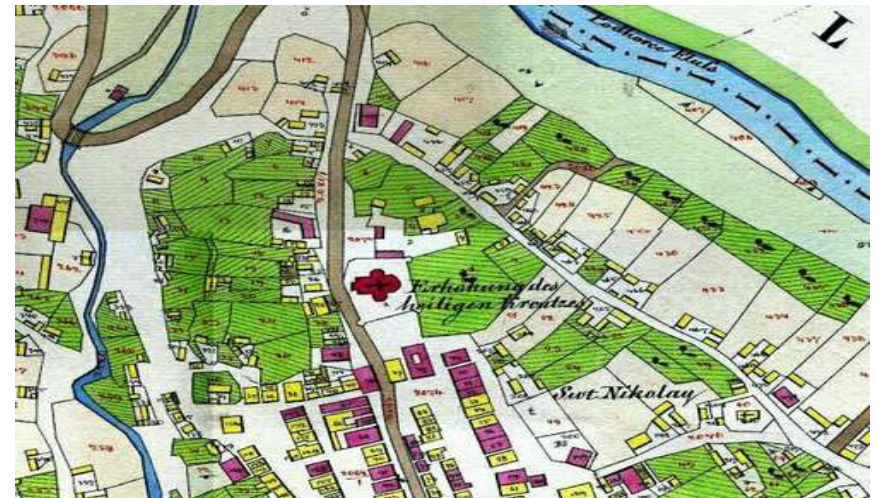
Topographic Survey: Plotting natural features





Cadastral Survey:

- ❖ Boundaries of municipalities, villages, talukas, districts, states etc. The survey made to mark properties of individuals also come under this category.





City Survey:



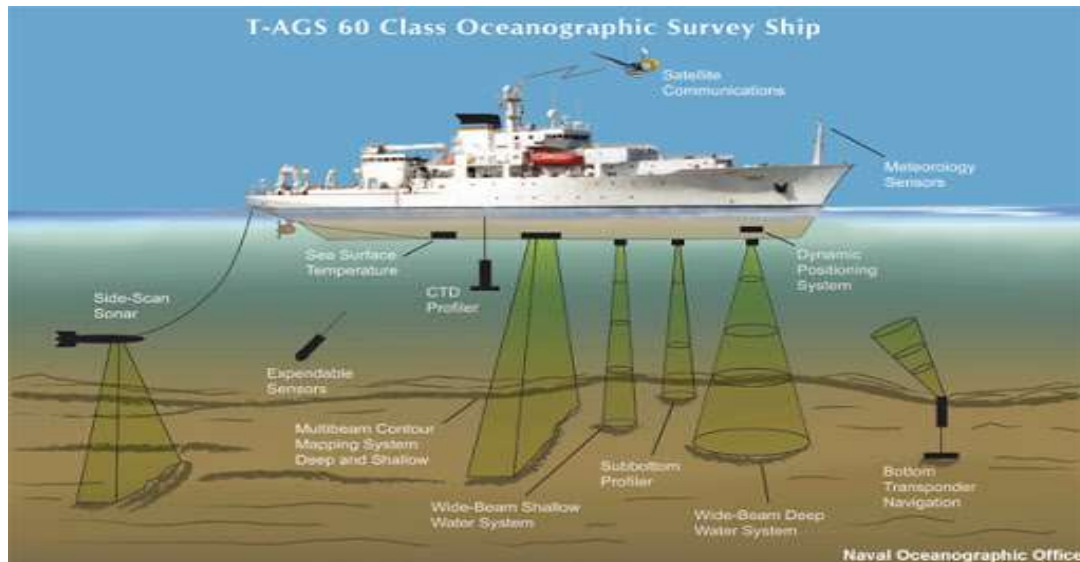
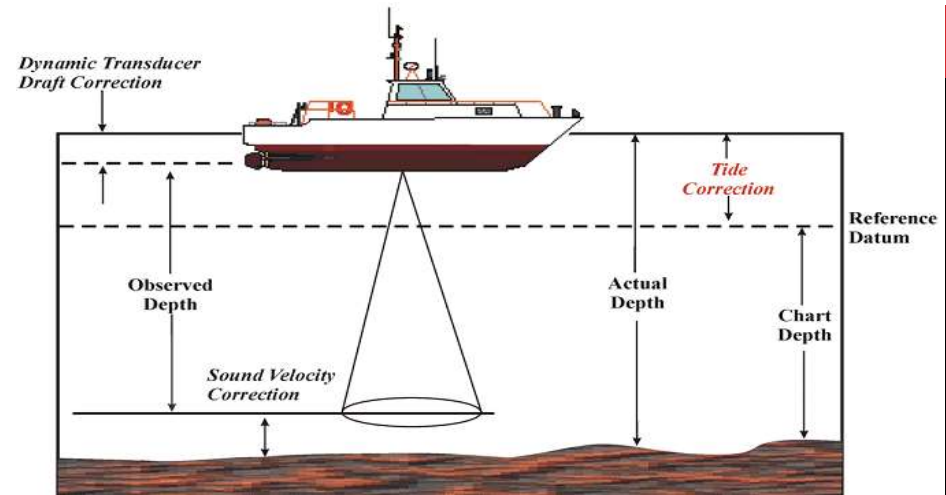
Made in connection with the construction of streets, water supply and sewage lines etc.,





Marine or Hydrographic Survey:

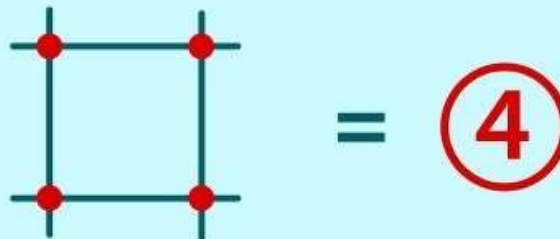
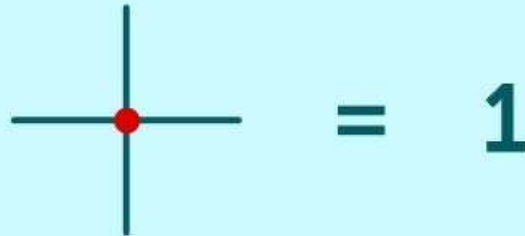
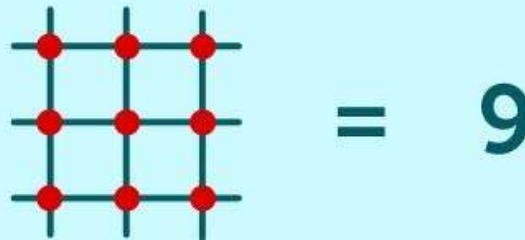
- ❖ To find depth of water at various points
- ❖ Finding depth of water at specified points is - sounding.





Activity

4. The numbers indicate the number of crossed lines in each shape.





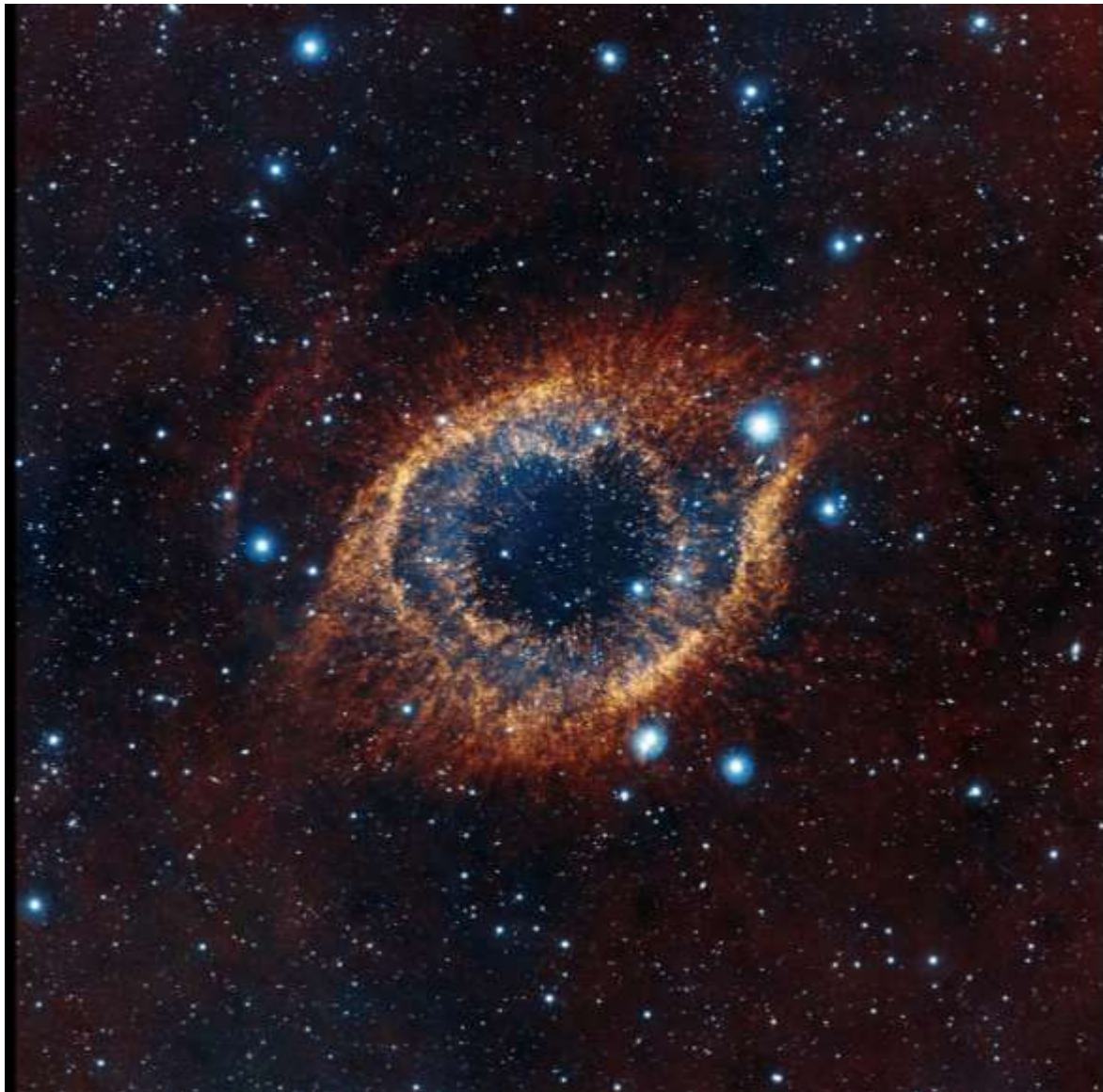
Astronomical Survey

Observations made to heavenly bodies to locate absolute positions of points on the earth and for the purpose of calculating local time.





Astronomical Survey





Classification Based on Object of Survey



- a) Engineering survey,
- b) Military survey,
- c) Mines survey,
- d) Geological survey and
- e) Archeological survey.



Classification Based on Object of Survey

(a) Engineering Survey

- ❖ To collect data for designing civil engineering projects

These surveys are further sub-divided into:

- ❖ Reconnaissance Survey - determining feasibility and estimation of the scheme.
- ❖ Preliminary Survey - collecting more information to estimate the cost of the project, and Location Survey to set the work on the ground.
- ❖ Location survey - To set out work on the ground for actual construction / execution of the project.



Classification Based on Object of Survey

- (b) **Military Survey:** This survey is meant for working out plans of strategic importance.
- (c) **Mines Survey:** This is used for exploring mineral wealth.
- (d) **Geological Survey:** This survey is for finding different strata in the earth's crust.
- (e) **Archeological Survey:** This survey is for unearthing relics of antiquity.



Classification Based on Instruments Used

- (i) Chain survey
- (ii) Compass survey
- (iii) Plane table survey
- (iv) Theodolite survey
- (v) Tacheometric survey
- (vi) Modern survey using electronic distance meters and total station
- (vii) Photographic and Aerial survey



Classification Based on Methods Employed

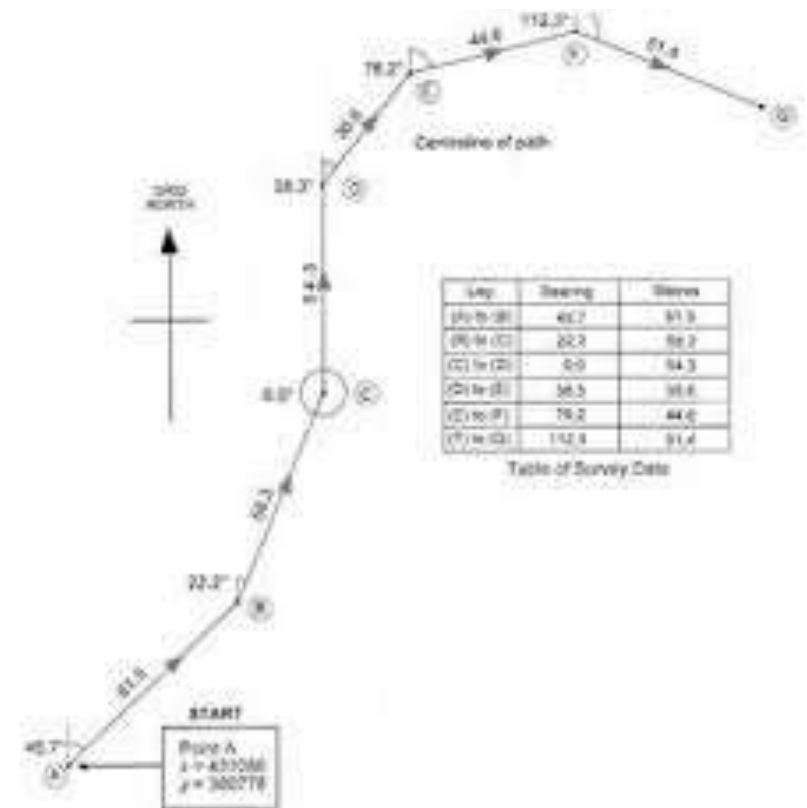
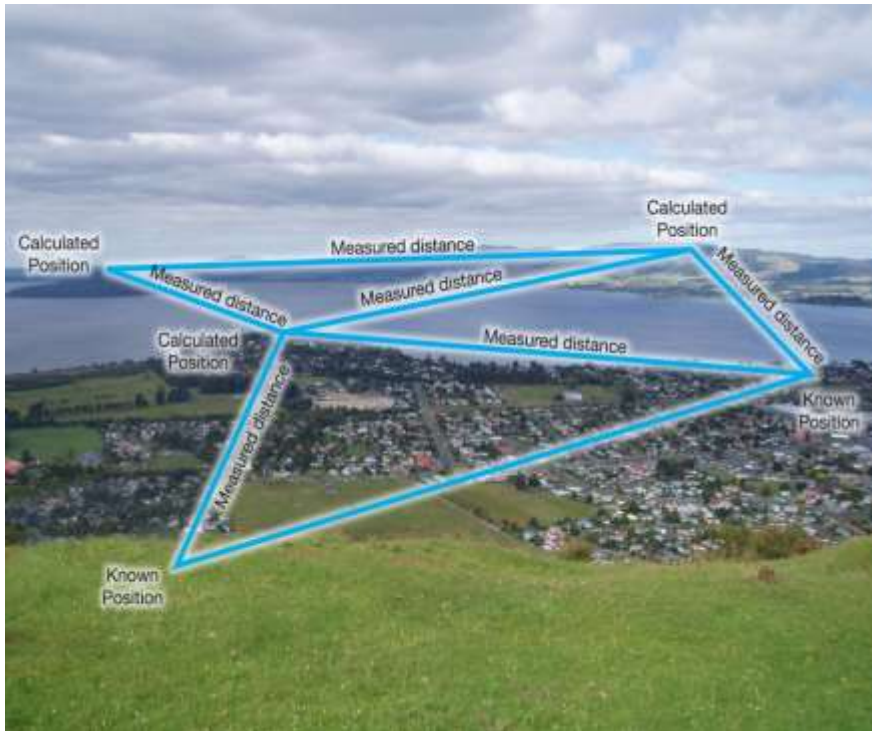
(i) Triangulation: In this method control points are established through a network of triangles.

(ii) Traversing: In this scheme of establishing control points consists of a series of connected points established through linear and angular measurements.

- ❖ If the last line meets the starting point it is called as closed traverse.
- ❖ If it does not meet, it is known as open traverse



Closed Traverse and Open Traverse





Q & A Session





Field and office work



THANK YOU