

Mapping

مساحة اولى مدنى

131



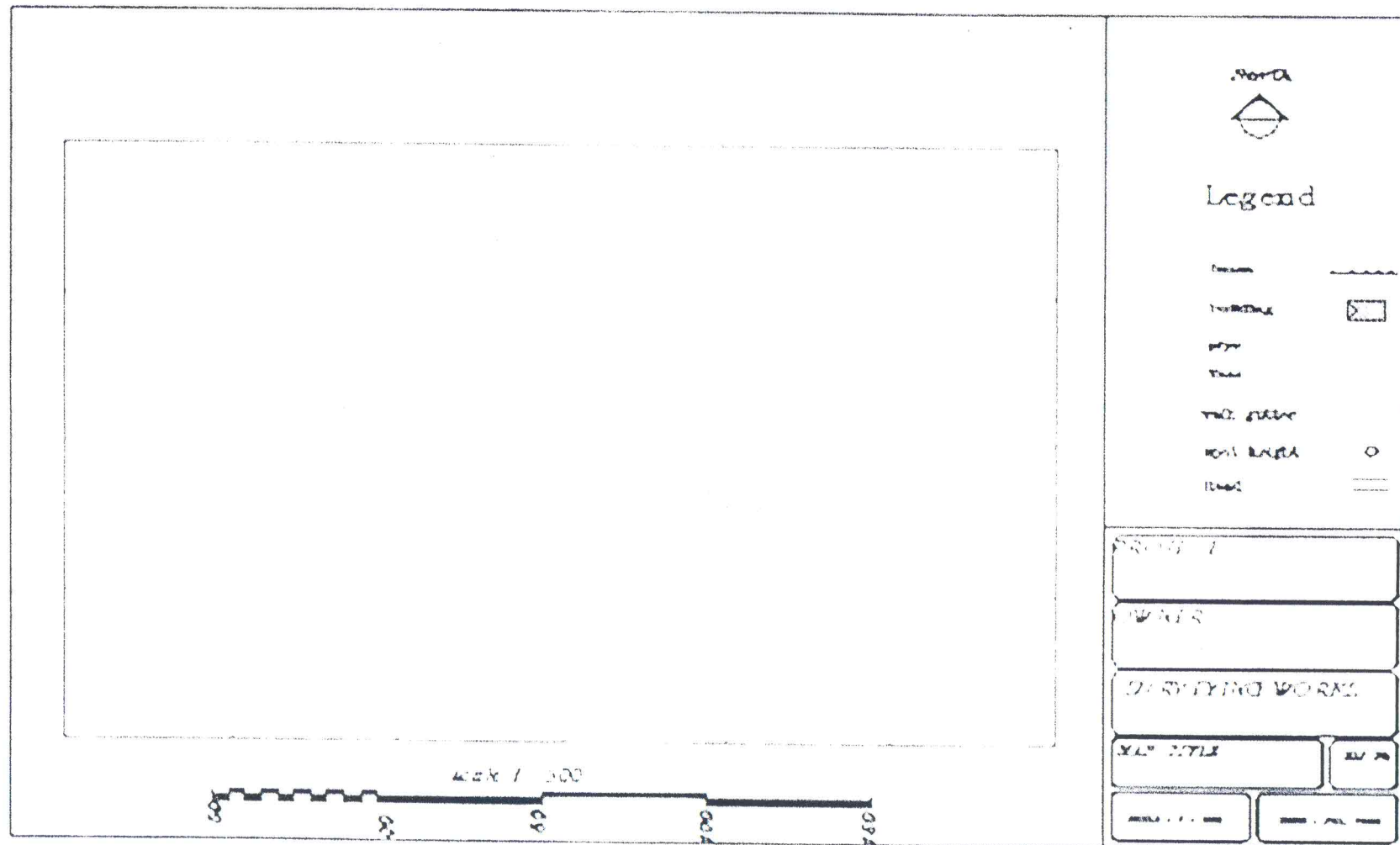
Vol. 1

1st Year Civil

(Plane Surveying)

CEP 111

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Project	
Owner	
Surveying Works	
Map title	Map No.
Scale	Date



- 1- No deformation in storage
- 2- Easy to store
- 3- Easy to duplicate and plot
- 4- Any modification can be done easily
- 5- Choosing the appropriate scale
- 6- Faster than manual methods
- 7- Any accuracy required
- 8- Less required time for production
- 9- Deals with coordinates



A) According to purpose

- 1- Detail Maps (all natural and artificial features)
- 2- Cadastral Maps (land ownership boundaries)
- 3- Engineering Maps (design and construction)
- 4- Topographic Maps (terrain mapping)
- 5- Geological Maps (soil and surface rocks)
- 6- Geodetic Maps (taking Earth's curvature into consideration)
- 7- Meteorological Maps (temperature, wind and humidity)
- 8- Tourism Maps (leisure, museums, shopping, directions)
- 9- Marine Maps (water depth)



B) According to material

- 1- Paper Map
- 2- Water Proof & Thermal Map
- 3- Transparent Map

C) According to color

- 1- Black and White
- 2- Colored

D) According to size

Ao, A1, A2, A3, A4, Ao Special roles



E) According to scale

- 1- Large Scale 1:100, 1:250, 1:500 (Detail Maps)
- 2- Medium Scale 1:1000 (City Maps), 1:2500 (Cadastral Maps), 1:5000 (Base Maps)
- 3- Small Scale 1:10000, 1:25000, 1:50000, 1:100000, 1:500000, 1:1000000 (Geodetic & Topographic Maps)

Factors affecting choice of map scale

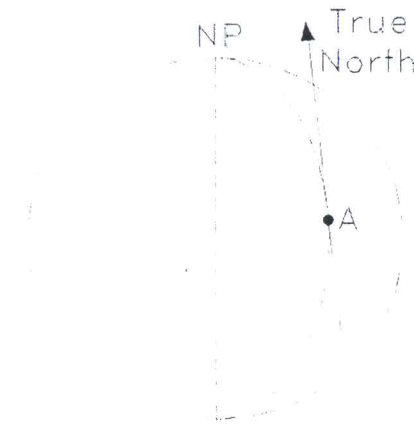
- 1- Purpose of map
- 2- Importance of project
- 3- Required accuracy
- 4- Size of map sheet



Has to be drawn on any map for orientation

1- Geographic (True) North

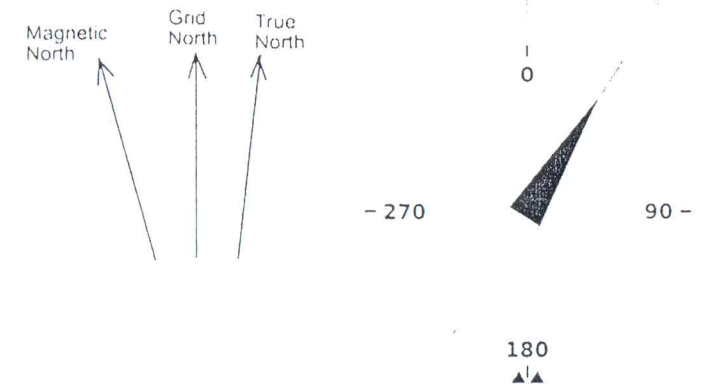
Tangent to the meridian passing by the point towards North Pole



2- Magnetic North

It is the direction pointed by the magnetic needle of the compass

- Changes from one point to another
- Affected by any magnetic field
- $\text{True North} - \text{Magnetic North} = \text{Magnetic Declination}$





3- Grid North

- As tangent to meridians are not parallel, then North directions are not parallel
- Use only one North for the whole surveyed area which is the tangent to the mean meridian of surveyed area



4- Arbitrary (Assumed) North

Assumed in any direction



If no. of maps (n) > 1
Maps are arranged:

Numerical ($1 < n < 10$)

1	2	3
4	5	6
7	8	9

Alphabetical ($10 < n < 26$)

A	B	C
D	E	F
G	H	I

Alpha-numeric

	1	2	3
A	A-1	A-2	A-3
B	B-1	B-2	B-3
C	C-1	C-2	C-3

Any no. of maps