

# Characteristics of the NAD '83 Control Network

1. Global reference system with origin at Earth's center of mass.

## Geodetic Reference System 1980:

$a = 6,378,137.000$  meters

$1/f = 298.25722210088$

2. Internal consistency of network improved by eliminating much of the existing distortion.
3. Latitude and longitude shifts will occur at all stations.
4. State plane coordinate systems have been redefined.
5. As in normal geodetic surveying practice, NGS has published state plane coordinates in meters and as required by state statute.

In 1959 a notice in the Federal Register stipulated that use of the U.S. Survey Foot should continue until the national network is readjusted; after such time the International Foot is to be used. If meter units are not used for state plane coordinates, then:

- A. Some states include use of International Foot as law.
- B. Other states clearly specify use of U.S. Survey Foot.
- C. If Foot units used, FGCC supports use of U.S. survey foot for surveying practice.

6. Coordinates on NAD 83 are northing and easting (N/E) instead of X and Y as on NAD 27. Difference is convention only.
7. Azimuth from north will be used instead of azimuth from south.