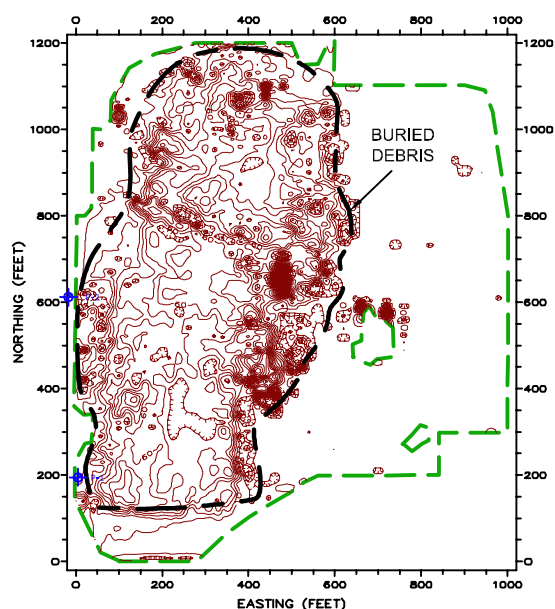


# ELECTROMAGNETIC TERRAIN CONDUCTIVITY SURVEYS



The electromagnetic terrain conductivity (EM) method uses a non-contact instrument that measures subsurface conductivity. A single measurement represents the conductivity value of a volume of earth material beneath a central point at the ground surface to a depth of approximately 15 feet. Since it measures the conductivity of a volume, actual changes in conductivity with depth or layering can not be determined. However, when a series of points are recorded over a grid pattern and contoured, the EM method can provide a map showing lateral variations in conductivity over a site. Since fine grained material is more conductive than coarse-grained materials, it can provide a means for locating lateral changes in site materials. Additionally, the EM meter is sensitive to the effects of localized buried objects. Since the instrument is portable and non-contact, surveys can be conducted at a walking pace along predetermined parallel traverses, typically spaced 5 to 20 feet apart. The spacing is dependent on the objective of the survey and the potential size of subsurface targets.



EM surveys can be conducted independently or in conjunction with other methods such as magnetometer, ground penetrating radar, and utility locating methods to:

- Locate metallic and nonmetallic buried debris
- Locate underground tanks, utilities and associated facilities
- Delineate excavated and filled areas
- Determine lateral extent or limits of changes in site materials
- Locate voids or cavities