

# 01050S01 -FIELD ENGINEERING SURVEY STANDARDS

## 1. OBJECTIVE

The objective of this standard is to present the minimum requirements for a survey conducted on a University of Kentucky project.

## 2. RESEARCH

The University shall furnish any utility information and existing surveys at its disposal. These documents are for informational purposes only and the University does not guarantee their accuracy. All utilities are to be verified in the field.

## 3. ACCURACY

The survey method used should produce a survey of the highest caliber possible using state of the art instruments. In no case shall a traverse closure be less than 1 in 10,000 unless permitted by the architect. The vertical accuracy shall be such that no more than 10 percent of the elevations shall be in error more than half the contour interval.

## 4. MONUMENTATION

The surveyor shall set at least four (4) control monuments for construction purposes. These shall be readily identifiable points outside of actual construction, but close enough that a contractor may conveniently make use of them. The monuments shall consist of a steel rod inserted in concrete with a brass plate on top. The plate shall include the name of the college and year the monument was set. The use of existing monuments is permitted. If State Plane Coordinates are readily available the monument should be tied into this system. The cost of obtaining the coordinates should be broken out in the estimate of the survey price.

## 5. UTILITIES

Utility locations shall be determined working in conjunction with the Owner, local agencies, and existing physical locations. These surveys shall locate all underground and overhead utilities in addition to any drainage and sanitary lines. Sewers, storm and sanitary, and manholes and inlets, including those adjacent to the property, shall show size, location, top or inlet and invert elevations and direction of flow of each. Location and sizes of gas and water mains, meter vaults, valve boxes, fire hydrants, etc. shall be located on or adjacent to the property. Electric, telephone, and cable TV lines, poles, transformer pads, exterior light poles, etc shall be shown. List the name, address, and phone number of all utilities serving the site.

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## 6. TOPOGRAPHIC INFORMATION

Topographic information shall be obtained in order to depict all existing features and conditions including buildings, fences, trees (caliper and type), roads (include setbacks), sidewalks, utilities, and easements. The contour interval shall be one (1') foot unless instructed otherwise by the Architect.

Show name, width and type of streets, drives, roads, alleys, curbs, bridges, culverts, walks, or steps. Indicate any streets, drives, roads, or alleys, which are dedicated to public use or maintenance. Information required on existing buildings will be the height, size, floor elevations, location, dimensions, and description.

Locate datum relative to existing structures or points. Locate trees and shrubs with spot elevation, type, and size.

## 7. PLANS

Plans shall include all topographic information. They shall be ink on mylar. If plans are produced by CAD, they must be in a system compatible with the software in Capital Project Management Division. A disk copy of the plans shall be included in the submittals. The plans will be to one inch equal twenty feet unless otherwise instructed by the Architect. Plans are to be signed and sealed by a Land Surveyor.