

Survey of the ARMM Coal INC. Property to be Conveyed to Greenup-Boyd Riverport Authority Wurtland, KY

**HOWERTON
ENGINEERING &
SURVEYING PLLC**

Client

Greenup-Boyd Riverport Authority
C/O Greenup County Fiscal Court
Greenup County Courthouse
Room 102
Main Street
Greenup, KY 41144

Key Staff

Richard L. Howerton, PE, PLS
Richard A. Howerton, PLS
Carl R. Kibbey
Josh Pemberton
Terry Wells
Michael Ruggieri

Project Cost

\$8,000

Project Area

15 Acres ±

Project Completion Date

2005

The purpose of this project was to provide a boundary survey of the Wurtland Riverport site for the Greenup-Boyd Riverport Authority. The project site was covered an area of 14.48 area owned by ARMM Coal INC. Howerton Engineering & Surveying used a combination of GPS and traditional Surveying techniques to establish the boundary of the site. In addition, a 60 foot easement following an existing road was established. The Northing and Easting coordinates of the major property corners were identified for the Riverport Authority, as well as latitude and longitude coordinates with a precision of 4 decimal places.

A particularly challenging aspect of this project was piecing together properties with poor deed descriptions, vague out-conveyances, missing or erroneous information and lack of proper monumentation. The deed descriptions were entered into a CADD database and fit together into "blocks". In several instances it was necessary to interview the property owners for assistance in determining the property boundaries. PVA Maps, highway right-of-way plans, and coal company maps were also used to determine property boundaries.

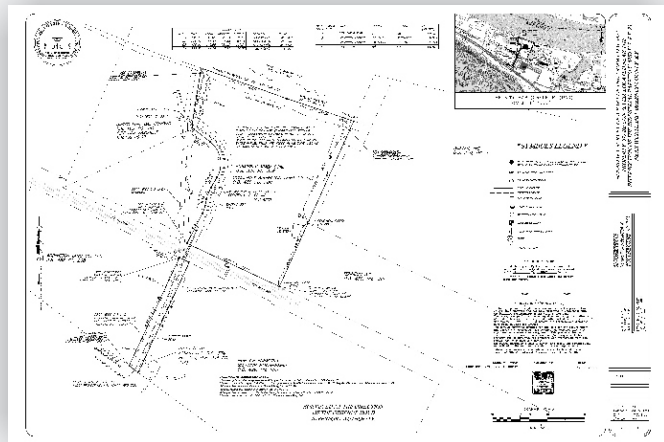
GPS was used to establish control necessary to tie the property boundaries to the Kentucky State Plane (North zone) coordinate system. By establishing state plane based coordinate system, the project survey mapping could be overlaid onto aerial photography.

Project Budget

Finished on Budget

Project Schedule

Finished on Time



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