**INNOVATIVE TERM CONTRACT FOR SURVEYING AND MAPPING:**

**HOMER: EAST END ROAD MP 12.5 TO END & OLD EAST END ROAD**

**AKSAS PROJECT NO. 55261**

**SURVEY NARRATIVE MLA PROJECT 13-143**

**SURVEYOR IN RESPONSIBLE CHARGE: Michael Miller, PLS**

**FIELD SURVEYOR: Mike Frame, PLS**

**Personnel**

Michael Miller, PLS Responsible Charge

Mike Frame, PLS Field Surveyor

Cameron Forbes, Field Tech

Billy McClintock, Field Tech

**Equipment**

RTK and Static observations were collected using Topcon Dual Frequency Hiper+, HiperGA, Hiper GGD and GR-5 receivers. Topcon Tesla field controllers running Windows Mobile and Topcon’s Magnet Field Data Collection Program were used for all data collection. All static observations were post-processed using Topcon’s Magnet Office Tools program. RTK coordinates were also checked with Magnet Office Tools. Leveling was performed with a Topcon DL-502 digital level.

**Control Monuments**

Mike Frame and Cam Forbes set and ran long static sessions on 10 new control monuments from May 24 to June 1. Each of the new control monuments is tied by direct observation to USC&GS Triangulation Station “HOMAIR 1954” at the Homer Airport, and GPS Control Point No. 12, as shown on the Record of Survey, AKSAS Project No.(s) 54130. 54140, 58106, Sterling Highway Pavement Preservation, Kenai Peninsula, Alaska, recorded as Plat No. 2012-5, Homer Recording District. Each monument was set near the edge of the right of way and each pair has intervisibility.

We established orthometric heights for the control monuments by GPS observations.

We ran differential levels at each pair of monuments as a check and adjusted one of the orthometric heights at each pair by the differential levels. The largest adjustment was

0.02 ft.

**Recoveries**

Two of the digout areas were within platted rights-of-way and one was partially platted. We located ROW corners in these areas to define the limits of our topographic surveys. We also located centerline monuments and corners that might be disturbed during construction. We believe the DOT was quit claimed Homer East End Road by the Omnibus Act recorded in the Homer Recording District at Book 54, Page 204. We located 4 additional PLSS corners that were tied during a 1969 DOT location survey of East End Road. We used a 100’ width for our topographic surveys in the three digouts that had no platted or partially platted right of way.

**Topographic Surveys – May 26 - June 3, 2013**

At various times during this period, Mike Frame, Billy McClintock and Cameron Forbes collected RTK data on the five digout areas and the centerline and edge of pavement for East End Road and Old East End Road. We did check shots at the beginning and end of each day. We downloaded each day’s work and added it to our field drawing to check coverage of the sites. 99% of the topographic data on this survey was collected by RTK observations; overhead wire elevations were shot with a total station.

ACS and HEA were prompt in contacting us and marking their lines. There are two short sections of buried electrical; there are buried telephone lines along all of East End Road and Old East End Road.

**Project Summary**

Overall the project went well with no significant issues. There are a couple of areas where the existing paved road may be outside the platted right of way (based on the background information from the Kenai Peninsula Borough GIS). It would take additional right of way surveying to determine this. Several of the centerline monuments from MP12.5-14.0 are in poor condition. The caps are corroding and illegible; some are screw-on caps which have worked loose.