Remote Airport Obstruction Maintenance
AKSAS 64128 and 64207

DEM Certification
Koyukuk Airport

I hereby certify that an independent ground survey was performed under my supervision to obtain data for and to check the reliability of the bare earth digital elevation models as defined in the following files:

- File Name: **Koyukuk Bare-Earth DEM 001.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:53 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1673006.74, East 1679006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Bare-Earth DEM 002.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:53 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1679006.74, East 1685006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Bare-Earth DEM 003.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1685006.74, East 1691006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Bare-Earth DEM 004.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1691006.74, East 1697006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Bare-Earth DEM 005.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1667006.74, East 1673006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Bare-Earth DEM 006.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet

Vertical Coordinate System: NAVD 88, US Survey Feet
Extents: West 1673006.74, East 1679006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Bare-Earth DEM 007.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 12: 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1679006.74, East 1685006.74, South 3971620.20, North 3977620.20

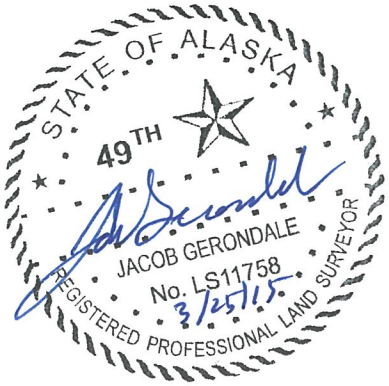
- File Name: **Koyukuk Bare-Earth DEM 008.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1685006.74, East 1691006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Bare-Earth DEM 009.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 10:54 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1691006.74, East 1697006.74, South 3971620.20, North 3977620.20

The files are in geotiff (.tif) format and were produced by Kodiak Mapping, Inc. from an aerial mapping survey conducted on October 9, 2014.

The surfaces are comprised solely of the LIDAR survey data generated by Kodiak Mapping, Inc. The surfaces meet 2-foot contour accuracy standards. Lounsbury's independent ground survey for quality control used a combination of conventional and Real Time Kinematic (RTK) GPS techniques, employing a Leica TCR 1105 total station and Topcon GR-5 units.

Kodiak Mapping, Inc. mapped approximately 3576 acres of ground lying within the DEM files listed above. A random sampling of topographic points was withheld throughout the mapping area by Lounsbury & Associates. The measured coordinates of these points were compared to the surface definitions as an independent check and were found to meet the specified accuracy as qualified above.



Jacob M. Gerondale, LS-11758

Remote Airport Obstruction Maintenance
AKSAS 64128 and 64207

DSM Certification
Koyukuk Airport

I hereby certify that an independent ground survey was performed under my supervision to obtain data for and to check the reliability of the highest hit digital surface models as defined in the following files:

- File Name: **Koyukuk Highest Hit DSM 001.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1673006.74, East 1679006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Highest Hit DSM 002.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1679006.74, East 1685006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Highest Hit DSM 003.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1685006.74, East 1691006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Highest Hit DSM 004.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1691006.74, East 1697006.74, South 3977620.20, North 3983620.20

- File Name: **Koyukuk Highest Hit DSM 005.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1667006.74, East 1673006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Highest Hit DSM 006.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet

Vertical Coordinate System: NAVD 88, US Survey Feet
Extents: West 1673006.74, East 1679006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Highest Hit DSM 007.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 12: 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1679006.74, East 1685006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Highest Hit DSM 008.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1685006.74, East 1691006.74, South 3971620.20, North 3977620.20

- File Name: **Koyukuk Highest Hit DSM 009.tif**
  File Size: 140,720 KB
  Save Date/Time: 03/06/2015 11:21 A.M.
  Horizontal Coordinate System: NAD_1983_StatePlane_Alaska_6_FIPS_5006_Feet
  Vertical Coordinate System: NAVD 88, US Survey Feet
  Extents: West 1691006.74, East 1697006.74, South 3971620.20, North 3977620.20

The files are in geotiff (.tif) format and were produced by Kodiak Mapping, Inc. from an aerial mapping survey conducted on October 9, 2014.

The surfaces are comprised solely of the LIDAR survey data generated by Kodiak Mapping, Inc. The surfaces meet 2-foot contour equivalent (18.5 cm RMSE) accuracy standards. Lounsbury's independent ground survey for quality control used a combination of conventional and Real Time Kinematic (RTK) GPS techniques, employing a Leica TCR 1105 total station and Topcon GR-5 units.

Kodiak Mapping, Inc. mapped approximately 3576 acres of ground lying within the DEM files listed above. A random sampling of topographic points was withheld throughout the mapping area by Lounsbury & Associates. The measured coordinates of these points were compared to the surface definitions as an independent check and were found to meet the specified accuracy as qualified above.

Jacob M. Gerondale, LS-11758