

Work and Services Performed

- **Aerial Photography:** On April 29, 2001 Kodak Global Imaging captured thousands of high-resolution (6-inch pixels) aerial photographs in the Greater Portland areas. This flight enables the planimetric and topographic mapping to be done at a scale of 1 inch = 100 feet with a DTM collected to support 2-foot contours. The aerial photographs are provided on CD-ROM and handled digitally during the photogrammetric processes.
- **Control Surveys:** Multiple flight lines are usually set up with 1 control point every 5 photos. The control target are measured in the digital aerotriangulation process and later compared to known GPS coordinates providing the information necessary to map at the specified scale according to National Mapping Accuracy Standards (NMAS).
- **Digital Analytical Aerial Triangulation (DAAT):** Control was densified through DAAT. The exposure stations were provided originally by the flying contractor but further refined by an intricate adjustment of the Airborne (Kinematic) GPS data, Inertial Measuring Unit (IMU), and the photo and ground control measurements. The coordinates were then used as control in the simultaneous block bundle adjustment.



Digital Orthoimage with sewer data overlay

- **Stereo Compilation:** The data collection was accomplished using ABC-PC Stereoplotters. Transportation centerlines and watershed data were the primary data layers to be collected. The topographic data collected was used in the creation of a Digital Terrain Model (DTM), which is responsible for the creation of contour lines. All topographic projects are compiled with surface modeling techniques. This includes the collection of hard and soft breakline features with supplemental random mass points to maintain mapping accuracies. DTM projects are processed through Spectra-Precision Terramodel software, which has a direct interface with the KDMS data files.
- **Digital Orthophotography:** The digital orthophotos was a natural by product of the work as the images were scanned at a resolution of 15 microns for softcopy triangulation and compilation testing. Digital orthos were produced with a 5cm (ground distance) pixel resolution.