



Land Surveying

With a seasoned team of registered professionals and survey staff, combined with cutting-edge technology and equipment, CEC offers a full range of land surveying services that meet the changing needs of clients.

CEC surveyors have completed numerous projects requiring topographic, boundary, construction, hydrographic, geodetic, route, and settlement and displacement surveys. CEC maintains a full complement of equipment, including RTK and static GPS, robotic and conventional Total Stations, automatic and digital levels, data collectors, and 3D laser scanners that use terrestrial LiDAR scanning to create spatial imaging.

Robust professional capabilities, specialized experience, and technical competence and capacity allow CEC to provide the following services:

HORIZONTAL & VERTICAL CONTROL SURVEYS

CEC's experience includes photogrammetric control, monitoring stations for lakes and dams, site development, earthwork, utility, roadway and bridge construction control, waterway channel alignment, towers and transmission lines, and oil and gas well pads and pipelines.

TOPOGRAPHIC SURVEYS

CEC employs various topographic techniques depending on site characteristics and requirements such as terrain, vegetation, desired accuracy, and physical improvements.

CONSTRUCTION SURVEYS

Many of these surveys include surface/subsurface utilities, stakeout of roads, bridges, runways, buildings, parking lots, fuel lines, storage tanks, towers, gas well pads, and midstream pipelines. Work also has included experience in construction surveys of upland disposal sites, locks and dams, rivers, lakes, and canals, as well as sedimentation surveys.

BOUNDARY AND LAND TITLE SURVEYS

CEC has completed boundary surveys and mapping for parcels in our service areas and beyond, including American Land Title Association (ALTA) surveys, mortgage surveys, annexations, zoning, highway right-of-way plans, subdivision platting, gas well plats, and condominium documents.

VOLUMETRIC SURVEYS

CEC is experienced with performing volumetric computations pertaining to excavation and landfill operations. Projects range from mass excavations of commercial sites and landfills to small building pads.

LIDAR

CEC utilizes both "Phase Based" and "Time of Flight" LiDAR scanners, which capture high-definition field data. LiDAR scanning enhances a broad range of land surveying and engineering projects from architectural and building surveying to industrial mapping of intricate sites and structures to forensics and accident reconstruction.

AS-BUILT PIPELINE SURVEYS

In the Oil & Gas industry, determining the exact location of pipelines is critical. CEC surveyors collect horizontal and vertical locations of pipeline components such as welds, bends, and valves that are then recorded in a CADD or GIS database. This critical survey provides pinpoint accuracy and identifies the exact location of pipe features or other anomalies that can have an effect on the integrity of the pipelines.

