Utility Engineering for Highways

When you work with Cardno, you get a single point of contact for all aspects of utility risk management and integrated infrastructure services.

At a Glance:

34 DOTs

7000+ Projects

The inability to obtain reliable underground utility information has been a troublesome problem for highway designers. Subsurface Utility Engineering (SUE) enables state and local DOTs, design consultants, and utility companies to locate existing subsurface utilities with a high degree of accuracy and comprehensiveness.

For utility design and mapping, utility coordinating, and Subsurface Utility Engineering, Cardno has experience and long established relationships with utility providers, uniquely enabling us to effectively resolve complex utility issues in roadway construction projects:

- Local roads
- State highways
- Interstate highways
- Traffic signals and intersections

We have worked with more than 30 state departments of transportation (DOTs) to locate utilities, helping eliminate costly conflicts in design and delays in design and construction.

Reducing risk and delay claims

Our job is to help reduce uncertainties and keep your project moving forward. With decades of experience serving hundreds of clients, top notch equipment and processes, you can be confident that your project will be handled with the attention it deserves. Our SUE expertise regularly leads to identification and documentation of previously unrecorded subsurface utilities, reducing the risk of potential project impacts.

The proper and successful use of SUE benefits both highway agencies and the impacted utilities:

- Avoid unnecessary utility relocations
- Reduce delay claims
- Eliminate unexpected utility conflicts
- Enhance safety and lessen possibility of damage to a utility, property, and personnel

Comprehensive services

Cardno is experienced in completing projects utilizing the design build methodology, in which the design/builder performs both design and construction under a single contract. We work between the design and construction disciplines, setting the stage for a successful project.

Benefits of design build:

- Single source of accountability
- Budget management
- Enhanced communications
- Faster project completion
- Quality control
**Safety Managing Risk & Uncertainty**

With decades of experience, top notch equipment, and firmly entrenched safety processes, you can be confident that we will mitigate impacts and reduce risk over the life of your project, providing a full range of services that minimize the opportunity for costly delays and unplanned expenses. Safety is a core value for Cardno. We are committed to continually improving our safety processes and to providing for the safety of the project site, staff, and the public.

**Staff and training**

Cardno’s ongoing focus on staff training and advancement keep us at the forefront of the industry. Our UES field and office teams are highly-trained and specialized professionals qualified to meet a broad range of client needs. All staff are required to meet rigid safety and industry training requirements as well as complete training that Cardno has developed to provide our teams with additional skills and technical knowledge.

**Leading with technology**

A wide range of equipment is necessary to detect the variety of subsurface utilities that may be present. We use the most appropriate technology for the project to increase the accuracy of the data, including:

- Stream EM, a multi-channel ground penetrating radar solution dedicated to utility locating and mapping.
- Stream C, a compact array solution for real-time 3D mapping of underground utilities and features.
- Concrete imaging GPR, advanced concrete scanning that detects and protect existing utilities and structural supports in concrete
- LiDAR Scanning of roads, interchanges and bridges for precise 3D mapping to be merged with SUE data to support new 3D engineering designs

**Projects**

Cardno’s well-trained and well-equipped SUE team has worked with more than 30 DOTs across the country to date. As a firm with more than three decades of experience, we have become a recognized leader within the industry, working on award-winning projects from coast to coast.

**Leading the Utility Engineering & Surveying (UES) industry**

We are proud to be a founding and sustaining member of the American Society of Civil Engineers’ (ASCE) Utility Engineering and Surveying Institute (UESI), whose mission is to advance the UES practice. Our experts lead the profession through speaking at industry conferences; developing standards and manuals of practice. We lead the industry by example. We develop professional practices that set the bar regarding the expectations for any SUE or survey investigation.

Cardno is a global provider of integrated professional services which enrich the physical and social environment for the communities in which we live and work. Our team of multidisciplinary specialists around the world has more than 70 years’ experience in designing, developing and delivering sustainable projects and community advancement programs. Cardno is listed on the Australian Securities Exchange (ASX: CDD).

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