



statement of qualifications for  
Civil Services



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## civil services

From water towers and roads to airport runways and planning studies, our team has the knowledge and experience to handle any project, large or small. Ulteig offers a full range of civil disciplines, including aviation, municipal, planning and environmental, transportation, water and wastewater, and water resources services. We take the time to understand your needs and apply our understanding to provide innovative and reliable solutions that sustain your built-environment.

### **Aviation**

We provide total aviation engineering and planning services to air carrier airports, general aviation airports, and military installations. Our team includes engineers, planners, and scientists who provide effective solutions by drawing on each others' strengths. We partner with our clients to leverage their current facilities and future capital improvements to the greatest possible advantage for the communities they serve.

### **Municipal**

Ulteig helps communities develop and manage their infrastructure and resources by connecting technical expertise to the vision of community leaders and their constituents. We make certain that your existing characteristics and natural resources are preserved, ensuring that what we do today will serve your community well tomorrow and beyond.

### **Community Planning**

We help our clients develop and manage their communities' built-environment and natural resources while enhancing their quality of life. Municipalities, private developers, federal agencies, and regional planning bodies all rely on Ulteig to help them make informed decisions that result in sustainable systems, vibrant communities, and livable places.

### **Transportation**

Our services produce responsible results for connecting people to one another and their workplaces, connecting resources and goods to consumers, and connecting entire economies to one another. We are accustomed to meeting the requirements and expectations of federally funded projects and State Departments of Transportation as well as regional and local levels of government.

### **Water & Wastewater**

Our engineers, technicians, and operators provide the experience and innovation to develop dependable water and wastewater infrastructure solutions through a complete range of planning, design, and operational services.

### **Water Resources**

Ulteig's water resources professionals assist public- and private-sector clients in managing stormwater runoff and surface water resources to sustain or improve water quality, minimize flooding, and address regulatory challenges.

## Aviation

Ulteig's aviation tradition dates to 1970, with a project that pioneered the application of slipform technology for concrete runway overlays. That same year, we were instrumental in obtaining the first airport development grant awarded in the United States.

### Planning

- Airport layout plans
- Master plans
- Geographic information systems (GIS)
- Part 77 obstruction studies
- Sign plans
- Site development plans
- Terminal planning

### Environmental

- Environmental assessments
- Categorical exclusions
- Wetland mitigation plans
- Stormwater pollution prevention plans (SWPPPs)
- Surface water management

### Design

- Airside
  - Runways
  - Taxiways
  - Aprons
  - Heliports
  - Apron lighting
  - Airfield lighting
  - Drainage
  - Guidance signs
  - Navigation aids
- Landside
  - Access roads/parking
  - Fueling facilities
  - Hangars
  - Sanitary sewer, water, and storm sewer
  - Security fencing/gates
  - Snow removal equipment buildings
  - Terminals

### Construction

- Construction administration
- Construction observation
- Construction surveying
- AIP grant closeout

## Municipal

We serve a community's municipal engineering needs by providing services that are beyond typical engineering design solutions. Our approach centers on understanding a client's vision and objectives.

### Engineering

- Construction document preparation
  - Water systems
  - Wastewater systems
  - Utility rehabilitation
  - Street rehabilitation
  - Land development/subdivisions
  - City maps and utility records
  - Maintenance assistance
  - Permit applications
- Studies and reports
  - Capital improvement plans
  - Preliminary design studies
  - Facility plans
  - Feasibility studies
  - Hydrology and hydraulic analysis

### Environmental

- 404 permit application
- Erosion control design
- Stormwater pollution prevention plans
- Wetland delineation
- Wetland mitigation
- Wetland restoration

### Financial

- Annual budgets
- Capital budgeting
- Grant and loan assistance
- Improvement bond determinations
- Public hearings
- Special assessment determinations
- Water and sewer rate studies

### Planning

- Capital improvement planning
- Comprehensive planning
  - Growth projections
  - Infrastructure
  - Land use
  - Transportation
- Environmental assessment worksheet
- Ordinances and policies

## Planning

Ulteig's planners provide services to both private and public clients. We understand the issues from both perspectives. The dual perspective helps us provide effective communication and more streamlined plans and projects.

### Community Planning

- Comprehensive planning
- Small-area planning
- Land use planning
- Walkability assessments
- Socioeconomic analysis
- Growth management planning
- Strategic planning
- Corridor planning
- Transportation planning
- Complete streets
- Capital improvement programs
- Airport influence zones

### Regulations & Administration

- Zoning ordinances
- Subdivision regulations
- Planning/zoning procedures training and consulting
- Regulating plans
- Historic area zoning
- Rural development regulations

### Land Development

- Master development plans
- Traditional neighborhood design
- Urban design
- Mixed use planning
- Platting
- Floodplain management documents
- Parks, trails, and amenities planning
- Development proposal technical assistance

### Public Involvement

- Public hearings
- Open house meetings
- GIS mapping and analysis
- News media communications
- Systematic Development of Informed Consent
- Charrettes
- Statistically representative surveys

## Landscape Architecture

- Multiuse recreational trail development and design
- Transportation corridor aesthetics
- Site master planning
- Project concept reports
- Land development/platting assistance
- Interpretive concept development and design
- Residential and commercial site design

## Transportation

We provide planning, design, and construction services for complex urban intersections, corridor retrofits, and urban and rural highways. Thousands of miles of completed projects represent our expertise in problem-solving for the needs of city, county, state, federal, and private transportation.

### Planning

- Traffic analysis
- Corridor studies
- Site impact analysis
- Multimodal plans
- Environmental documents
- Long-range transportation plans
- Public participation and consensus building

### Design

- Structures and bridges
- Water resources, drainage, and utilities
- Multiuse recreational trails
- Noise walls
- Roundabouts
- Streets and highways
- Traffic signals and lighting
- Reconstruction and rehabilitation
- CADD and MicroStation
- Construction traffic control and detour plans
- Right-of-way acquisition

### Construction

- Project management
- Bidding phase services
- Shop drawing review
- Construction surveying
- On-site construction observation
- Records and as-builts
- Project closeout

## Water & Wastewater

Ulteig's water and wastewater practice has helped a growing list of public and private clients meet the challenges of delivering potable water to their communities and clean water to the environment since 1970. Population growth, climate change, regulatory mandates, and aging water and wastewater infrastructure are some of the biggest challenges facing society today. Our water and wastewater specialists are experts in the industry and can help you overcome these challenges.



### Water

- Supply
  - Ground water wells
  - Surface water sources
  - Intake structures
  - Horizontal collector wells
  - Alternate water supplies
- Distribution
  - Master planning
  - Capital improvement plans
  - Water storage facilities
  - Pumping stations
  - Transmission mains
  - Distribution mains
  - Regional systems
  - Corrosion control
- Treatment
  - Facility planning
  - Process optimization/audits
  - Water treatment facility design
  - Granular filtration
  - Softening
  - Chemical feed
  - Membrane systems
  - Disinfection
  - Residuals management
- Specialized water services
  - Water distribution modeling/analysis
  - Fire flow assessments
  - Distribution system field testing
  - Instrumentation and controls
  - Vulnerability assessments
  - Regulatory compliance
  - Rate studies
  - Funding assistance
  - Operations consulting

### Wastewater

- Collection
  - Master planning
  - Capital improvement plans
  - Inflow/infiltration studies
  - Sanitary sewer evaluation studies
  - CMOM compliance
  - Sewer separation
  - Trenchless technologies
- Conveyance
  - Pump station design
  - Pump station optimization and rehabilitation
  - Flow control structures
  - Inverted siphons
- Treatment
  - Stabilization ponds
  - Activated sludge
  - Attached growth systems
  - Nutrient removal
  - Disinfection
  - Biosolids management
  - Odor control
  - Water reuse
- Specialized wastewater services
  - Sanitary sewer system modeling
  - Smoke/dye testing
  - Pump performance testing
  - Instrumentation and controls
  - Rate studies
  - Funding assistance
  - Regulatory compliance
  - Permitting
  - Operations consulting

## Water Resources

We are experts in the field of hydrology and hydraulics, working on projects from simple drainage designs to major flood control works. We integrate natural elements into civil design and look to natural hydrologic systems as inspiration for our constructed solutions.

### Watershed Management

- Stormwater and surface water management plans
- Comprehensive sewer plans
- Development review and code compliance
- Operation and maintenance plans
- Risk assessment
- GIS mapping

### Hydrologic & Hydraulic Modeling

- Urban stormwater modeling
- Rural drainage modeling
- Stream modeling
- Lake and reservoir modeling
- Sanitary sewer hydraulic modeling
- Dam and levee failure analysis

### Stormwater Compliance & Water Quality

- Project permitting
- MS4 Permit, SWPPP, and program development
- Construction stormwater permit and SWPPP
- Antidegradation compliance
- Impaired waters and special waters
- Water quality management plans



### Floodplain Management & Analysis

- Flood insurance rate studies
- Conditional letters of map revision (CLOMR)
- Letters of map revision (LOMR)
- FEMA mapping
- Digital flood insurance rate maps (DFIRMs)
- Flood elevation certificates
- Post event urban flood studies
- Flood damage reduction
- Flood control projects
- Flood preparation and planning
- Post event recovery and analysis

### Stormwater Conveyance & Storage

- Pond and storm sewer design
- Rate control, extended detention, and hydrograph management
- Energy dissipation
- Overland conveyance design
- Bank stabilization

### Wetland Services

- Wetland delineation
- Wetland mitigation design and replacement plans
- Wetland studies/wetland hydrology
- GIS wetland mapping

### Best Management Practice (BMP) Analysis & Design

- BMP implementation planning
- BMP performance calculations and permitting
- Runoff water recycling strategies
- Erosion and sediment control

### Hydraulic & Control Structures

- Stormwater pumping stations
- Multistage outlets, control structures, and diversions
- Bridge and culvert hydraulic assessment
- Agricultural control structures
- Dams, levees, and flood walls

### Economic Studies & Grants

- Water resource grant applications
- Benefit/cost for hazard mitigation grants
- Stormwater utilities and rate studies
- Area and connection charges
- Capital improvement planning and budgeting



## about ulteig

From urban infrastructure to building systems, airports, and highways to energy, land, and water, we help people build and sustain the systems that support vital communities.

Since our founding in 1944, Ulteig has grown to include hundreds of professionals who represent a wide range of disciplines. We are an employee-owned company that delivers comprehensive engineering, planning, and surveying services.

### **Building Services**

Our Building Services sector consists of professionals representing a wide range of disciplines, working together to serve our clients with integrated building and site design solutions. We provide a diverse list of capabilities — only available from a full-service firm — to government, healthcare, education, corporate/industrial, and community/commercial development clients.

### **Energy Services**

Our Energy Services sector works with clients ranging from global energy producers to local power cooperatives. We connect energy sources and power generation to end users. We are recognized leaders in this industry, providing services and expertise on projects worldwide.

### **Land Services**

Ulteig's Land Services sector combines the practices of land surveying with GIS and right-of-way acquisition services to deliver comprehensive capabilities. Ulteig is recognized for mobilizing projects of all types in all locations — from local lot surveys to electric transmission and pipeline corridors across the country.

### **Civil Services**

Our Civil Services sector consists of core practices in surface transportation, aviation, water/wastewater, water resources, and municipal engineering. Engineers and technicians in these practices offer specialized engineering, environmental, and planning services to government agencies at all levels.

What truly distinguishes Ulteig is our ability to leverage resources from across all of our sectors. For example, we use the 3D laser scanning capabilities of our Land Services sector to create a 3D Revit model during a structural analysis project. We access the FAA expertise of the aviation staff in our Civil Services sector to guide a site master plan near a busy regional airport. We collaborate with the renewable power generation and electrical distribution experts of our Energy Services sector to help a building owner determine the best design for on-site wind and solar generation. Our ability to utilize the knowledge and experience of a wide variety of industry experts — within Ulteig — is unparalleled.



## the ulteig advantage

### Locations

Ulteig offers a wide range of services and expertise to give you easy and instant access to a wealth of knowledge, skill, and talent. Because we are a multidiscipline, full-service firm, we offer an array of services that few companies can match.

Our company has grown to include offices in the following locations:

- Bismarck, ND
- Cedar Rapids, IA
- Denver, CO
- Detroit Lakes, MN
- Fargo, ND
- Minneapolis, MN
- Sioux Falls, SD
- Williston, ND

### Community Partner

We live our core values by building a work environment that stimulates innovation, enhances teamwork, and drives our clients' success. This desire to succeed extends beyond our company walls. We encourage our staff to volunteer and to be involved in activities that help shape our communities to be places where everyone is proud to work, live, and play.

### Our Mission

To create sustainable, cost-effective, and environmentally sound communities.

### Our Vision

To advance the business of energy, water, and our built-environment.

### Sustainability

Considering how to best use natural resources in planning and design is a cornerstone philosophy at Ulteig. You will see this commitment in our renewable wind energy, waste heat recovery, clean water and wastewater, and energy-efficient and sustainable building projects. This is the way we have always done business.

At Ulteig, we pledge to continually take a fresh approach to sustainable engineering. We will strive to produce energy while, at the same time, reducing the demand for it. We will protect and restore, save and recycle, and take a leadership role in our communities by finding new ways to think green in everything we do.



Ulteig is proud to be a member of the US Green Building Council.

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