

ROXBOROUGH VILLAGE METROPOLITAN DISTRICT

141 Union Boulevard, Suite 150
Lakewood, Colorado 80228-1898
Tel: 303-987-0835 • 800-741-3254
Fax: 303-987-2032

<https://www.roxboroughmetrodistrict.org/>

NOTICE OF MEETING AND AGENDA

<u>Board of Directors:</u>	<u>Office:</u>	<u>Term/Expires:</u>
Mat Hart	President	2025/May 2025
Ephram Glass	Vice President	2023/May 2023
Calvin Brown	Treasurer	2023/May 2023
Travis Jensen	Secretary	2025/May 2025
Mark Rubic		2025/May 2025

DATE: March 29, 2023

TIME: 6:00 p.m.

LOCATION: Zoom Meeting

<https://us02web.zoom.us/j/86267550643?pwd=V3RnRGRtWkRyUIZZc1VMWTJFZjFHdz09>

Meeting ID: 862 6755 0643

Passcode: 987572

Call in Number: 1 (719) 359-4580

** Agenda is preliminary and subject to change by majority vote of the Board at the meeting.*

** Individuals requiring special accommodation to attend and/or participate in the meeting please advise the District Manager (pripko@sdmsi.com or 303-987-0835) of their specific need(s) before the meeting.*

I. ADMINISTRATIVE MATTERS

A. Disclosure of Potential Conflicts of Interest.

B. Additions/Deletions/Approval of Agenda.

II. PUBLIC COMMENTS/HOMEOWNER REQUESTS

A. Members of the public may express their views to the Board on matters that affect the District. Comments will be limited to three (3) minutes. Please sign in. Questions may be asked of the Board but will not be answered at this time. Please refer to the Meeting Code of Conduct for additional guidelines:

<https://www.roxboroughmetrodistrict.org/2022-meetings>

III. ENGINEERING MATTERS

A. Conduct interviews for District engineering firms (enclosures).

1. Farnsworth Group Inc.

2. Merrick

B. Consider engagement of District engineering firm.

IV. OTHER MATTERS

A. _____

X. ADJOURNMENT **THE NEXT REGULAR MEETING IS SCHEDULED FOR APRIL 18, 2023**

MARCH 22, 2023

Roxborough Village Metropolitan District

District Engineering Services



March 22, 2023

Peggy Ripko, District Manager
Special District Management Services
pripko@sdmis.com

RE: Qualifications for Contract District Engineer

Dear members of the selection committee:

Selecting an engineering team may not be easy as so much of what we accomplish is beneath the ground. Few people give much thought to pipelines, water and wastewater treatment facilities or trails. What you will discover from our team is that engineers make a difference – through solid infrastructure design as well as water distribution, wastewater collection and treatment, and transportation projects successfully completed in the places we live and work. As a nationwide firm, we offer exceptional capabilities in nearly all aspects of community enhancement, such as engineering, surveying, architecture, and landscape architecture.

While many of our projects are not thought of as high-profile, our projects are necessary, and it is how our team makes a difference. Farnsworth Group has a positive reputation for providing engineering services as well as development and design review services for many local agencies including Colorado Parks and Wildlife, Boxelder Sanitation District, and Morgan County Quality Water District.

We are good at the work we do. More importantly for Roxborough Village Metropolitan District, we are good at managing our projects, providing the right solutions, and helping you navigate the steps required to reach the success you define in terms of schedules and budgets. We can even help you navigate the public process to ensure your citizenry is informed. Our engineering involvement will benefit your community and assets.

Our local presence in the Colorado Front Range area gives us insight into the challenges that local communities face every day. Our firm's expertise is working with small to mid-sized communities to help them achieve immediate and long-term goals.

The District must be nimble to respond to requests from developers and customers. In response to this, the District's development department must respond and provide adequate and reliable systems. This includes parks, recreational areas, and irrigation systems. We have experience with larger irrigation projects, not necessarily landscape level irrigation projects.

As a larger engineering firm, we can also provide assistance on any needs the District may have including irrigation reservoirs, water distribution and treatment and pumping facilities, sanitary sewer collection and treatment and pumping facilities, recreational facilities (extensive experience with Colorado State Parks), and transportation facilities (auto and pedestrian).

We have served clients up and down the Front Range and across Colorado. We like on-call or as-needed contracts because it allows us to establish a relationship where you can count on us, and where we can serve as a "trusted advisor." Building a positive working relationship with the District by providing on-call services will allow us to demonstrate our team's high levels of technical competence and problem-solving abilities. My team strives to be viewed as an extension of your staff, as it allows us to demonstrate our strengths: our people, passion, and performance.

As a Colorado Professional, I will serve as the primary point-of-contact for this contract.

In summary, our team has the requisite expertise providing engineering that the District may be seeking. We also have the availability to allocate resources to the District on short notice. We know our team will be judged by how well we provide the services and solutions to address your engineering challenges.

We encourage you to consider us for this role and assure you that we can deliver on our promises and succeed in meeting your objectives. I sign below as a demonstration of our commitment to build a working relationship with you that gives you an appreciation for the depth and knowledge of consultant engineers at their best.

Sincerely,

FARNSWORTH GROUP, INC.



J.C. Cundall, PE (CO, WY) / Project Manager

970.484.7477 / jcundall@f-w.com



Firm Overview

Farnsworth Group is an employee-owned, full-service design firm with over 500 engineers, architects, surveyors, commissioning authorities, technicians, and support personnel across the United States. Our firm was founded in the 1890s after a local land surveyor traveled from community to community providing survey services for municipalities. Farnsworth Group's earlier employees operated under the same adage that still exists today: "The client is our first priority."

As a national consulting firm, we rely on our people, passion, and ability to perform beyond expectations to ensure your project success. Farnsworth Group boasts a strong Colorado presence, with four offices in Colorado and more than a quarter of the firm's employees calling Colorado home. This will allow Farnsworth Group to provide you with the attentive service of a small firm, while having the depth of staff to ensure your project requirements are met.

130+
YEARS IN BUSINESS

\$94M
REVENUE IN 2022

500+
STAFF NATIONWIDE

14K
CLIENTS SERVED



VOTED A GREAT PLACE TO WORK

Farnsworth Group has been voted a Great Place To Work for the past 7 years.



Mission

Farnsworth Group's team of experts will champion our clients' successes, advance our communities, and embrace the challenges of a changing world.



Services

- Architecture
- Interior Design
- Landscape Architecture
- Mechanical Engineering
- Electrical Engineering
- Plumbing Engineering
- Structural Engineering
- Civil Engineering
- LEED Consulting
- Commissioning
- Asset Management
- Land Surveying
- Water System Engineering
- Wastewater System Engineering
- Oil & Gas Engineering
- Energy & Utilities

Project Understanding

This proposal is for Farnsworth Group to provide District Engineering services for Roxborough Village Metropolitan District (RVMD) as needed. RVMD was formed in 1985. RVMD provides improvement and maintenance for the following:

- Park and recreation
- Open space
- Streetscape

Douglas County is responsible for street and drainage maintenance in RVMD.

The services Farnsworth Group is proposing is for any of the following needs:

- Civil Engineering
- Architecture
- Site Planning
- Subsurface Utility Engineering (SUE)
- SUE Is in conjunction with Kinetic Industry
- Structural Engineering
- GIS/Mapping
- Land Surveying
- Commissioning
- Landscape Architecture

At the heart of
what we do is our
people, passion,
and performance.

We have served clients up and down the Front Range and across Colorado. We like on-call or as-needed contracts because it allows us to establish a relationship where you can count on us, and where we can serve as a “trusted advisor.” Building a positive working relationship with the District by providing on-call services will allow us to demonstrate our team’s high levels of technical competence and problem-solving abilities. My team strives to be viewed as an extension of your staff, as it allows us to demonstrate our strengths: our people, passion and performance.

We serve both public and private sectors from all our offices. Our projects are widely varied in size and complexity and range from small utility studies or feasibility analyses to street design and multi-process water and/or wastewater treatment facilities for entire municipalities. This varied operation is explained by our desire to build strong client relationships and to meet client expectations, whether the project is small or large, client satisfaction is our priority.

In addition to working regularly on project-specific contracts, we also engage in on-call consulting/engineering services. Our survey and civil engineering groups have on-call experience with municipalities, government agencies, and special districts within the Rocky Mountain Region.

Our experience working with varied clients offers us an understanding of the challenges that can occur. It also provides us with experience in being flexible in the types of projects that may arise and meeting the challenges of those projects. Communication is a key element in trying to forecast and address issues before they arise. Typically, our clients discover that we remain focused on solutions that are in the best interest of our clients.

We propose to have a base contract, which generally defines our work responsibilities for General District Engineering Services. Included in the contract would be our hourly billing rates, which form the basis of our fee structure, insurance requirements, and duties and responsibilities.

Individual work items will be authorized by Task Orders that are reviewed and approved by the District. Each Task Order will define specific work items, the fee or estimated cost for each work item, and the time of completion. Each Task Order will have a specific Billing Number, which will allow the District to accurately and easily track engineering work to a specific budget category because all work related to specific Task Orders are kept in the appropriate files. The Task Orders are a way to ensure that any engineering work meets the budgetary constraints of the District. The overall goal of this management approach and project tracking is for the District to have better budgetary control over the engineering expenses that will occur.

Experience with Special Districts

The Civil Engineering Group in the Farnsworth Group office in Fort Collins has mainly worked with Special Districts, mostly water and sanitation districts, throughout most of our history. We have worked with in the past or are currently working with the following Special Districts:

- Little Thompson Water District (LTWD)
- East Larimer County (ELCO) Water District
- Boxelder Sanitation District
- Fort Collins-Loveland Water District
- South Fort Collins Sanitation District
- North Weld County Water District
- Morgan County Quality Water District (MCQWD)
- Northern Water Conservancy District

Most of our other clients are small to medium sized communities and Colorado Department of Parks and Wildlife. We have worked for some irrigation companies in the past. The most current and relevant is Red Feather Lakes Irrigation Company. The following are the projects that we have most recently worked on for them:

IRRIGATION PIPELINE, RED FEATHER LAKES STORAGE AND IRRIGATION COMPANY

Red Feather Lakes, Colorado

Project included the design of a 5,300 LF high density polyethylene (HDPE) pipeline to convey irrigation water between two reservoirs in Red Feather Lakes, Colorado. Challenges encountered on this project included: shallow bedrock, a limited easement within which to place the pipeline without exceeding the pipe's bending radius and designing the pipeline to be placed in close vicinity of existing structures. Additionally, an inlet structure and forebay were designed for the pipeline to remove sediment prior to water entering the pipeline. This pipeline replaced an open ditch.

SHAGWA LAKE PRELIMINARY ENVIRONMENTAL STUDY, RED FEATHER LAKES STORAGE AND IRRIGATION COMPANY

Red Feather Lakes, Colorado

Project was an evaluation of the residential septic systems surrounding a shallow mountain lake that was experiencing fish kills and poor aquatic health. Incorporated evaluation results along with analytical sample results and a hydrogeological study to recommend remedial actions. A second, more detailed study was performed which included soil borings and sludge samples to try to locate any spots that may show where a concentrated leak may be and to determine the dredging design.



Organizational Chart

Our team will be led by J.C. Cundall. J.C. is an accomplished engineer and project manager with over 20 years of experience with municipal water and civil infrastructure projects. He provides unmatched support to our clients, ensuring their questions are answered and their projects are executed seamlessly. J.C. will serve as Project Manager and primary point of contact. He will oversee the projects from beginning to end including staffing, design, budget, and schedule.



Key Personnel

At Farnsworth Group, our approach is to assign an experienced manager within the firm as the Project Manager, supported by engineers who are experienced in the disciplines required by the project. Additional support staff are assigned as needed. With this approach, we can ensure that your projects will receive the utmost attention from the most qualified and experienced engineers. While we are a large firm, this approach to project management allows for individualized service that is more often associated with a smaller firm. We have developed sound managerial processes to assure that our work meets and/or exceeds client expectations. Following we have provided a list of our key personnel we are proposing.



J.C. CUNDALL, PE / PROJECT MANAGER - FARNSWORTH GROUP / FORT COLLINS, CO

Our team will be led by J.C. Cundall. J.C. is an accomplished engineer and project manager with over 20 years of experience with municipal water and civil infrastructure projects. He provides unmatched support to our clients, ensuring their questions are answered and their projects are executed seamlessly. J.C. will serve as Project Manager and primary point of contact. He will oversee the projects from beginning to end including staffing, design, budget, and schedule.



TED BARELA, PE / PRINCIPAL ENGINEER - FARNSWORTH GROUP / FORT COLLINS, CO

Ted is a licensed professional engineer with over 30 years of experience. His project experience includes stormwater drainage design, potable water distribution and wastewater collection design, commercial and residential development, and construction administration services.



BRIAN DAVIES, PE / SENIOR PROJECT ENGINEER - FARNSWORTH GROUP / FORT COLLINS, CO

Brian has more than 35 years of experience with much of it concentrated on water distribution system planning and design and water treatment plant, construction and operation.



SCOTT TURNER, PE / PROJECT ENGINEER - FARNSWORTH GROUP / FORT COLLINS, CO

Scott is a licensed professional engineer with over 10 years of experience. His project experience includes stormwater drainage design, hydrological and hydraulic modeling, potable water distribution and wastewater collection design, floodplain modeling and delineation and construction observation.



TODD KRELL, PE / ENGINEERING MANAGER - FARNSWORTH GROUP / FORT COLLINS, CO

Todd is a licensed professional engineer with over 20 years of experience. His project experience includes stormwater drainage design, potable water distribution and wastewater collection design, commercial and residential development, and construction administration services.



DEREK LUTZ, PE / SENIOR ENGINEER - FARNSWORTH GROUP / FORT COLLINS, CO

Mr. Lutz has 10 years of experience in the civil engineering field. Derek's technical experience has involved commercial site development, roadway design, water distribution systems, sanitary sewer systems, hydrology, hydraulics, stormwater management, and low-impact development including best management practices.



JACK LOWERY / SENIOR DESIGNER - FARNSWORTH GROUP / FORT COLLINS, CO

Jack has served as design technician/designer for more than 30 years. His projects range from pipeline projects to complex multi-discipline projects.



DANIEL MONTEZ / PROJECT DESIGNER - FARNSWORTH GROUP / FORT COLLINS, CO

Daniel has over 20 years of civil drafting and design experience, including piping infrastructure, process piping, road and dam rehabilitation, and water/ wastewater design.



DOUG BARKER, GISP / GIS ANALYST- FARNSWORTH GROUP / FORT COLLINS, CO

Mr. Barker’s 23 years of GIS experience includes extensive work with the Esri suite of software. His experience includes 20 years with Farnsworth Group.



J.R. MCGEHEE, PLS / LAND SURVEYING MANAGER- FARNSWORTH GROUP / FORT COLLINS, CO

J.R. has over 20 years of experience in land surveying, with seven years as a licensed surveyor in the State of Colorado.



KINETIC INDUSTRY – UTILITY LOCATES/POTHOLES

Kinetic Industry is a detail oriented Utility Designation and Pothole Excavation Company. They pride themselves on providing superior underground Utility Locating, Utility Mapping, and Hydro-Vacuum Excavation/Utility Potholing services. Their utility locating and potholing services are performed to the standards set forth by ASCE 38-22, which is the standard guideline for the collection and depiction of existing subsurface utility data.



Client References

Boxelder Sanitation District / Fort Collins, CO

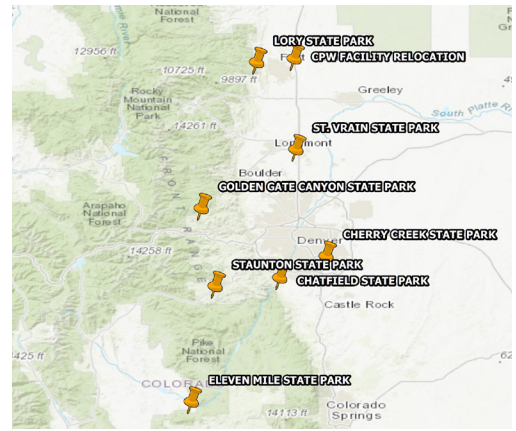
Brian Zick, PE
District Manager
3201 E. Mulberry St., Unit Q
Fort Collins, CO 80524
(970) 498-0604

City of Evans / Evans, CO

Rick Pickard, PE
Engineer
1100 37th Street
Evans, CO 80634
(970) 475-1113

Colorado Department of Parks and Wildlife / Fort Collins, CO

Paul Barker, PE
Project Manager
3745 E. Prospect Rd.
Fort Collins, CO 80525
(970) 491-1168



Conflicts of Interest

Farnsworth Group, Inc. does not have any real or potential conflicts of interest with Roxborough Village Metropolitan District. We affirm that no officer or employee of Farnsworth Group, Inc. is directly or indirectly interested in this project for any reason of personal gain.

Schedule

Farnsworth Group's current workload is such that we can begin work within two weeks of receiving the Notice to Proceed. We have qualified technical staff assigned to this project to ensure that your schedule is met. Our depth of personnel allows the project team to devote the time and attention necessary to achieve your schedule requirements. The team's ability to complete this assignment is further enhanced by our depth of experience and by our efforts working closely with our clients toward meeting their needs. These staff members are accustomed to managing several projects at the same time while meeting deadlines and paying attention to details.

Cost Proposal

We have included our Standard Schedule of Charges on the following page for your information.





Standard Schedule of Charges

Engineering / Surveying / Commissioning Professional Staff	Per Hour
Administrative Support.....	\$ 88.00
Engineering Associate I / Cx Specialist I.....	\$ 131.00
Engineering Associate II / Cx Specialist II.....	\$ 145.00
Engineer / Land Surveyor / Senior Cx Specialist	\$ 153.00
Senior Engineer / Senior Land Surveyor / Cx Project Manager	\$ 161.00
Project Engineer / Project Land Surveyor / Senior Cx Project Manager.....	\$ 173.00
Senior Project Engineer / Senior Project Land Surveyor / Cx Manager.....	\$ 193.00
Engineering Manager / Land Surveying Manager / Senior Cx Manager	\$ 218.00
Senior Engineering Manager / Senior Land Surveying Manager / Senior Cx Director.....	\$ 233.00
Principal / Vice President.....	\$ 253.00

Technical Staff	Per Hour
Technician I.....	\$ 90.00
Technician II.....	\$ 113.00
Senior Technician / Cx Technician	\$ 123.00
Chief Technician.....	\$ 141.00
Designer / Computer Specialist / Lead Technician	\$ 153.00
Senior Designer	\$ 158.00
Project Designer / Project Technician.....	\$ 173.00
Senior Project Designer / Systems Integration Manager	\$ 193.00
Design Manager / Grants Manager	\$ 198.00
Technical Manager.....	\$ 208.00
Senior Technical Manager	\$ 228.00

Architecture / Landscape Architecture / Interior Design Professional Staff	Per Hour
Architectural Associate I / Landscape Associate I / Interiors Associate I.....	\$ 119.00
Architectural Associate II / Landscape Associate II, Interiors Associate II / Interior Designer.....	\$ 129.00
Architect / Architectural Associate III / Landscape Associate III	\$ 145.00
Project Coordinator / Urban Planner I / Senior Interior Designer	\$ 145.00
Senior Architect / Senior Project Coordinator/ Urban Planner II / Interior Design Manager	\$ 155.00
Project Architect / Project Manager	\$ 166.00
Senior Project Architect / Senior Project Manager	\$ 183.00
Architectural Manager.....	\$ 196.00
Senior Architectural Manager / Senior Urban and Community Planner.....	\$ 213.00
Architecture Principal.....	\$ 233.00
Principal / Vice President.....	\$ 253.00

Units	
Expert Testimony.....	2.0x bill rate
ATV & Trailer.....	\$15.00 / hr
Field Vehicle.....	\$25.00 / hr
Automobile mileage.....	IRS Rate
Hand Held GPS.....	\$11.00 / hr
GPS Unit (each).....	\$22.00 / hr
Environmental GPS Data Collector	\$75.00 / day
Utility Locator / Robotic Total Station	\$26.00 / hr
Stationary Scanner (low res) High Def Scanner / UAV.....	\$300 / day \$500 / day
Subconsultants & Other Reimbursable Expenses Related to Project*.....	Cost+ 10%

*Includes the actual cost of prints / copies, supplies, travel charges, testing services, conferencing services, and other costs directly incidental to the performance of the above services.

CHARGES EFFECTIVE UNTIL JANUARY 1, 2024 UNLESS OTHERWISE NOTIFIED

ENGINEER | ARCHITECTS | SURVEYORS | SCIENTISTS

PROPOSAL

DISTRICT ENGINEERING SERVICES

Submitted to:
Roxborough Village Metropolitan District

B6549306
March 22, 2023



MERRICK[®]

[in](#) [Twitter](#) [f](#) [Instagram](#) [YouTube](#) [g+](#)
www.merrick.com

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COVER LETTER



March 22, 2023

Peggy Ripko
Special District Management Services, District Manager
Roxborough Village Metropolitan District
141 Union Blvd. Suite 150
Lakewood, CO 80228-1898
pripko@sdmsi.com

RE: District Engineering Services - Roxborough Village Metropolitan District

Dear Ms. Ripko and Members of the Selection Committee:

Roxborough Village Metropolitan District (RVMD) places a high importance on providing quality public improvements and services creating a safe community across the 959 acres located within its boundaries. For the benefit of existing and future inhabitants and taxpayers of the District, various public, park and recreation, open space, mosquito control, and streetscape improvements and services need to be seamlessly integrated into the district. In order to successfully complete this endeavor, RVMD will require a partner who is well versed in representing special districts as district engineer and has the resources to provide comprehensive district engineering services.

The Merrick & Company (Merrick) team is that partner. Our lineup of outstanding professionals will bring a great benefit to the district and make sure RVMD is well represented with regards to producing quality public improvements. Specifically, our team brings the following benefits:

- **Experience Serving as District Engineer.** RVMD wants to solidify a trusted partner to represent them during construction meetings, review of plans and contracts, monitoring of field construction, and general representation of the District. Having a team who has served as District Engineer for numerous metropolitan districts, as well as water and sanitation districts, will reduce the time needed to become aligned with the district's procedures and successfully complete your desired objectives. Our project manager, Wade Wheatlake, has represented more than 24 different metro and water districts as District Engineer in Colorado alone. He has provided comprehensive engineering services to similar clients, such as the Bancroft-Clover Water & Sanitation District and Bear Creek Water and Sanitation District. Wade will ensure the district is fully represented at all meetings to ensure public improvements are seamlessly integrated into the district.
- **Cohesive Project Team and Availability.** Our team understands the need to ensure our clients are covered 24/7. Therefore, we have the main point of contact as Wade Wheatlake and the secondary point of contact as Luke Lovato. Wade and Luke have worked together for over 8 years on District Engineering projects and will continue this relationship for RVMD. Our service to our long-standing clients shows not only our commitment to one another but the ability to provide consistency and continuity to RVMD.
- **Resources to Provide Comprehensive District Engineering Services.** Our firm understands the issues and challenges you face while planning and maintaining a metropolitan district and has the resources to provide comprehensive engineering services to districts of all sizes. Our firm employs more than 950 employees with over 400 personnel located in Colorado, including a locally dedicated water engineering team made up of 60+ outstanding professionals. They are augmented by more than 55 civil engineers, 10 construction managers, and 50+ Geographic Information Systems (GIS) and survey personnel. These resources are available to you as needed to successfully complete your objectives.

The Merrick team looks forward to working with you as you provide your residents with quality public improvements and a safe community. If you have any questions regarding the content of our proposal, please feel free to contact me to discuss.

Sincerely,
Merrick & Company

Wade Wheatlake, PE | Project Manager
wade.wheatlake@merrick.com | 303-353-3683

Employee Owned

 5970 Greenwood Plaza Blvd.
Greenwood Village, CO 80111

 Tel: +1 303-751-0741

 hello@merrick.com
www.merrick.com

FIRM OVERVIEW

Company Name

Merrick & Company (Merrick)

Business Address and Phone Number

5970 Greenwood Plaza Boulevard
Greenwood Village, CO 80111
303-751-0741

Principal(s)

Christopher C. Sherry - Chairman, CEO, and President
Michael J. Martin, PE - Senior Vice President, Infrastructure Engineering BU Leader

Year Established

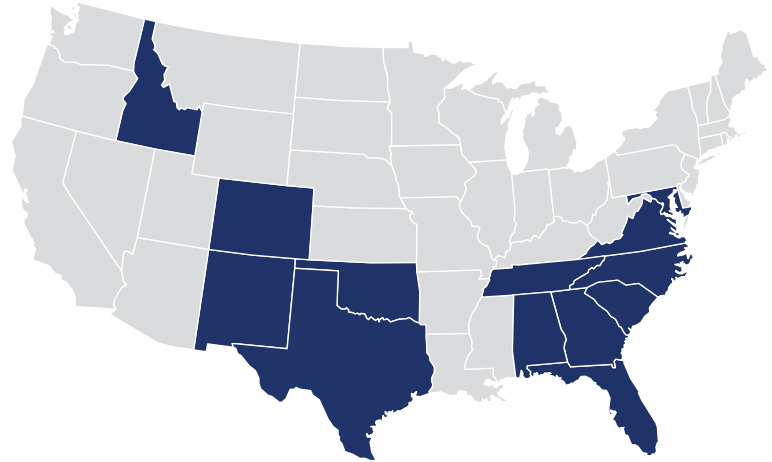
1955 (67 years) -- Incorporated in 1959

District Engineering Services Overview

Merrick has provided comprehensive district engineering services to numerous metropolitan and water and sanitation districts in the Rocky Mountain region for more than 30

years. These services include engineering assistance during the formation and construction phase as well as engineering assistance during the operations and management phase. Merrick dedicates an in-house team of engineers as necessary to each district client.

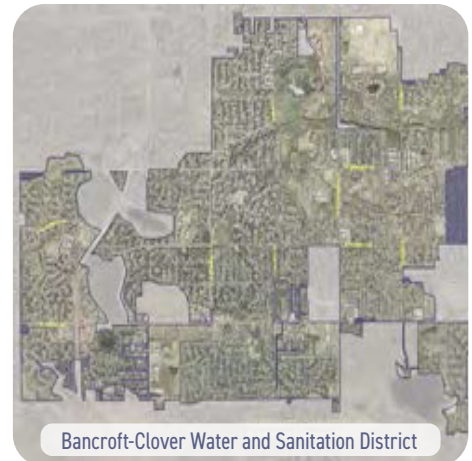
LOCALLY OWNED & OPERATED
LOCAL COMMUNITY & ECONOMY
401 COLORADO JOBS
MERRICK



The above map shows the states where Merrick maintains a branch office. We also have offices located in Canada (Ontario), Mexico, and United Kingdom.

District Engineering Services

- District formation assistance
- Boundary surveys/mapping
- Utility mapping
- GIS consulting
- Conceptual/master planning
- Condition assessments
- Master programming
- Life cycle cost studies
- Cost estimates
- Capital planning
- Design reviews
- Engineering/design
- Bid documents
- Project administration
- Owner's representation
- Construction management
- Construction staking
- Inspections
- As-builts
- Maintenance/operations analysis



Merrick's team of industry professionals has provided district engineering services to a diverse group of district clients, including the following: Painted Prairie Metro District; Porteous Metro District; Eagle Shadow Metro District; Bancroft-Clover Water and Sanitation District (pictured above); Bear Creek Water & Sanitation District; Cherry Creek Valley Water & Sanitation District; Green Mountain Water & Sanitation District; Arapahoe County Water and Wastewater Authority, South Sheridan Water, Sanitation, & Stormwater District; East Lakewood Sanitation District; and Rampart Range Metropolitan District. A comprehensive list of references is provided later in this proposal.



Water Systems

- Distribution network analysis and design
- Transmission lines
- Distribution lines
- Pump stations - water meter/vaults
- Storage Tanks
- Valves and controls
- Pressure regulating stations (PRVs)
- Owner's representation
- District engineering



Water and Sewer Pump Station

Sanitary Sewer Systems

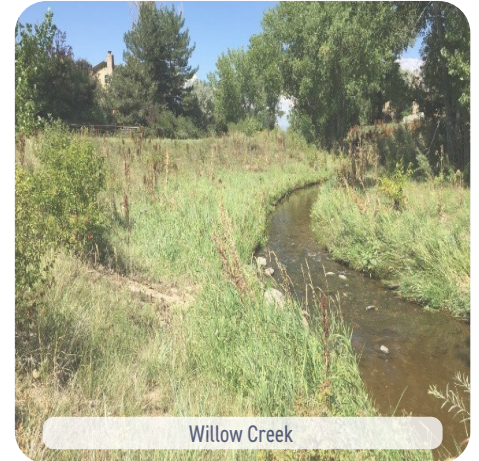
- System analysis and design
- Lift stations
- Force mains
- Collection network design
- Owner's representation
- District engineering



Sanitary Sewer - General

Drainage Systems

- Hydrology studies
- Hydraulic studies
- Major and minor storm collection systems
- Outfall systems
- Stormwater conveyance (piped systems)
- Channel conveyance systems
- Erosion control systems
- Detention pond systems
- Stormwater quality treatment systems
- NPDES permit assistance



Willow Creek

Road/Street Systems

- Geometric design
- Pavement design
- Arterial roadways
- Collector roadways
- Local streets
- Intersections
- Bridges and structures
- Streetscape/urban design
- Parking lots/structures
- Park-n-Rides



Street and Roadway - General

A/E Services

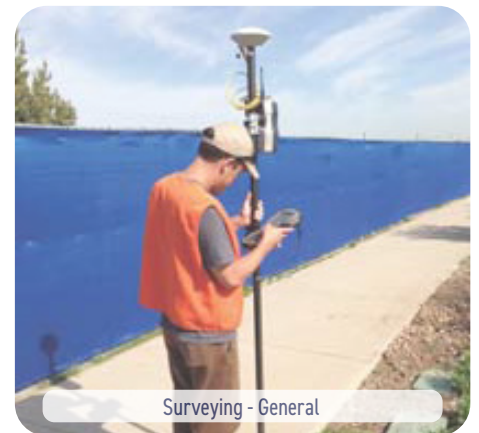
- Architectural-engineering facilities
- Architecture
- Mechanical systems (HVAC, piping, plumbing)
- Electrical systems
- Structural systems

CM Services

- Owner's representation services
- Resident engineering
- Daily or periodic inspections
- Quantity calculations
- Pay estimate reviews
- As-built documentation
- Close out support
- Construction administration

Surveying

- ALTA surveys
- Boundary surveys
- Legal surveys (ROW)
- Utility Surveys
- Field topographic surveys
- Cross section surveys
- Construction staking
- Alignment staking
- Slope staking
- Quantity surveys



Surveying - General



MERRICK®



TEAM MEMBERS

Merrick's vast experience with special districts and our extensive engineering capacity make us a perfect fit for Roxborough Village Metropolitan District (RVMD). For over 30 years, we have been providing district engineering services to over 30 special districts along the Colorado Front Range. Our reputation for sound district representation is evident by our long-term client relationships and extensive special district client list. A list of similar clients and references has been included for your reference. We encourage the RVMD to reach out to our clients to gain a better understanding of our commitment and quality service we provide.

The RVMD will benefit from more than 70 years of combined experience of engineers on their team. Further information on the Merrick team is included within this submittal. We have a strong presence and understanding of special districts that allow us to provide quality district engineering services and representation.

Merrick will serve as the District Engineer, providing comprehensive district engineering services. The Merrick team is excellent at and currently providing a variety of services similar to those RVMD is requesting, including:

▶	Monthly operations and management program; master planning
▶	Condition assessment evaluations, recommendations, and reports
▶	District maintenance contractor(s) coordination
▶	Plan reviews, individual service connections to full development and mainline extensions
▶	Engineering status reports for board meetings
▶	Annual budget preparation for engineering, system O&M and capital improvement projects
▶	Developing operating procedures, including rules and regulations, O&M, emergency and various facility maintenance manuals
▶	Capitol improvement and rehabilitation designs
▶	Emergency Response oversight and direction. On-call 24/7 to the district

RVMD requires a wide range of engineering services for their on-going operations. Merrick's approach utilizes a team of specialists with a variety of district experience. While there are basic principles that apply across various district services, we recognize there are different personalities that distinguish districts from one another in how they manage their operations and systems. The Merrick team will get acquainted with the traits of RVMD quickly to provide the benefit of their expertise and resources.

Merrick works with management, other consultants, and contractors in a collaborative and proactive approach in maintaining RVMD interests, systems, and operations. We understand the importance of technical competency and district operations. Our support and focus towards properly maintaining each will provide RVMD better peace of mind.

The Merrick Team

Merrick’s project team has been specifically identified for RVMD based on experience with metro districts and special districts, district project and operations, capital improvement design, construction observation, and development engineering.

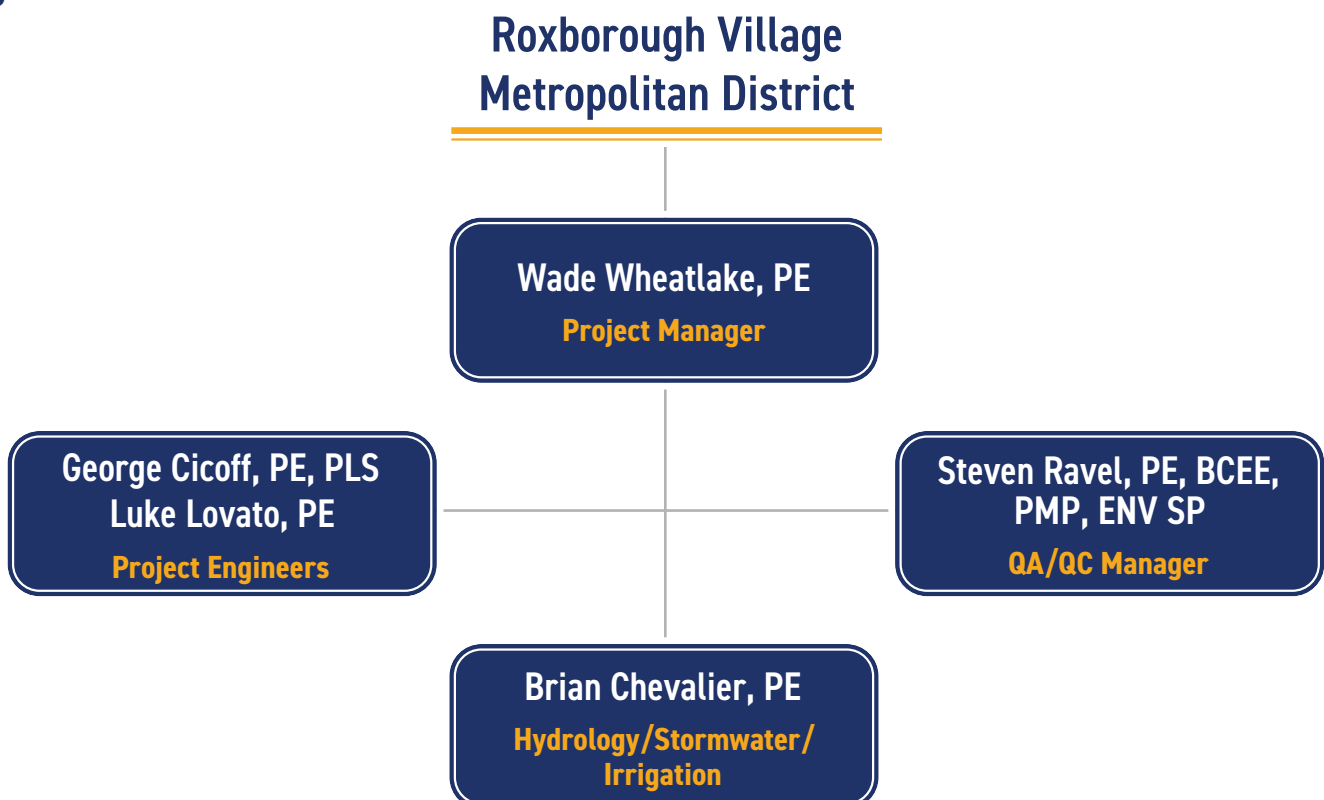
Wade Wheatlake, PE will be the project manager and main point of contact for RVMD supported by the following team:

Name	Role	Years of Experience	Colorado PE Number
Wade Wheatlake, PE	Project Manager	24	38990
George Cicoff, PE, PLS	Senior Project Engineer	52	29937
Luke Lovato, PE	Project Engineer	8	62024
Steven M. Ravel, PE, BCEE, PMP, ENV SP	QA/QC Manager	29	35024
Brian Chevalier, PE	Hydrology/Stormwater/Irrigation	38	24003

RVMD requires a wide range of engineering services to facilitate success of the district’s ongoing operations and objectives. Wade will assemble the appropriate personnel from Merrick’s local team as well as clearly identify the scope, schedule, budget, design criteria, and client expectations as needed for each task. Merrick’s approach utilizes a team of specialists and engineers who are already well experienced in the same services requested by RVMD. This team will efficiently execute the necessary tasks through completion to RVMD’s expectations. The Merrick team takes pride in their accountability; thus, both Wade and Luke will be on-call 24/7 for RVMD needs.

As evident by this submittal, the Merrick team is experienced in all facets of general district engineering services, including those requested by RVMD. With this knowledge and expertise, Merrick will help RVMD achieve success and meet their short- and long-term objectives. In fact, we approach and perform our services as though we are the District. We look forward to meeting with RVMD to discuss our qualifications and how we may be of service.

Organization Chart



Team Bios



Project Manager: Wade Wheatlake, PE | Greenwood Village, CO

Wade is an project manager specializing in water and wastewater infrastructure engineering services. He has more than 24 years of experience in civil infrastructure projects involving water supply and distribution systems, sanitary sewer collection and outfall systems, utility infrastructure, and construction management services. He specializes in water and wastewater district engineering, planning, analysis, design, operations and maintenance programs, and construction administration. Clients include municipalities and water and sanitation districts, including serving as District Engineer for the East Lakewood Sanitation District and Development Engineer for the Arapahoe County Water & Wastewater Authority. Wade is a professional engineer registered in Colorado, New Mexico, and North Dakota. He also holds a Class 3 Operator certification in both collection and distribution for Colorado and PACP/MACP/LACP certification through the National Association of Sanitary Sewer Contractors (NASSCO). Wade is a knowledgeable, detail oriented engineer who always strives for client satisfaction and responsiveness.



Senior Project Engineer: George Cicoff, PE, PLS | Loveland, CO

George is a senior civil engineer and has been involved in complex civil engineering projects of various types of infrastructure. These projects have included large-scale land development projects, quasi-municipal utility districts, water supply systems, wastewater systems, drainage systems, and street and roadway systems. George is a professional engineer who places his emphasis on hands-on detailed supervision and coordination of design efforts.



Project Engineer: Luke Lovato, PE | Greenwood Village, CO

Luke is an engineer with experience in planning, design, construction management of municipal water and wastewater systems, and inspection services. He has served as the inspector for Merrick's recent engineering efforts for the South Sheridan Water and Sanitation District, the Bancroft-Clover Water and Sanitation District, and the Castlewood Water and Sanitation District. In addition, he has served as a civil engineer on the current CIPP rehabilitation of the Bear Creek Water and Sanitation District sanitary sewer system. Luke places his emphasis on the detailed analysis, design, and field engineering associated with a utility project.



QA/QC Manager: Steve Ravel, PE, BCEE, PMP, ENV SP | Denver, CO

Steve has served as the District Engineer for the Upper Thompson Sanitation District. He has led design, construction support, and operations for dozens of wastewater projects over the last 15 years, including as project manager for the district's ongoing \$60+ million Wastewater System Upgrade Program. Having worked with both large and small utilities, Steve understands how to drive cost-effective and resilient technical solutions while staying in line with community goals. His QA/QC will affirm continuity and compliance between segments, applying his past knowledge to identify creative solutions.



Hydrology/Stormwater/Irrigation: Brian Chevalier, PE | Greenwood Village, CO

Brian specializes in the hydraulic design of open channels, reservoirs, drop structures, pressure storm sewer conduits, and storm water storage facilities, water quality outlet works, including district projects. Special skills include Civil3D design, analysis of complex hydraulic conditions using a CFD model called FLOW-3D, and HECRAS analysis. He has been a project manager for much of his professional career, with projects that include a golf course, recreational parks, creek and river stabilizations, roadways, parking lots, dams, storm sewer retrofits, recreational boating, drop structures, raw water intakes, and an infiltration gallery.

Team member resumes with additional project experience may be found in the **Appendix** of this submittal.

Continuity of Assigned Personnel



Merrick employs more than 950 employees with over 400 personnel located in Colorado, including a locally dedicated 60+ water engineering team. They are augmented by more than 55 civil engineers, 10 construction managers, and 50 Geographic Information Systems (GIS) and survey personnel. We have the right-sized team in that we have the resources of a large firm with the one-on-one mentality of a small firm. Merrick does not anticipate changing personnel at any point during the duration of this contract. Wade has more than 24 years of extensive industry experience, and created this team to ensure any and all tasks associated with this contract will be completed in a timely and professional manner.

Quality of Engineering Services

It is Merrick's understanding that RVMD desires to engage a District Engineer for ongoing general engineering services, including meetings, operations, planning, maintenance, and review of documents, projects, and plans. The role would be broad in scope to allow RVMD flexibility in requesting on-call services and assigning of miscellaneous tasks as needed. This may include specific analysis reports, modeling, mapping, planning, opinion of cost estimating, design, bidding coordination, and construction management, as well as infrastructure rehabilitation. There will be a tremendous amount of interaction with RVMD, contractor, city, county, utility providers, property and utility stakeholders, and third-party design teams. This role will command an enormous amount of leadership, responsibility, knowledge and trust. Frequently, the engineer will be leaned on to provide leadership to drive a project deliverable or meet a tight schedule, recall of design standards during meetings, provide an understanding of the district requirements to a third-party design team, and certainly represent the district at meetings. **This role will require the engineer to build and maintain the respect and trust of all parties encountered during day-to-day activities and operations.**

To succeed in the District Engineer role, the engineer must:

- Have a strong local presence and adequate staffing and resources available to provide timely on-call services as requested by RVMD. Attendance at RVMD meetings will be necessary to provide input and stay abreast of the ongoing development opportunities and RVMD business.
- Maintain a comprehensive understanding of RVMD vision, design guidelines, master planning studies, and general knowledge on other civil engineering related criteria. Knowledge of and compliance with of all these standards and plans is required.
- Possess a comprehensive understanding of RVMD needs and requirements (reporting, bidding, cost estimating, hearings, etc.) and a full understanding of the needs from the development and district operations side.
- Be able to provide timely and quality engineering services for the public improvements.
- Communicate and facilitate collaboration between RVMD, contractor, engineers, local jurisdictions, and many other partners and stakeholders. Communication between all parties is paramount for the success of RVMD.
- Maintain a working knowledge and be involved with emerging technologies for engineering and construction.

Strong local presence and adequate resources

Comprehensive understanding of RVMD vision

Comprehensive understanding of RVMD needs and requirements

Timely/quality engineering services

Communication and collaboration

Knowledge of emerging technologies

Through our previous work with metro and special districts, we know that to achieve a successful project, the project team must communicate well, collaborate with all stakeholders, provide excellent quality solutions, and be extremely nimble to changing circumstances. The Merrick team has been assembled to provide each of those items to you. Our project manager, Wade Wheatlake, will be dedicated towards RVMD's success and will hit the ground running by utilizing his distinct working familiarity and institutional knowledge of development and district operations. Wade's team of engineers are recognized and creative experts in their fields with District projects and will be dedicated to RVMD. This team has worked together for several years with their primary focus on special district engineering services. **By serving together as a team demonstrates not only commitment to one another but the consistency and continuity RVMD is looking for from their District Engineer and team.**



Merrick will coordinate and manage the document/data transfer to the extent requested by RVMD. Merrick can host electronic storage and maintenance of RVMD engineering records; inclusive of system maps, facility maps, boundary maps, rights-of-way and easements, construction plans, tap applications and approvals, inspection records, construction and maintenance contracts and attendant performance and pay records. Documents will be inventoried and can be provided at a moment's notice to RVMD. Merrick recently performed a file transfer for the work associated with the Castlewood Water & Sanitation District. Merrick took over as District Engineer and facilitated a seamless transition of District files with the previous engineering firm with the assistance of the District Attorney. All data and files, hard copies and electronically, are now stored by Merrick.

Project Management

Strong project management and project control measures are crucial to meeting the many objectives of RVMD. This includes assigning experienced technical personnel to key positions and maintaining that continuity; developing a project plan and communications procedures; regular communications with the RVMD and engineering team on status, schedule, and budget; maintaining thorough documentation; being responsive to RVMD needs; and monitoring the project throughout all phases for progress evaluation. Successful control of the project starts with strong project management, including an understanding of the interrelationship between budget, quality, and schedule and of RVMD's procedures and expectations. Merrick has assigned an experienced project manager that is well versed in district operations and development similar to RVMD. Key project management philosophies include the following:

- Assigning a responsible team of lead personnel with proper experience and qualifications
- Developing a project work plan and review it with the RVMD before beginning the work
- Communicating with the RVMD regularly throughout the project
- Complying with all applicable standards and procedures
- Coordinating closely with RVMD staff/consultants
- Performing on schedule

Case Study

On-Call Engineering Services Eagle Shadow Metro District Denver, CO

Merrick provided District Engineering services as requested by the Eagle Shadow Metropolitan District. Services and responsibilities include general civil engineering related tasks ranging between master and capital planning, through surveying and engineering design, and wrapping up with construction bidding, inspection, and management services. These services also included utilizing provided legal descriptions, to calculate and depict legal descriptions to describe the District's boundaries. Merrick provided an aerial background of District boundaries, clip imagery of the area, produced in State Plane (NAD 83) format, plotted all documents provided for best fit (in other words we will not be providing a survey grade (field survey work) document, and researched other applicable referenced documents for the county. Merrick also provided a map to meet State map filing criteria for Districts. Other services provided include General Engineering Design, General Consulting, and Construction Management.



CLIENT REFERENCES

Colorado Local Government Client References

Merrick has a wide range of experience providing district engineering services for metro and special district clients. This experience includes all phases of water and wastewater projects including surveying, easements, studies, investigations, operations support and troubleshooting, planning, preliminary engineering, final design, bid assistance, owners' representation, development plan review, construction observation/documentation, construction closeout, and other support. Below is a list of selected relevant clients we serve with services similar to those that RVMD has requested:

Maintenance Districts

Merrick performs engineering services in numerous capacities to special districts. The extensive list of services and responsibilities includes general civil engineering related tasks ranging between master and capital planning, through surveying and engineering design, and wrapping up with construction bidding, inspection, and management services. Along that path we also provide subconsultant contracting and coordination, easement exhibit and legal description preparation and execution, and technical support to management and legal counsel to rules and regulations, policies, and standard forms or agreements. Management of various disciplines including landscaping, streetlights and streets, and parks. Mixed in we also develop and support Operations and Maintenance programming and management services including condition assessments, mapping updates and improvements, system monitoring and reporting, and Risk & Resilience Assessment and Emergency Response plans. We serve as an extension to District board, management, and staff through collaboration and coordination with other jurisdictions, consultants, and contractors. We assist in preparing overall budgeting while providing oversight and direction to special districts.

Maintenance District clients include:

- Bear Creek Water & Sanitation District
- Bancroft-Clover Water & Sanitation District
- Castlewood Water & Sanitation District
- East Lakewood Sanitation District
- Arapahoe County Water & Wastewater Authority
- South Sheridan Water & Sanitation District
- North Washington Street Water & Sanitation District
- Greenwood Metro District
- Todd Creek Parks & Recreation Metro District
- Eagle Shadow Metro District
- Fossil Ridge Metro District
- Sierra Ridge Metro District
- Silver Peaks Metro District
- Centerra Metro District
- Green Mountain Water & Sanitation District
- Cherry Creek Valley Water & Sanitation District
- Upper Thompson Sanitation District
- Upper Blue Sanitation District
- Eagle River Water & Sanitation District
- Donala Water & Sanitation District

Development Districts

Merrick performs engineering services in numerous capacities to development special districts. The extensive list of services and responsibilities includes general civil engineering related tasks towards setting up district operations, to bidding construction projects, and cost verification and reimbursement. Various components of surveying and engineering, as well as management of electrical, streetlights, landscaping, streets, and parks are included. Additionally, we advise district board members, management,

staff, and consultants on engineering-related topics in connection with district processes and procedures, and assist legal counsel and the district with the solicitation of qualifications and proposals for district projects. We continue by preparing and administering project delivery including scheduling, requests for information, change orders, payment recommendations, and project acceptance. We perform construction inspection services of the project site and activities, ensure schedules and delivery dates are being met, and cost verification for reimbursement procedures.

Development District clients include:

- Painted Prairie Metro District
- Rudolph Farms Metro District
- Winder Homestead Metro District
- Velocity Metro District
- Green Metro District
- Ridgegate Metro District
- Blue Eagle Metro District
- HM Metro District

The following districts and their particular requirements are provided below:

Bear Creek Water and Sanitation District	2,600 acres of mixed-use development within the City of Lakewood and Jefferson County and has a population of 38,000. The system has approximately 45 miles of sanitary sewer lines, ranging in size from 8-inch to 30-inch, and 60 miles of water line ranging in size from 6-inch to 24-inch. The system also includes three (3) pressure zones and seven (7) pressure-reducing valves. Merrick has served this District for 25-years.
Bancroft-Clover Water and Sanitation District:	4,000 acres of mixed-use development within the City of Lakewood and has over 80,000 in population. The Bancroft-Clover water system includes 110 miles of water lines (up to 16-inch diameter), 15 connection points to the Denver Water Department mainlines, four pump stations, eight pressure zones, and five pressure-reducing valves. The system also includes 104 miles of sanitary sewer main lines, interceptors (up to 30-inch diameter), and an outfall to the Metro Wastewater system. Merrick has served the Bancroft-Clover Water and Sanitation District, in the capacity of District Engineer, since 2002.
Castlewood Water and Sanitation District	This 2,500-acre District is within the City of Greenwood Village and the City of Centennial, including a portion of the Denver Tech Center. This District is also mixed-use and has over 40 miles of sanitary sewer lines that range in size from 6-inch to 33-inch, has two lift stations (one is rated at 0.6 MGD and the other one is rated at 3.5 MGD).
Greenwood Metro and Greenwood Metro South District	This District is approximately 480 acres of commercial development within the City of Greenwood Village. The District is responsible for all irrigation within the District which includes a 500,000 gallon storage tank, two (2) pump stations, two (2) supply wells over 1,500-foot deep pumping 400 GPM, and over five (5) miles of piping. The District also owns and maintains six (6) retention ponds and controls the MS-4 Permitting on these.
Todd Creek Park and Recreation District	Contains approximately 7,000 acres, inclusive of open and park space and platted developments. The District's intent is to cooperate with Adams County to serve developed and undeveloped residential parks, trails and retention areas for its residents.

The following pages contain more detailed project descriptions and references for the above projects.

Client Reference

Jan Walker
District Manager
Bear Creek Water & Sanitation District
2517 S. Flower Street
Lakewood, CO 80227
P: 303-986-3442
E: janwalker@bearcreekwater.org

Key Features

- Capital Improvement Program (CIP) planning
- Master water and sewer studies
- Preparation of project and yearly budgets
- Cost estimating and schedule analysis
- Lift station design and coordination
- Project oversight (design reviews, plan reviews, construction reviews)
- Conceptual design and final design
- Preparation and distribution of RFPs
- Monthly status reporting to the board
- Computer modeling of water and wastewater systems
- Preparation of studies
- GIS applications support
- System operational planning
- Troubleshooting support
- Coordination with various agencies
- Evaluation of contracting options
- Technical assistance on legal issues
- Preparation of mapping, easements and surveys
- Construction observation and administration

The Bear Creek Wastewater System also includes 45 miles of sanitary sewer main lines, several lift stations, interceptors (up to 30" diameter), and an outfall to the Metro Wastewater System. Merrick has served the Bear Creek Water and Sanitation District in the capacity of District Engineer for more than a decade.

Merrick provides a full range of District Engineering services for the Bear Creek Water and Sanitation District, which is located in Lakewood, CO. The district covers over 2,600 acres and is located between Wadsworth Boulevard, Iliff Avenue, Hampden Avenue, and C-470. The district includes residential and commercial land uses, and the population in this area is projected at approximately 37,000 total residents (residential and non-residential).

As District Engineer, Merrick provides a multitude of engineering consulting services including master planning, operations planning, conceptual design, final design, cost estimating, budgeting, design review services, construction administration, and construction inspection services.

The Bear Creek Water System includes 55 miles of water lines (up to 24" diameter), ten connection points to the Denver Water Department main lines, three pressure zones, and five pressure reducing valves.

Merrick provided GIS consulting services to the Bear Creek Water and Sanitation District using the Bancroft-Clover project as a case study example to implement a similar system in order to modernize the District's day-to-day administration and operations. A similar system was used to allow district managers to instantly view all condition reports, surveys, maintenance records, and previous televised inspections to help identify problems and needs.

Services provided to the district include:

- General engineering services
- Master planning studies
- Hydrologic/hydraulic analyses and modeling
- Development plan review
- Conceptual and final design
- Monthly status reporting to the Board
- Capital improvement planning, design, and construction
- O&M program management
- Cost estimating and schedule analysis
- Bid process administration support
- Technical assistance on legal issues
- Budget preparation and reporting
- Contractor and various agencies coordination
- Construction management and inspection services
- Preparation of mapping, easements, and surveys
- GIS, surveying, & mapping
- Administrative support



District Engineering Services

Bancroft-Clover Water and Sanitation District | Lakewood, CO



ACEC/Colorado 2009
Merit Award Winning
Project

Client Reference

Tim Lowe
District Manager
Bancroft-Clover Water & Sanitation
District
900 S. Wadsworth Blvd.
Lakewood, CO 80226
P: 303-922-1113
E: tim@bancroftclover.com

Key Features

- Capital Improvement Program (CIP) planning
- Master water and sewer studies
- Preparation of project and yearly budgets
- Cost estimating and schedule analysis
- Project oversight (design reviews, plan reviews, construction reviews)
- Computer modeling of water and wastewater systems
- Preparation of studies
- System operational planning; trouble shooting support
- Coordination with various agencies
- Evaluation of contracting options
- Technical assistance on legal issues
- Preparation of mapping
- Conceptual and final design
- Preparation and distribution of RFPs
- Bid process administration and support

Merrick provided master water and sewer planning services for the Bancroft-Clover Water and Sanitation District of Lakewood, CO. The district covers more than 4,000 acres bordered by Alameda Boulevard, Sheridan Boulevard, Iliff Avenue, and Sims Street.

The district includes residential and commercial land uses. The population in this area is projected at approximately 81,000 total residents (residential and non-residential), including approximately 110 miles of water lines, 104 miles of sewer lines, 9000 taps, four pump stations, eight pressure zones, five pressure reducing valves with vaults (PRV's), and 15 interconnections with the Denver Water system.

As District Engineer, Merrick provides a multitude of engineering consulting services including master planning, operations planning, conceptual design, final design, cost estimating, budgeting, design review services, construction administration, and construction inspection services. Merrick has served the Bancroft-Clover Water and Sanitation District in the capacity of District Engineer since 2002.

Merrick provided GIS consulting services to the Bancroft-Clover Water and Sanitation District in a project to modernize the District's day-to-day administration and operations.

The District's water and sewer infrastructure elements (pipelines, valves, manholes, pump stations, etc.) were surveyed and locations were documented using Trimble survey grade global position system (GPS) surveys. Data and other relevant system information, such as the age, service history, and future scheduled inspections or replacements for each infrastructure element were entered into the infrastructure maintenance tracking database that Merrick created for the District. A custom interface was then created that integrated the database system with the ESRI ArcMAP GIS system. Camera inspections, utilizing the Flex 6 system, were performed on all of the District's pipe lines to document existing conditions. This information was then added to the GIS system using customized programming that extracted all of the video observation out of the system database. Merrick then located this data in the correct position along each respective pipe segment in the GIS; this also included all sewer tap locations. In addition, District personnel scanned tap records, correspondence, inspection reports, old notes, and other information, cross-referencing them, accordingly, with each account record and location in the GIS. Merrick and the District refined key maps and integrated all information to complete the GIS system.

The District's technicians access the GIS data through laptops in service vehicles. They are able to instantly view all condition reports, surveys, maintenance records, and previous televised inspections to help identify problems and needs. GPS locations have already proven especially valuable during emergencies, allowing the District to quickly find and close a valve in the event of a line break.

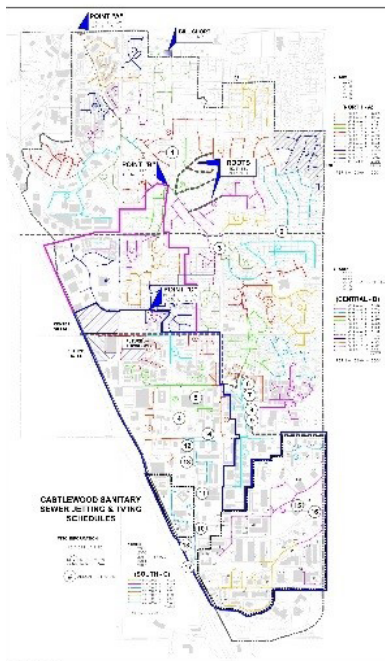
"I can tell you that working with Merrick has been terrific. It's kind of the best of both worlds. It's like you're working with a small firm, but have the resources of a large firm. Anything I've asked them to do gets done. They have all the resources that you could ask for. They're all first-class people, top-notch as far as I'm concerned."

-Jim Forth, Previous Field Operations Manager, Bancroft Clover Water & Sanitation District, Lakewood, Colorado

Client Reference

Allen Stone
Board Member
Castlewood Water and Sanitation
District

E: alphylston@aol.com



Merrick's experience in handling seamless data transition, such as we did with the Castlewood Water & Sanitation District, will save RVMD both time and money.

Responsible in various capacities for this 2,200 acre water and sanitation District that is located between E. Belleview Avenue, Interstate 25, E. Dry Creek Road, and S. Havana Street. The District includes 2,180 residential taps and 345 commercial taps. The water system is provided by Denver Water through a total service agreement with the District. The wastewater system includes approximately 41 miles of sanitary sewer mains 8"-33" diameter, and a few outfalls to the Metro Wastewater system. Merrick's responsibilities include master planning, capital planning, program management, design reviews, plan review services, O&M coordination, construction inspection, survey, administration assistance, and other general consulting. Merrick has served as District Engineer since 2013.

Recent efforts involved overhauling both lift stations in the district to provide additional storage capacity and update controls and monitoring.

Republic Park Lift Station-Castlewood Water and Sanitation District, Greenwood Village, CO. Merrick designed storage capacity to this existing 75 gpm sewage lift station that had been in operation for many years without any provisions for emergency storage. The former site of the lift station was to be utilized for the 12'x12' emergency storage vault. The vault provides 5,125 gallons of emergency storage. The unique feature of the storage vault is the conversion of one of the main sewer lines will run through the vault. This sewer line will function as an overflow weir to capture the excess flows in the vault, for later removal by pumping. Merrick also designed all the electrical improvements to this lift station including upgrades to the SCADA system, programmable logic controller, and the local interfaces. In addition, Merrick integrated the controls with the web site that will be the call center for all alarms and responses from this lift station. Merrick provided the bidding and construction management services. There was extensive coordination with the Colorado Department of Public Health and Environment.

Havana Lift Station - Castlewood Water and Sanitation District, Centennial, CO. Merrick designed the electrical upgrades and extra storage capacity upgrades for this 3.53 MGD lift station. The storage capacity, instrumentation, electrical gear, and back-up generator were deficient or outdated and did not meet current standards. In conjunction with the upgrades made to the SCADA system, PLC, HMI devices and website services, all of the electrical controls were moved above-ground allowing the remaining vault to be utilized for the needed emergency storage capacity. This optimizes the operational efficiency while minimizing the total project costs. The number of pumps was reduced from three to two with one of the remaining pumps being replaced with a smaller pump capable of meeting the needs of the fully developed service area. During this conversion, the diesel emergency generator was replaced with a natural gas generator. The project was completed with minimal surface disturbance allowing the existing facility to remain operational during construction. There was extensive coordination with the Colorado Department of Public Health and Environment, City of Centennial, and the Cherry Creek Basin Water Quality Authority. Merrick also provided Bidding and Construction Management services.



On-Call Engineering Services

Greenwood Metro and Greenwood Metro South District | Greenwood, SC

Client Reference

Ken Lykens
General Manager

P: 303-773-1700

E: Ken.Lykens@sheaproperties.com

As District Engineer, Merrick provided GIS mapping, conceptual and final design, MS-4 permitting, O&M program management and coordination of District supply wells, pump stations, irrigation distribution system, storage facilities, and other general consulting. In addition, Merrick provided weekly wellness checks of the District's pump stations and supply wells during the winter months when no irrigation was occurring.

Merrick identified routine preventative maintenance needs and contacted and coordinated directly with contractors for remedial action, as needed. The same action was taken in an event there was a malfunction of equipment at a booster pump station or well. The preventative maintenance needs assessment included evaluations of well surface equipment, pump stations, storage tanks (consisting of visual inspections to the extent possible) and checking of electrical panels, switches, meters and gauges, including infrared scans (by separate vendor) where appropriate.



On-Call Engineering Services

Todd Creek Park and Recreation District | Adams County, CO

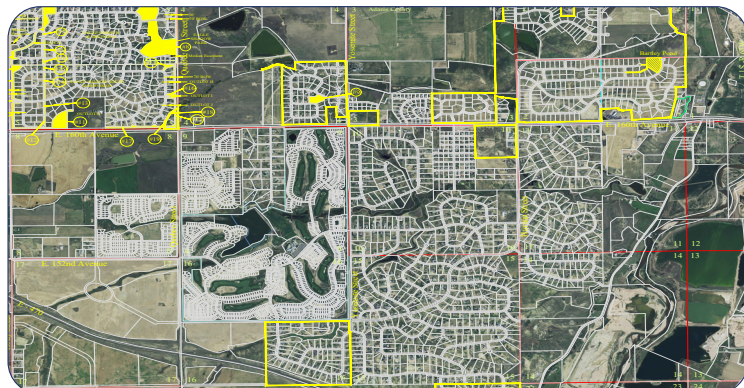
Client Reference

Russell W. Dykstra
Attorney-in-Fact for District

P: 303-839-3845

E: rdykstra@spencerfane.com

Merrick provided District Engineering services as requested by the Todd Creek Village Park and Recreation District. These services included utilizing provided legal descriptions to calculate and depict the legal descriptions to describe the District's boundaries. Merrick provided an aerial background, clip imagery of the area, produced in State Plane (NAD 83) format, plotted all documents provided for best fit document, and researched the county for other documents referenced in the client-supplied documents. Merrick also provided a map to meet the State map filing criteria for Districts. Other services provided include General Engineering Design, General Consulting, and Construction Management.



CONFLICT OF INTEREST

Merrick does not have any conflict of interest by any individual or the company.

WORK COMMENCEMENT DATE

The Merrick proposed team is available as soon as possible once contract negotiations are completed and notice to proceed has been issued. If required, additional team members will be added per project requirements from the Merrick Colorado office resources of over 400.

COST PROPOSAL

Merrick Rate Sheet

The rate sheet on the following page reflects standard fees Merrick charges for requested services by the team's key personnel. Out-of-pocket expenses to be reimbursed are also reflected on the following rate sheet.








SCHEDULE OF HOURLY BILLING RATES

EFFECTIVE January 1, 2023

ADMINISTRATION:		
Clerical		\$110.00
DRAFTING:		
Senior Technician		\$155.00
Technician		\$125.00
FIELD ENGINEERING:		
Senior Construction Manager		\$200.00
Construction Manager/Construction Administrator		\$180.00
Senior Field Engineer		\$155.00
Field Engineer/Senior Field Technician		\$140.00
Field Engineering Technician		\$125.00
PROJECT ENGINEERING:		
Senior Project Engineer/Assistant Project Manager		\$200.00
Project Engineer		\$175.00
Senior Design Engineer		\$155.00
Design Engineer		\$140.00
Senior Designer		\$140.00
Designer		\$125.00
PROJECT MANAGEMENT:		
Senior Project Manager/Sr. Technical Manager		\$250.00
Project/Technical Manager		\$225.00
OTHER:		
Subconsultant		Cost + 10%
Courier		Cost + 10%
Expert Witness Court Appearance		\$3,000.00/day
G.P.S. System		\$125/unit/day
Workstations/Specialized Equipment (Minimum Charge \$25.00)		\$60.00/day
Minimum Charge		\$25.00
Personal Vehicle Mileage	Current Allowable IRS Rate	
Special Software		Cost + 10%
Other Materials or Equipment	Other Materials or Equipment	Cost + 10%

Above standard rates will be held firm through December 31, 2023.
 Standard rates will be subject to review in the fourth quarter in 2023.
 Client will be notified in writing of any requested changes.

Employee Owned

 5970 Greenwood Plaza Blvd. Greenwood Village, CO 80111	 Tel: +1 303-751-0741	 hello@merrick.com www.merrick.com
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APPENDIX - RESUMES





EDUCATION

Colorado State University, BS, Civil Engineering

REGISTRATIONS & AFFILIATIONS

- Professional Engineer: CO, #38990; NM, #19324; ND, #8693
- Member, American Water Works Association (AWWA)
- National Association of Sewer Service Companies (NASSCO) Certified: PACP, MACP, LACP, #U-315-0623777
- Class 3 Collection Operator & Certified Water Professional - #15986
- Class 3 Distribution Operator & Certified Water Professional - #15986
- OSHA - 10-Hour Training

WORK HISTORY

- 2001-Present, Merrick
- 2 years, Other firms

PRIMARY LOCATION

- Greenwood Village, Colorado



WADE WHEATLAKE, PE

Project Manager

Wade has more than 24 years of experience in master planning, design, and construction management of municipal water and wastewater systems. His experience includes the design of water systems involving transmission lines, distribution lines, service lines, pump stations, PRVs, meters, line realignments, and line extensions. In addition, Wade is experienced in the design of sanitary sewer systems involving collection lines, outfall lines, interceptors, lift stations, force mains, manholes, line realignments, rehabilitation and condition assessment. His experience encompasses construction management and inspection, including preparation of bid estimates, specifications and contract documents, bid openings, preconstruction and progress meetings, daily field inspections, coordination of material testing, performing field survey checks on construction, field documentation, final inspections, and project closeout coordination. He has a vast amount of experience working with various Districts throughout Colorado.

EXPERIENCE

Bear Creek Water and Sanitation District, Lakewood, CO.

District Engineer/Project Manager responsible in various capacities for this 2,600-acre water and sanitation district that is located between Wadsworth Blvd, Iliff Ave, Hampden Ave, and C-470. The District includes residential and commercial land uses, and serves a projected population of approximately 37,500 residents. The Bear Creek Water System includes 54 miles of waterlines (up to 24" diameter) three pressure zones, five PRV's and five connections to the Denver Water System. The wastewater system includes 45 miles of sanitary sewer mains, several list stations, interceptors (up to 30" diameter), and an outfall to the Metro Wastewater system. Merrick's responsibilities include master planning, capital planning, program management, design reviews, plan review services, O&M coordination, construction inspection, survey, GIS, administration assistance, and other general consulting.

Bancroft-Clover Water and Sanitation District, Lakewood, CO.

District Engineer and Project Manager for this 4,000-acre water and sanitation District located between Alameda Boulevard, Sheridan Boulevard, Iliff Avenue, and Sims Street. The District includes residential and commercial land uses and serves a population of approximately 81,000 total residential and non-residential. The Bancroft-Clover Water System includes 110 miles of waterlines (up to 16" diameter), 4 pump stations, 8 pressure zones, 5 PRV's, and 15 connection points to the Denver Water System. The wastewater system includes 104 miles of sanitary sewer mains, interceptors (up to 30" diameter), and an outfall to the Metro Wastewater system. Merrick's responsibilities include master planning, capital planning, program management, design, design review, plan review services, O&M coordination, construction inspection, surveying, GIS, administration assistance, and other general consulting.

Castlewood Water & Sanitation District, Centennial, CO.

Project Manager. Responsible in various capacities for this 2,200-acre water and sanitation District located between E. Belleview Avenue, Interstate 25, E. Dry Creek Road, and S. Havana Street. The District includes 2,180 residential taps and 345 commercial taps. The water system is provided by Denver Water through a total service agreement with the District. The wastewater system includes approximately 41 miles of sanitary sewer mains 8"-33" diameter, and a few outfalls to the Metro Wastewater system. Merrick's responsibilities include master planning, capital planning, program management, design reviews, plan review services, O&M coordination, construction inspection, survey, administration assistance, and other general consulting.

North Washington Street Water & Sanitation District, Denver CO.

District Engineer and Project Manager. Project management and engineering support, including design and quality control checks of capital improvement project (CIP) designs (water and sewer), bidding support and construction observation, development reviews to ensure conformity with District requirements, coordination with Denver Water, Adams County, and other agencies, maintaining District base maps, hydraulic capacity computer modeling of water and sewer mains, and other on-call engineering tasks in support of District business. Recent CIPs include York Street Phase I and II Improvements and 58th Avenue Improvements.





GEORGE CICOFF, PE, PLS

Senior Project Engineer

George is a senior civil engineer with more than 50 years of diverse experience. He has been involved in complex civil engineering projects of various types of infrastructure. These projects have included large-scale land development projects, quasi-municipal utility districts, water supply systems, wastewater systems, drainage systems, and street and roadway systems. His District Engineering experience includes capital planning, master planning, design, plan review, and inspection services for various utility districts. George places his emphasis on hands-on detailed supervision and coordination of design efforts. He will work to produce high quality deliverables on time and within budget.

EDUCATION

West Virginia Institute of Technology,
BS, Civil Engineering

West Virginia Institute of Technology,
AS, Civil Engineering Technology

REGISTRATIONS/SPECIAL QUALIFICATIONS

- Professional Engineer: CO, #29937; WY; MT; WV
- Professional Land Surveyor: CO, #29937
- 1994 Governor's Award for Peak Performance in State Government
- South Carolina Government Civil Engineer of the Year -ASCE (1992-1993)
- Public Agency Peer Reviewer - ASCE
- Certified Manager of Landfill Operations - Solid Waste Association of North America
- Emergency Disaster Response Training - FEMA Training Center

WORK HISTORY

- 2006-Present, Merrick
- 35 years, Other firms

PRIMARY LOCATION

- Loveland, Colorado

EXPERIENCE

Master Water and Sanitary Sewer Studies, Bancroft-Clover Water and Sanitation District, Lakewood, CO.

Civil Engineer. The master water study consisted of field reconnaissance of the existing 110 miles of water lines in the District. The water study included a hydraulic model and a report on deficiencies of the system and recommended solutions. The report included an assessment of the condition of the lines and cost estimates per GASB requirements. The report included an assessment of the condition of the lines and cost estimates of the system for GASB requirements. The master sanitary sewer study involved the development of drainage basins and wastewater routing plans. Solutions were recommended for over capacity lines and construction cost estimate were prepared. The report included an assessment of the condition of the lines and cost estimate of the system for GASB requirements and CMOM compliance.

Master Water and Sanitary Sewer Study, Bear Creek Water and Sanitation District, Lakewood, CO.

Civil Engineer. The master water study consisted of field reconnaissance of the existing 55 miles of water lines in the District. The water study included a hydraulic model and a report on deficiencies of the system and recommended solutions. The report included an assessment of the condition of the lines and cost estimates per GASB requirements. The report included an assessment of the condition of the lines and cost estimates of the system for GASB requirements. The master sanitary sewer study involved the development of drainage basins and wastewater routing plans. Solutions were recommended for over capacity lines and construction cost estimate were prepared. The report included an assessment of the condition of the lines and cost estimate of the system for GASB requirements and CMOM compliance.

Water and Sewer Line Design, Bear Creek Water and Sanitation District, Lakewood, CO.

Senior Design Engineer. The District's water system includes 55 miles of waterlines (up to 24" diameter), 3 pressure zones, 5 PRV's and five connections to the Denver Water System. The sanitary sewer system includes 45 miles of sanitary sewer mains, and interceptors up to 33" diameter. The Merrick team provided design, plan review services, construction inspection, coordination, and administration assistance. George prepared designs of water transmission lines, water distribution lines, and sanitary sewer lines.

On-Call Contract, City of Centennial, Centennial, CO.

Project Engineer. Merrick provided services for an on-call Public Works Support Services Contract for the City of Centennial. Under this contract, Merrick provided public works consulting, plan review services, operational review services, traffic engineering, construction management, and other services. George provided plan review services. He also assisted in the evaluation and development of performance standards for privatization of the City's maintenance and operations department. He performed periodic audits and performance evaluations to ensure the private contractor's compliance with the terms of the contract.





LUKE LOVATO, PE

Project Engineer

Luke is a civil engineer and inspector with over 8 years of experience in planning, design, construction management of municipal water and wastewater systems, and inspection services. He has served as the inspector for Merrick's recent engineering efforts for the South Sheridan Water and Sanitation District, the Bear Creek Water and Sanitation District, and the Castlewood Water and Sanitation District. In addition, he has served as a civil engineer on the current CIPP rehabilitation of the Bancroft-Clover Water and Sanitation District sanitary sewer system. Luke places his emphasis on the detailed analysis, design, and field engineering associated with a utility project.

EXPERIENCE

Bear Creek Water & Sanitation District, Lakewood, CO.

Design Engineer/Field Engineer/Inspector for this 2,600-acre water and sanitation District that is located between Wadsworth Blvd, Iliff Ave, Hampden Ave, and C-470. The District includes residential and commercial land uses, and serves a projected population of approximately 37,500 residents. The Bear Creek Water System includes 54 miles of waterlines (up to 24" diameter), 3 pressure zones, 5 PRV's and five connections to the Denver Water System. The wastewater system includes 45 miles of sanitary sewer mains, several list stations, interceptors (up to 30" diameter), and an outfall to the Metro Wastewater system. Luke's responsibilities included master planning, capital planning, design, design review, plan review services, construction inspection, administration assistance, and other general consulting.

Bancroft-Clover Water & Sanitation District, Lakewood, CO.

Design Engineer/Field Engineer/Inspector for this 4,000-acre water and sanitation District. The District includes residential and commercial land uses and serves a population of approximately 81,000 total residential and non-residential. The Bancroft-Clover Water System includes 110 miles of waterlines (up to 16" diameter), 4 pump stations, 8 pressure zones, 5 PRV's and 15 connection points to the Denver Water System. The wastewater system includes 104 miles of sanitary sewer mains, interceptors (up to 30" diameter), and an outfall to the Metro Wastewater system. Luke's responsibilities included master planning, capital planning, design, design review, plan review services, construction inspection, administration assistance, and other general consulting.

Castlewood Water & Sanitation District, Greenwood Village, CO.

Design Engineer/Field Engineer/Inspector. Merrick's responsibilities include master planning, capital planning, program management, design reviews, plan review services, O&M coordination, construction inspection, survey, administration assistance and other general consulting. Inspector for sanitary sewer service repairs and new service installations. Luke's responsibilities included master planning, capital planning, design, design review, plan review services, construction inspection, administration assistance, and other general consulting.

South Sheridan Water & Sanitation District, Lakewood, CO.

Design Engineer/Field Engineer/Inspector for this 217-acre water and sanitation District that is located between Mississippi Avenue, W. Mexico Avenue, S. Kendall Street, and Sheridan Boulevard. The District includes residential and commercial land uses, and serves a projected population of approximately 1,300 residents. The water system includes 54 miles of waterlines (up to 24" diameter), 3 pressure zones, 5 PRV's and five connections to the Denver Water System. The wastewater system includes approximately 9 miles of sanitary sewer mains, and a few outfalls to the Metro Wastewater system. Inspector for domestic water valve and hydrant installations as well as 3/4" meter yoke removal and replacements. Inspections consisted of conducting inspection reports and construction management.

East Lakewood Sanitation District, Lakewood, CO.

Design Engineer/Field Engineer/Inspector. Merrick provided construction plan review and inspection services on behalf of the East Lakewood Sanitation District for this mixed-use-neighborhood-transit 134-unit apartment/town-home complex. This project consisted of approximately 1400 LF of 8" PVC sewer main, 13 manholes, with 101 multi-family units, 30 duplexes, and 1 triplex homes. Construction inspection tasks included as-built plan documentation, completing daily construction activity reports, photograph documentation, sewer compliance testing, and communication/coordination with the contractor and District.

EDUCATION

Colorado State University-Pueblo, BS, Civil Engineering

REGISTRATIONS & AFFILIATIONS

- Professional Engineer: CO, #62024
- National Association of Sewer Service Companies (NASSCO) Certified: PACP, MACP, and LACP: #U-0318-070300930
- National Association of Sewer Service Companies (NASSCO) ITCP Certified: #CIPP-316-0201760
- Member, American Water Works Association (AWWA)
- OSHA - 10-Hour Training

WORK HISTORY

- 2014-Present, Merrick

PRIMARY LOCATION

- Greenwood Village, Colorado



MERRICK®





STEVE RAVEL, PE, BCEE, PMP, ENV SP

QA/QC Manager

Steve is a civil and environmental engineer with extensive experience in the management, planning, and design of water, wastewater, and reuse treatment and collection/distribution systems. He has been responsible for the preparation of master planning reports, water and wastewater hydraulic modeling, engineering and feasibility reports, layout and design, specification writing, permitting, cost estimating, construction phase engineering, operational audits, cost of service studies, the development of rates and capital improvement planning, site evaluations, asset management studies, and project and program management.

EDUCATION

Pennsylvania State University, BS, Civil Engineering with Minor in Environmental Engineering

University of Colorado at Denver, Graduate Classwork

REGISTRATIONS & AFFILIATIONS

- Professional Engineer: CO, 2001, #35024; ID, 2023, #P-21941; NM, 2010, #19923; PA, 1999, #PE-055002-E; TX, 2016, #12255; WY, 2012, #13780
- Board Certified Environmental Engineer (BCEE) by AAEES
- Envision Sustainability Professional (ENV SP), 2015
- Project Management Professional (PMP), 2015, #2391057

WORK HISTORY

- 2021-Present, Merrick
- 27 years, Other firms

PRIMARY LOCATION

- Denver, Colorado

EXPERIENCE

Water Reclamation Facility (WRF) and Lift Station improvements Project, Upper Thompson Sanitation District, Estes Park, CO.

Project manager for the design of new interceptors; two (2) new lift stations; a dual force main; and 3 MGD biological nutrient removal (BNR) and membrane bioreactor (MBR) WRF. The project included permitting with the CDPHE, County, Town, and US Bureau of Reclamation; design of improvements; development of a Construction Manager at Risk (CMAR) solicitation and award of a contract; development of a membrane bioreactor (MBR) equipment procurement solicitation and award of a contract; participation in stakeholders; development of State Revolving Fund (SRF), US Department of Agriculture (USDA), and Water Infrastructure Finance and Innovation Act (WIFIA) funding applications; development of opinions of probable total project costs; and development of Contract and Bidding Documents.

Water Reclamation Facility (WRF) Improvements, City of Lafayette, CO.

Quality assurance / quality control of final design documents and Project Manager for services during bidding and services during construction. The Project included the design of an additional secondary treatment train (primary clarifier, aeration basin, secondary clarifier, and blower replacement) and a tertiary treatment expansion (clarifloculators, alum addition, filters, intermediate pump station, backwash holding basin, flow equalization, and solids dewatering) for further nutrient (nitrogen and phosphorus) removal at the City of Lafayette's 4.4 MGD Water Reclamation Facility. Responsibilities included review of final design documents (specifications and drawings) and coordination of final regulatory approvals from the Colorado Department of Public Health and Environment (CDPHE) and the City of Lafayette Planning and Building Departments; preparation of documents for bidding by contractors in the Fall of 2021; and management of the design team during construction of the improvements beginning in 2022. Services during construction will include coordination with the City (management and operations staff), contractor, and regulatory agencies; management of full-time field observation staff; processing of submittals, requests for information (RFI), change orders, applications for payment; development of the operation and maintenance (O&M) manual; and start-up and operation of the facility.

Wastewater Collection System Master Plan, Eagle River Water and Sanitation District, Avon, CO.

Quality assurance / quality control (QA/QC) for the development of a system wide wastewater collection system master plan including flow metering; infiltration and inflow (I/I) identification and analysis; and capital improvement planning.

Solids Dewatering Project, Upper Blue Sanitation District, Breckenridge, CO.

Project manager for the design of a solids dewatering screw press including pre-procurement of the press, augers, and polymer chemical feed pumps at the existing 4.99 MGD Farmers Korner Wastewater Treatment Facility (FKWWTF).

Wastewater Reuse and Aquifer Recharge and Recovery Evaluation, Donala Water and Sanitation District, Colorado Springs, CO.

Project manager for the evaluation of the existing Upper Monument Creek Wastewater Treatment Facility (UMC WWTF) treatment facility and effluent water quality for use with recharge of an aquifer recharge and recovery well. The project involved development of treatment alternatives including microfiltration and reverse osmosis. Opinions of probable total project costs were developed for use with planning the improvements.





BRIAN CHEVALIER, PE

Hydrology/Stormwater/Irrigation

Brian specializes in the hydraulic design of open channels, reservoirs, drop structures, pressure storm sewer conduits, and storm water storage facilities, including water quality outlet works. Special skills include Civil3D design, analysis of complex hydraulic conditions using a CFD model called FLOW-3D, and HECRAS analysis. He has been a Project Manager for much of his professional career, with projects that include a golf course, recreational parks, creek and river stabilizations, roadways, parking lots, dams, storm sewer retrofits, recreational boating, drop structures, raw water intakes, and an infiltration gallery.

EDUCATION

Colorado State University, MS, Hydrology and Water Resources

University of Vermont, BS, Civil Engineering

University of Colorado, Short Course: Geographical Information Systems

REGISTRATIONS & AFFILIATIONS

- Professional Engineer: CO, #24003
- Project Management Professional (PMP): #1363879

WORK HISTORY

- 2013-Present, Merrick
- 20 years, Other firms

PRIMARY LOCATION

- Greenwood Village, Colorado

EXPERIENCE

Tributary T Improvements for the Aurora Highlands, Aerotropolis Area Coordinating Metropolitan District, Aurora, CO.

Project Manager/Lead Technical Engineer. Design for five detention ponds, 9,000 LF of open channel, hydraulic analysis for five bridges and low flow crossings, and overall site grading. A CLOMR for this project has been prepared.

Flying Horse Detention Pond Rehabilitation, Colorado Springs, CO.

Project Manager. Responsible for supervising final conceptual and final design to retrofit an existing 135 ac-ft detention pond to meet current city detention and water quality standards for a 1.9 sq. mi. watershed. The pond site will also detain runoff from a future extension of Powers Boulevard. Work tasks include conceptual alternatives analysis, final design documents, and a cost estimate.

Green Lake Intake, City of Black Hawk, CO.

Project Manager. Design of a 10 cfs diversion structure at an elevation of about 9,500 feet. A coanda screen will separate diverted flow from Leavenworth Creek, and diverted flow will be conveyed to Green Lake for water supply for the City.

Scarborough Site Regional Detention, Colorado Springs, CO.

Project Manager. Responsible for supervising final design of a new detention pond to serve an existing development. Runoff will be detained to lower the peak rate and will include water quality treatment before the pond discharge reaches Cottonwood Creek. Final design documents, a design report, and a cost estimate were produced.

Sulphur Gulch Flood Hazard Area Delineation (FHAD), Mile High Flood District (MHFD), Parker, CO.

Project Manager. Responsible for supervising a hydrology update, new hydraulic modeling, and floodplain delineation for Sulphur Gulch. The project followed MHFD guidelines and delineate a new floodplain and floodway for the 17 sq. mi. watershed.

Fourmile Canyon Creek Improvements, City of Boulder, CO.

Project Manager/Senior Project Engineer. Responsible for technical lead for design of a bridge at 19th Street, a regional trail, stream conveyance, utility relocations, and general site grading. The project features more than 827 LF of 4-foot to 14-foot tall cast-in-place walls, drop structures, and transition grading to private property. The project required water and sanitary sewer relocations. In 2017, the project scope expanded to include 2,450 LF of open channel, additional drop structures, additional walls, and three new bridges including a pedestrian crossing.

Jackass Gulch Improvements, Mile High Flood District (MHFD), Littleton, CO.

Project Manager/Senior Project Engineer. Responsible for technical lead for 612 LF of stream stabilization and streambank stabilization. The project required construction of five drop structures, coordination with private property owners, hydraulic modeling, 404 Permit assistance, and alignment adjustments to avoid tree removal.

Littles Creek Improvements, Mile High Flood District (MHFD), City of Littleton, CO.

Project Engineer/Project Manager. Hydrologic assessment and modeling of an existing urban watershed, hydraulic analysis, sizing and design of six pre-cast box stream crossings, design of 800 LF of sanitary sewer, stormwater design, water line relocation and design, and detention pond conceptual design. Served as project manager during the construction period.

