

RYAN M. MANGINO, P.E. 43304

Education and Registration:

B.S. – Civil Engineering Technology, CSU – Pueblo, Colorado
Registered Professional Engineer - Colorado

Experience:

Mr. Mangino has over 17 years of experience in civil engineering and related fields, including water storage, potable water systems, water pumping and facilities design, wastewater treatment and pumping, road corridor design, water and wastewater system studies, CDPHE permitting, drainage analysis and planning, water distribution system modeling, and construction administration/inspection.

Selected Experience:

- *Staff/Design Engineer for a **14-mile Raw Water Transmission Pipeline** for Woodmen Hills Metropolitan District. Design included aerial sections of alignment, overseeing utility locations, plan and profile drawings of pipeline, design and placement of pipeline, permitting, complete construction drawing design, and on-site observation.*
- *Staff/Design Engineer for the **Guthrie Water Booster Pump Station, several deep well completions, vaults and intricate SCADA** system for a joint water project between Woodmen Hills Public Facilities Authority and Meridian Service Metropolitan District. Design included site grading, cast-in-place concrete vaults, well sections, well piping, complete construction drawing design, and on-site observation.*
- *Project/Design Engineer for a **1.3 MGD Activated Sludge Wastewater Treatment Facility** for the Woodmen Hills Metropolitan District. Project included permitting, design, and construction administration of a new mechanical wastewater treatment plant on the same site as an existing lagoon facility. The facility includes incorporating existing primary treatment, all new secondary treatment with aerobic and anoxic zones, secondary clarification, odor control, sub-grade and above-grade infrastructure, process piping and pumps, dewatering, backup power generation, and solids handling.*
- *Staff/Design Engineer for **1.3 MGD Water Filtration Plant** for Woodmen Hills Metropolitan District. Design included **flocculation, filtration, back-wash systems, chlorination, internal booster re-pumping station and Instrumentation** and Control. Design also required design of building and wells, building drawings and **CDPHE permitting**, field piping design, complete construction drawings, and on-site observation.*
- *Project/Design Engineer for a **0.15 MGD High-Head Wastewater Pump Station** for the Woodmen Hills Metropolitan District. Project included the design of a new lift station to replace an aging lift station on the same site. The facility **incorporated redundant pumping, separation of wet well and pump room, above-grade structure to house electrical and control equipment, bypass pumping, backup power, odor control, and emergency storage**. Permitting involved In-Kind Replacement through CDPHE, Site Development Plan approval through El Paso County, and approval through the Pikes Peak Regional Building Department.*
- *Staff/Design Engineer/On-site Engineer for a **Dual, High-Head Wastewater Pump Station with Headworks Equipment** for the Meridian Service Metropolitan District (with Woodmen Hills Metropolitan District represented at same facility). Project included redesign and re-permitting of an original design, incorporating wastewater screening, grit removal, and pumping. Facility also involved dual pairs of pumping equipment, each with full redundancy, backup generation, odor control, equalization storage, and emergency storage.*
- *Staff/Design Engineer for a Central Water System for the Sanctuary in the Pines Metropolitan District. Design included site layout of **0.4 million-gallon welded steel potable water storage tank**, design of **deep well completion**, and design of **Water Filtration Plant** which including **flocculation, chemical feed, filtration, back-wash systems-recovery, booster pumping, instrumentation/controls, and chlorination**. Also required were CDPHE permitting, TMF and construction approvals as well as all land use planning.*
- *Staff/Design Engineer for **2.5 million-gallon welded steel potable water storage tank**. Design included location of all inlet, outlet, drain, and overflow piping, foundation, connection to existing water lines, tank appurtenances, complete construction drawings, and on-site observation. Meridian Ranch Metropolitan District*