

■ John Blanchard, PE Principal



AREAS OF EXPERTISE

Land Development and Infrastructure Master Planning

Economic Analysis

Urban Drainage and Flood Control

Water Quality and Supply

Reclamation Projects

Wastewater Treatment Projects

EDUCATION

MBA, Regis College, 1988

BS, Civil Engineering, University of Iowa, 1982

PROFESSIONAL REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer, States of Colorado (24420/1986) and New York (65239/1988)

Registered Colorado Real Estate Appraiser

American Society of Civil Engineers

Mined Land Reclamation Board, Non Point Source Pollution Committee

Home Builders Association of Metro Denver, Water Development Committee

PROFESSIONAL SUMMARY

Mr. Blanchard is a principal and co-founder of the Matrix Design Group with a broad based background in municipal engineering design, environmental permitting, and economic analysis, and a strong expertise in water resources. He is recognized as an expert in urban drainage and flood control, and actively teaches for the American Society of Civil Engineers throughout the U.S. and Canada. Mr. Blanchard serves as project manager on interdisciplinary projects from the initial planning stages through design development and construction and has directed innovative designs on award winning development projects by successfully integrating the efforts of land planners, landscape architects, natural scientists, and engineers.

RELEVANT EXPERIENCE

Land Development and Infrastructure Master Planning

Mr. Blanchard has worked on a broad array of site planning and civil engineering assignments in more than 15 states. His expertise includes site layout, land planning, subdivision design, and program management.

Mr. Blanchard is currently assisting with the preparation of infrastructure master plans and capital improvement programs to support redevelopment of the **former STAPLETON INTERNATIONAL AIRPORT** at Stapleton, CO. This project consists of redevelopment of an approximately 3,000 acre site. It will be a mixed use community consisting of residential and retail properties as well as open space areas.

Mr. Blanchard has also provided expert engineering for redevelopment of federal installations associated with the Base Realignment and Closure (BRAC)

program. At the **FORMER LOWRY AIR FORCE BASE** in Denver, CO, he provided infrastructure master planning and managed the \$8.2 million **LOWRY EDA INFRASTRUCTURE PROJECT**. The EDA project created the spine roadway, utility, and drainage infrastructure to serve the site and stimulate redevelopment. Value engineering techniques resulted in a reduction of \$5 million in capital costs. Additionally, Mr. Blanchard served as manager on the **INFRASTRUCTURE MASTER PLAN FOR FITZSIMONS MEDIAL ARMY CENTER** in Aurora, CO to support redevelopment of the 577 acre site into a bioscience research park and campus for the University of Colorado Health Sciences Center. The master plan established the framework for privatization of a central energy plant, decommission of a wastewater treatment plant, and programmatic improvements to all roadway and utilities.

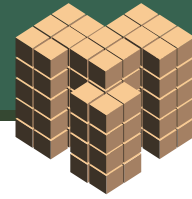
He was project manager for all aspects and planning and design for **RIVER'S EDGE** at Green Island, NY including an environmental impact statement, Planned Unit Development documents, roadways, drainage, and utilities associated with this 350 unit mixed-use residential development at the confluence of the Mohawk and Hudson Rivers in upstate New York. The project was funded in part with state economic development grants to satisfy latent housing demand and stimulate redevelopment of industrial lands.

Economic Analysis

Mr. Blanchard has extensive experience in economic analysis, real property, valuations, capital budgeting, and fiscal impact analysis for various residential development and commercial ventures. Representative assignments involving economic analysis include valuation of



Matrix Design Group, Inc.
Integrated Design Solutions



John Blanchard, PE Principal

PROFESSIONAL HISTORY

Matrix Design Group, Inc. (1999 to present)

BRW, Inc., Vice President (1995 to 1999)

Wright Water Engineers, Inc., Senior Water Engineer (1990 to 1995)

C.T. Male Associates, PC, Managing Engineer (1988 to 1990)

Bell Engineering Company, Project Manager (1983 to 1988)

Hansen Lind Meyer, PC, Design Engineer (1982 to 1983)

AWARDS AND PUBLICATIONS

Manual of Practice for Design and Construction of Urban Stormwater Management Systems, Contributing Author, ASCE/WPCF, 1992

ASCE *Manual of Practice*, Principal Instructor of Short Courses, Irvine, CA, Erie, PA, Toronto, CAN, Denver, CO, Las Vegas, NV, Ft. Lauderdale, FL, Memphis, TN and Phoenix, AZ

“Planning and Financing a Comprehensive Storm Water Management Program”, Instructor for University of Wisconsin short course, 1994

“Developing Difficult Sites”, 1994 National Association of Home Builders Convention in Las Vegas

ASCE *Applications in Stormwater Management*, Principal Instruction of Short Courses, San Antonio, TX, Sacramento, CA, Las Vegas, NV, Honolulu, HI, and Orlando, FL

water rights associated with **DELANEY LAKES** in Jackson County, CO; cash flow projections, pro forma budgets, and financial analysis of citrus orchard development for the **PAUMA INDIAN TRIBE** near San Diego, CA; fiscal impact analysis for a proposed development in **GREEN ISLAND**, NY which would add 1,200 residents to an existing population of 1,500; and preparation of a site wide redevelopment cost model for conversion of the **LOWRY AIR FORCE BASE**. The most recent projects in which this expertise has been performed include **STAPLETON REDEVELOPMENT** in Denver, CO; **LARKRIDGE MALL** in Thornton, CO; and **SANTA TERESA** in El Paso, Texas.

Urban Drainage and Flood Control
Throughout his career, Mr. Blanchard has demonstrated innovative approaches to solving complex drainage problems through the use of a comprehensive approach emphasizing multi-use, multi-benefit facilities. He developed a master plan to accomplish 100 year zero discharge from a 600 acre basin tributary to the **ROCKY MOUNTAIN ARSENAL** in Denver, CO. The plan utilized existing storage reservoirs to retain stormwater while providing a firm water supply for on-site irrigation and base flows for riparian corridors to be preserved downstream across the Arsenal.

As project manager for the Master Drainage Plan at the **ROCKY FLATS NUCLEAR WEAPONS COMPLEX** in Denver, CO, existing ponds were used to enhance water quality and protect downstream water supplies.

Representative design assignments include work as project manager for the design of riverfront improvements, navigable canals, and flood conveyance facilities for the **HISTORIC ARKANSAS RIVER PROJECT** in downtown Pueblo, CO and design of four multi-purpose lakes, four miles of irrigation canals and

pipelines, and numerous specialty structures including a 350 foot long concrete baffled apron drop on a 3.5:1 slope at the **MAROON CREEK GOLF CLUB** in Aspen, CO.

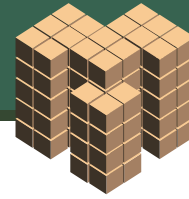
Mr. Blanchard was also the project manager for the planning and design of numerous stormwater detention and water supply storage facilities where jurisdictional dam structures were required. He has performed hydrological studies, hydraulic design, developed liner specifications, and assisted with permitting. Examples of jurisdictional dam designs include the rehabilitation of the 300 AF **LAKE GRANT DAM** near Crested Butte, CO and new construction of a 60 foot high dam at Kevin Costner's Dunbar Resort near Deadwood, SD.

Water Quality

Mr. Blanchard directed development of a monitoring program and preparation of an Integrated Pest Management Plan to protect water quality of adjacent wells and receiving waters down gradient of the **Maroon Creek Golf Club** in Aspen, CO. He has also served as project manager for stormwater NPDES permitting and preparation of erosion control plans to enable removal of transuranic waste products from TA 54 at the **LOS ALAMOS NATIONAL LABORATORY**, NM.

He prepared a Master Stormwater Management Plan for the **KEYSTONE SKI AREA**, in Summit County, CO to predict point and non-point phosphorus loading to Lake Dillon and provide a BMP based mitigation strategy. Additionally, Mr. Blanchard has prepared stormwater management plans for construction-related activities, sand and gravel operations, vehicle maintenance facilities, and other industry categories regulated under sections 402 and 405 of the Clean Water Act.





■ **John Blanchard, PE**
Principal

Water Supply

Mr. Blanchard has served as project manager on a wide variety of water exploration, raw water transmission, and supply/demand forecasting assignments. He designed a drop inlet type diversion structure together with a 1.3 MGD, high pressure (400 psi) vertical turbine pumping plant and 2 1/2 miles of raw **WATER TRANSMISSION LINE** to serve the Town of Victor, CO and the Cripple Creek and Victor Gold Mine. The drop inlet type structure was designed to provide sluicing of sediment laden water, minimize frazil ice problems and facilitate 404 permitting.

Other assignments representing domestic water supply development include the evaluation of surface water and ground water yields for the 500 unit **SKYLAND METROPOLITAN DISTRICT** near Crested Butte, CO and design of an infiltration gallery, disinfection and pumping facilities, various water distribution improvements, and a 0.3 MG buried concrete tank for the **Redstone Water and Sanitation District**.

Reclamation Projects

Mr. Blanchard prepared a landfill closure plan for lime waste piles situated in the Shoshone River floodplain at the **WESTERN SUGAR PLANT** in Lovell, WY. He served as task manager for the evaluation of surface water, conditions at a confidential gold mine in southern Idaho relating to the recovery of metals in dispersed mine tailings, including sediment transport analysis, and estimation of snowmelt/rainfall runoff yields, and design of channel stabilization measures.

In addition to serving on the Mined Land Reclamation Bureau's non-profit source pollution committee, Mr. Blanchard has worked for the **ADOLPH COORS BREWING COMPANY** for the hydrologic evaluation and preliminary design of a series of

sedimentation basins and a passive mine drainage treatment system for the **AORTA MINE**, which is situated in the Upper Clear Creek Watershed west of Denver, CO.

Waste Water Treatment Projects

Mr. Blanchard's experience with the planning, design, and permitting of wastewater projects is exemplified in preliminary design of aerated lagoons and land application system for **PIKES PEAK BOY SCOUT COUNCIL'S CAMP ALEXANDER** in Lake George, CO; service as District Engineer for the **EAST RIVER REGIONAL SANITATION DISTRICT** near Crested Butte, CO; and the design of four seepage beds to dispose of 7,500 gpd each at the **PEACEFUL VALLEY BOY SCOUTS CAMP** near Elbert, CO.

