



Kumar & Associates, Inc.

**Geotechnical Engineering
Engineering Geology
Construction Materials Testing and Observation
Third Party Inspection
Environmental Services**



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Statement of Qualifications

Kumar & Associates, Inc. (K+A) provides geotechnical engineering, engineering geology, environmental services, construction material testing services for land development, transportation, water resources and mining projects. We also provide forensic engineering and expert opinion for geotechnical engineering projects.

K+A was incorporated in 1989, and is a Small Business (SB) as defined by The U.S. Small Business Administration. Our headquarters is in Denver (pictured), with additional offices in Parker, Colorado Springs, Fort Collins, Glenwood Springs, and Summit County, Colorado.



Key to our success is our experienced and dedicated staff, attention to project details and requirements of our clients. Our simple philosophy of providing services on time, within budget and combined with practical solutions has made us a leader in the industry.

We have provided services for large projects like Denver International Airport, Civic Center Office Building, Vestas Blade and Nacelle Campus, Stapleton Redevelopment, Denver Justice Center, Sports Authority Field at Mile High Football Stadium (formerly Invesco Field), numerous Safeway Stores, state roads and FasTracks to small projects such as tennis courts, an addition an elementary school, or pavement design for a parking lot.

On behalf of our entire firm we are pleased to present to you an insight to our firm information, services we provide, an introduction to our professional and experienced staff, and a summary of our project experience demonstrating our vast knowledge and history in the industry.



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Firm Profile & Services

Project Experience

Leadership Personnel



Kumar & Associates, Inc. personnel are accustomed to working as a team providing geotechnical engineering, engineering geology, environmental, and construction materials testing and observation services on a wide variety of land development, building, transportation, water/waste water treatment, water resource, soil and groundwater cleanup, and mining and other types of civil works projects.

RANGE OF SERVICES

GEOTECHNICAL ENGINEERING



K+A performs due diligence and design-level geotechnical engineering studies for commercial, municipal, institutional, industrial, and recreational buildings and facilities; land development infrastructure; transportation, including roadways, bridges and airports; water resources, including impoundments and pipelines; and forensic evaluation. These studies generally consist of subsurface exploration, laboratory testing, and engineering analyses and report preparation, and are performed and/or supervised by registered engineers experienced with Colorado and surrounding states. Laboratory testing such as in-situ moisture/density, Atterberg limits, gradation analyses, swell-consolidation, shear strength, Proctors, etc., are performed in our in-house laboratories in accordance with applicable procedures established by ASTM, AASHTO, CDOT, ACI, and other recognized agencies and associations. Geotechnical design and construction recommendations are developed based on extensive experience and rigorous state-of-practice engineering analyses. K+A typically provides post-report geotechnical engineering consultation through project design and construction phases.

ENGINEERING GEOLOGY



K+A performs engineering geology and geologic hazard studies required by county planning agencies as a prerequisite to land development. These studies are important for identifying geologic factors potentially impacting development such as expansive soils and bedrock, potentially unstable slopes, rockfall, debris flows, flooding, radon, and ground subsidence due to natural underground cavities and abandoned underground mine workings, and providing concepts for mitigating adverse geologic conditions.

ENVIRONMENTAL SERVICES



K+A provides a full range of environmental services to assist our clients with their due diligence, planning, and permitting needs. Environmental due diligence services include transaction screens, Environmental Site Assessments (ESAs), Modified Environmental Site Assessments (also known as Hazardous Materials Investigations), asbestos surveys, and services associated with underground storage tanks, landfills and remediation of hazardous wastes. Asbestos surveys are performed by AHERA-trained personnel certified by the Colorado Department of Public Health and Environment (CDPHE). Phase II Environmental Site Assessments include soil sampling, installation of monitoring wells, groundwater sampling, and soil vapor surveys. Underground storage tank services include tank registration, tank closure, site characterization, Corrective Action Plans; Voluntary Cleanup Program Representation, and Environmental Construction Management.

CONSTRUCTION MATERIALS TESTING & OBSERVATION/THIRD PARTY INSPECTIONS



K+A provides materials testing, observation, and third-party inspections during construction by engineering technicians fully qualified and experienced in various aspects of quality control and quality assurance observation and testing services for earthwork, concrete, reinforcing steel, masonry, structural steel, fireproofing and asphalt. Non-destructive testing (NDT) methods are used for structural steel, and NDT testing for structural evaluation of pavements is performed using a Falling Weight Deflectometer. For large projects, a field laboratory can be provided for quick turnaround of test results.



Established in 1989, Kumar & Associates, Inc. (K+A) is a consulting engineering firm providing services in the areas of geotechnical engineering, engineering geology, environmental sciences, and construction materials testing and observation/third party inspections. Our offices are located in Denver (HQ), Parker, Colorado Springs, Fort Collins, Glenwood Springs, and Summit County, Colorado.

The majority of our personnel possess from 10 to over 40 years of experience performing our services for a variety of projects, such as: building and land development, commercial/industrial facilities, transportation, office and hospitality structures, and higher education facilities.

FIRM PROFILE

GEOTECHNICAL ENGINEERING

- Geotechnical Engineering Studies for:
 - Structures
 - Transportation
 - Water Resources
- Construction on Moisture-Sensitive Soils, including Expansive Soils
- Pavement Thickness Design and Rehabilitation using M-E Pavement Design Technology
- Nondestructive Pavement Structural Evaluation Using Falling Weight Deflectometer (FWD)
- Embankment Dam and Reservoir Liner Designs

ENGINEERING GEOLOGY

- Geologic Hazards Identification and Mitigation Studies
- Geologic Mapping
- Unstable Slopes
- Rockfall and Landslides
- Debris Flows
- Subsidence Over Underground Cavities

CONSTRUCTION MATERIALS TESTING & OBSERVATION/THIRD PARTY INSPECTIONS

- Asphalt and Concrete Pavement Testing
- Building Foundation Observation
- Concrete Observation and Testing
- Concrete Maturity
- Construction Management Assistance
- Earthfill Placements and Compaction
- Fireproofing Material Observation and Testing
- Masonry Observation and Testing
- Utility Installation Observation
- Reinforcing Steel Observation and Testing
- Special Inspections: as required by ICC
- Structural Steel Observation and Testing
- Post Tension Observation
- Floor Flatness Testing
- Relative Humidity Testing
- Adhesive Anchor Observation
- Wood Framing Observation

ENVIRONMENTAL SERVICES

- Environmental Site Assessments (Phase I, II, III, MESA, Transaction Screens)
- Voluntary Cleanup Program Representation
- Discharge, Permitting, and Sampling
- Soil and Ground Water Investigations
- Soil Vapor Assessments and Mitigation
- UST/AST Investigations
- Remediation Construction Management
- Construction Dewatering Permitting and Treatment
- Asbestos Building Inspections and Contaminated Soils
- Spill Prevention Control and Countermeasures Plans
- Radon Testing
- Drinking Water Sampling
- Indoor Air Quality Assessments
- Regulated Building Material Surveys
- Environmental Design and Remediation
- CERCLA and RCRA Remedial/Facility Investigations
- CERCLA and RCRA Feasibility/Corrective Measures Studies
- Remedial Cost Estimating
- Remedial Systems Operation and Maintenance



For 29 years, Kumar & Associates, Inc. has strived to achieve and maintain a reputation as a company focused on the development of innovative solutions to unique problems that can be encountered on both routine and complex projects. Our geotechnical engineers and engineering geologists possess diverse expertise providing quality, state of the practice geotechnical engineering and engineering geology services during all stages of a broad range of projects.

GEOTECHNICAL ENGINEERING



GEOTECHNICAL ENGINEERING SERVICES

Our geotechnical engineering services include:

- Field and laboratory test results;
- Results of engineering analyses;
- Conclusions and recommendations

...based upon theory and state of the practice, linked with the practical and economic considerations of design and construction. After the report is prepared, our services frequently include geotechnical review of plans and specifications, consulting, and observation and testing during construction.

ENGINEERING GEOLOGY



ENGINEERING GEOLOGY CAPABILITIES

K+A's engineering geologists have many years of experience throughout Colorado and the Western U.S. Our services encompass initial site evaluations, studies for design, and evaluation of geology hazards and failures post construction, including but not limited to:

- Geologic Mapping
- Soil Nail and Tie-Back Design Services
- Rockfall Mitigation
- Debris, Mud Flows
- Mining Hazards and Subsidence



New technology, increased construction liability, and revised building code requirements all contribute to the importance of construction testing.

Kumar & Associates, Inc. recognizes the value of quality construction observation and maintains a reputation for accurate materials testing and recording. Our engineers and technicians have the expertise and experience to observe a construction project from the foundation through the framework to the roof.

CMT Construction Materials Testing and Observations/Third Party Inspections



CERTIFIED TECHNICIANS

K+A technicians are certified by **ACI, PTI, ICC (IBC), LabCAT, OSHA, NICET** and **WAQTC**.



CONSTRUCTION MATERIALS TESTING & OBSERVATION/THIRD PARTY INSPECTIONS CAPABILITIES

- **Asphalt and Concrete Pavement Testing:** Monitoring of temperatures, consolidation, subgrade preparation, finishing, protection, rideability, and aggregate gradation testing.
- **Building Foundation Observation:** Driven piles, drilled shafts, spread footings and less common systems such as post-tensioned slabs and helical piers.
- **Concrete Testing:** Slump, air content, unit weight, temperature and the fabrication of compressive strength specimens.
- **Concrete and Pavement Coring and Testing:** Perform 4", 6" and 8" cores, concrete and asphalt pavement coring, laboratory testing of cores using ASTM standards.
- **Construction Management Assistance:** Review of contractor submittals, i.e., pay requests, material approval, budget management, and troubleshooting.
- **Earthfill Placements and Compaction:** Including moisture and density testing.
- **Fireproofing Material Observation and Testing:** Thickness, bond strength and density testing in accordance to ASTM (E-705).
- **Masonry Observation:** Reinforcing dowels, reinforcing steel, lentels, joints, ties, anchors, CMU, mortar and grout.
- **Pipeline Testing:** Pipe placement, bedding, trench compaction, and patching of trench cuts.
- **Reinforcing Steel:** Placement observation and testing.
- **Special Inspections:** As required by UBC, ICC (IBC), and ICBO.
- **Special Materials Inspection:** Mixing and placement for lime-treated and cement-treated soils, geotextiles used for subgrade reinforcing, and base course materials.
- **Structural Concrete Observation and Testing:** Checking of forms, reinforcing steel placement, concrete placement and batch plant control.
- **Structural Steel Observation and Testing:** Field and shop bolted and welded connections.



K+A offers a variety of environmental services. We perform all services in accordance with the protocols of the Colorado Department of Transportation (CDOT), Occupational Safety and Health Administration (OSHA), Colorado Department of Public Health and Environment (CDPHE), American Society for Testing and Materials (ASTM), and U.S. Environmental Protection Agency (EPA). Each of our staff members is a trained and certified professional.

ENVIRONMENTAL SERVICES



ENVIRONMENTAL SERVICES

Remediation Planning, Implementation, and Operation

- Voluntary Cleanup Program Applications
- Brownfield Site Assessment
- CERCLA and RCRA Remedial/Facility Investigations (RI/RFI)
- CERCLA and RCRA Feasibility/Corrective Measures Study (FS/CMS)
- Remedial Construction Cost Estimating
- Remedial Pilot Testing and System Design
- Remedial Action Oversight/Construction Management
- Temporary Construction and Perpetual Dewatering Treatment System Design
- Remedial System Operation, Maintenance and Monitoring

Environmental Compliance

- Spill Prevention Control and Countermeasure Plans (SPCC)
- Compliance Audits
- Stormwater Pollution Prevention Plans (SWPPP)
- Temporary Construction and Permanent Dewatering System Permitting and Monitoring

Environmental Due Diligence

- Transaction Screens
- Phase I Environmental Site Assessments (ESA)
- Phase II ESA (Subsurface Investigations)
- Phase III (Remediation)
- Soil and Groundwater Investigations
- Vapor Intrusion Assessments
- UST/AST Spill Investigations

Industrial Hygiene Services

- Asbestos Building Surveys/Inspections
- Asbestos Contaminated Soils/CABI (Colorado Asbestos Building Inspections)
- Radon Testing
- Indoor Air Quality Assessments
- Regulated Building Material Surveys (PCBs, CFCs, mercury, electronic waste)



Kumar & Associates, Inc. (K+A) in-house laboratory testing is performed in accordance with applicable procedures by ASTM, AASHTO, ACI, US Army Corps of Engineers (USACE), CDOT, and other recognized agencies. Additionally, our laboratory is accredited by AASHTO, and USACE.

K+A implements a program of maintenance and calibration of equipment and lab facilities to confirm accurate construction testing.

LABORATORY SERVICES

CERTIFIED LABORATORY TECHNICIANS

K+A laboratory technicians possess diverse experience and expertise related to evaluation and testing of soils, aggregates, concrete, masonry, and asphalt. Our laboratory technicians are certified by **ACI**, **ICC (IBC)**, **LabCAT**, **WAQTC**, and **NICET**.



LABORATORY TESTING SERVICES

- Atterberg Limits Tests
- Classification of Soils
- California Bearing Ratio
- Natural Density and Moisture Content
- Gradation Analyses
- Hveem Stabilometer
- Chemical Stabilization Mix Designs
- Proctors (Moisture-Density Relationship)
- Swell-Consolidation
- Concrete Compressive Strength
- Masonry Materials Tests
- Asphalt Extractions, Gradations, Volumetrics
- Corrosivity
- Lottman



K+A provides a wide range of pavement evaluation services including nondestructive testing of pavements and pavement subgrades.

Our personnel have provided FWD services and/or utilized FWD data in pavement management applications and designs for roadways, parking lots, and airfields throughout the United States, including: Colorado, Arkansas, Kansas, North Dakota, Pennsylvania, South Dakota, Utah, and Wyoming.

PAVEMENT EVALUATION SERVICES



NONDESTRUCTIVE DEFLECTION TESTING AND PAVEMENT DESIGN SERVICES

Nondestructive testing services consist of pavement structural evaluation through the use of a Falling Weight Deflectometer (FWD). The FWD is a system for performing nondestructive testing of roadway, parking lot, and airfield pavements, both flexible and rigid. During testing, force is generated by dropping weights onto a set of buffer springs. The force is then transmitted to the pavement surface through a 12-inch diameter rigid plate. The FWD measures the elastic response of the pavement layers and underlying

subgrade through a set of seven deflection sensors placed at various offsets from the load source [impact load]. The impact loads, and resulting deflections, are used to determine the structural characteristics of the pavement layers and underlying subgrade materials.

The results of the FWD testing will be used to evaluate the following key structural aspects of an existing pavement:

- Pavement condition and load carrying capacity
- Uniformity of the pavement structure
- Strength characteristics of the individual pavement layers
- Resilient modulus, or subgrade strength, of the underlying subgrade materials
- Pavement deficiencies resulting from defective construction procedures
- Load transfer efficiency of joints and cracks in rigid pavements
- Detection of voids under existing pavements

Data collected from FWD testing as indicated above, and information resulting from the deduction of that data, are used to determine cost effective designs and solutions to existing and future pavements. The information, used in conjunction with AASHTO or applicable state or local pavement design guidelines and anticipated future traffic loading information, will provide the following pavement design and/or pavement management information:

- Estimated remaining life of the pavement
- Overlay requirements
- Reconstruction or new construction pavement sections

Building Projects



Prologis Park 70, Buildings 3, 4, 8, 9

Location: Aurora, Colorado
Client: Prologis Development Services, Inc.

Anschutz In-Patient Pavilion at Fitzsimons

Location: Aurora, Colorado
Client: University of Colorado Health Sciences Center

Education II/Academic Offices East Facility at Fitzsimons

Location: Aurora, Colorado
Client: University of Colorado Health Sciences Center



Expansion of Isle of Capri and Colorado Central Station

Location: Black Hawk, Colorado
Client: Parkhill-Ivins Architects, P.C.

High Pointe Office Complex

Location: Greenwood Village, Colorado
Client: Lankford & Associates

Centennial Promenade Shopping Center

Location: Arapahoe County, Colorado
Client: Opus Northwest, LLC

Proposed Northland Development

Location: Thornton, Colorado
Client: United Properties

Lockheed Facility, Centre Tech Business Park

Location: Aurora, Colorado
Client: Dueck Group of Companies

Foothills Recreation Center and Ice Arena

Location: Littleton, Colorado
Client: Foothills Park & Recreation District

Hilton Garden Inn at Meridian

Location: Douglas County, Colorado
Client: Denver South Hotel Partners, LLC

Interlocken-Omni Hotel and Conference Center

Location: Broomfield, Colorado
Client: Internet Hospitality Group

Numerous King Soopers Stores

Location: Throughout Colorado
Client: King Soopers, Inc.

GSA/FBI Headquarters Building

Location: Denver, Colorado
Client: Alex S. Palmer & Company

GSA/FDOT Office Building and Parking Structure

Location: Lakewood, Colorado
Client: Opus Northwest, LLC

US Customs House Parking

Location: Denver, Colorado
Client: General Services Administration

The Meridian Tower at the Landmark

Location: Greenwood Village, Colorado
Client: 7677 East Berry Associates, LP

1400 Wewatta

Location: Denver, Colorado
Client: Opus Northwest, LLC

Children's Hospital Colorado at Fitzsimons

Location: Aurora, Colorado
Client: Vanir CM c/o Children's Hospital Planning Department

Stapleton Redevelopment, Quebec Square and Northfield Retail Developments, Stapleton Town Center, and Infrastructure Development for 20 Residential Filings

Location: Denver, Colorado
Client: Forest City Stapleton

Denver Justice Center

Location: Denver, Colorado
Client: City & County of Denver

Invesco Field at Mile High

Location: Denver, Colorado
Client: HNTB

McData Corporate Campus, Phase I and II, Great Western Park East

Location: Broomfield, Colorado
Client: Opus Northwest, LLC

Civic Center Office Building

Location: Denver, Colorado
Client: DOTA/RNL Design

Isle of Capri, Casino and Expansion

Location: Black Hawk, Colorado
Client: Colorado Central Station Casino

Milestone at Castle Rock Shopping Center

Location: Castle Rock, Colorado
Client: Kornfeld Koslosky Properties, LLP

Medical Facilities



Banner Health - Skyline Medical Pavilion Addition/Expansion

Location: Loveland, Colorado
Client: Banner Health

Sunrise Community Clinic

Location: Greeley, Colorado
Client: Sunrise Community Health

Indian Peaks Medical Center (IPMC)

Location: Dacono, Colorado
Client: Pinkard Construction

St. Francis Medical Center - Ed and Nicu Additions, Engineering

Location: Colorado Springs, Colorado
Client: Centura Health
C/O RTA Architects

Fresenius Medical Arts Building

Location: La Junta, Colorado
Client: Archer Development, LLC

Avista Adventist Hospital and Medical Office Building II

Location: Louisville, Colorado
Client: The Neenan Company
c/o Centura Hospital

Anschutz In-Patient Pavilion, University of Colorado Health Sciences Center, Fitzsimons Campus

Location: Aurora, Colorado
Client: University of Colorado Hospital
Facilities Management

University Hospital Emergency Department Pavilion

Location: Denver, Colorado
Client: University Hospital
c/o Lantz-Boggio Architects

Pharmacy Building, University of Colorado Health Sciences Center

Location: Denver, Colorado
Client: University of Colorado Health Sciences Center

Dakota Ridge Medical Plaza

Location: Littleton, Colorado
Client: Lauth Property Group

Medical Office Building and Wellness Center

Location: Denver, Colorado
Client: Raw Land Solutions, LLC

Evan Army Hospital MRI Addition

Location: Fort Carson, Colorado
Client: Emerald C.M., Inc.

Mercy Medical Center Replacement Hospital

Location: Durango, Colorado
Client: Hammes Company

Saint Luke's Hospital

Location: Denver, Colorado
Client: Hensel Phelps

Saint Anthony West Hospital Campus, Denver Federal Center

Location: Lakewood, Colorado
Client: Hammes Company

Carbon Valley Medical Center, Phase I

Location: Firestone, Colorado
Client: Carbon Valley Medical Center

Centennial Medical Plaza Building

Location: Centennial, Colorado
Client: HCA Healthone, LLC

St. Mary Corwin, Main Hospital Expansion and Bed Tower Expansion

Location: Pueblo, Colorado
Client: Centura Health

Audubon Medical Campus

Location: Colorado Springs, Colorado
Client: Penrose Saint Francis

Rocky Mountain Cancer Center

Location: Littleton, Colorado
Client: The Neenan Company

Penrose Community Hospital Addition

Location: Colorado Springs, Colorado
Client: Penrose Community Hospital

Carbon Valley Medical Center, Phase I

Location: Firestone, Colorado
Client: Carbon Valley Medical Center

Parker Adventist Hospital Medical Office Building II

Location: Parker, Colorado
Client: Parker MOB II Owners, LLC

Westminster Medical Office Building

Location: Westminster, Colorado
Client: Centura Health

Golden Medical Office Building

Location: Golden, Colorado
Client: Centura Health Systems

Arvada Medical Office Building

Location: Arvada, Colorado
Client: Centura Health Systems

Children's Hospital, Fitzsimons Campus

Location: Aurora, Colorado
Client: Vanir Construction
Management

St. Francis Medical Center

Location: Colorado Springs, Colorado
Client: Penrose-St. Frances Hospitals

Lazzara Center for Oral-Facial Health

Location: Aurora, Colorado
Client: University of Colorado Health Sciences Center

Colorado Plains Medical Center Expansion

Location: Fort Morgan, Colorado
Client: Fort Morgan Community
Hospital Association c/o Regan
& Associates

University Hospital Addition

Location: Aurora, Colorado
Client: Jordy & Company

Arvada Family Health Care Center

Location: Arvada, Colorado
Client: Lutheran Medical Center

St. Thomas More Hospital Expansion

Location: Canon City, Colorado
Client: Centura Health

Country Hills Medical Office Building

Location: Thornton, Colorado
Client: GE Johnson Construction
Company

Sky Ridge Medical Center Sign

Location: Lone Tree, Colorado
Client: Artcraft Sign Company

Cherry Hills Medical Plaza

Location: Englewood, Colorado
Client: Hyder Construction



Platte Valley Medical Plaza Reunion Clinic

Location: Commerce City, Colorado
Client: Health Connect Properties, Inc.

Parker Adventist Hospital, Medical Surgical and Renovation Project

Location: Parker, Colorado
Client: Parker Adventist Hospital

DHHA Southwest Family Clinic

Location: Denver, Colorado
Client: Denver Health Medical Center
Materials Management

Craig Hospital Expansion and Renovation

Location: Englewood, Colorado
Client: Craig Hospital

Craig Hospital Addition

Location: Englewood, Colorado
Client: Hammes Company

Evans Hospital

Location: Fort Carson, Colorado
Client: J.J. Kirlin

Cedar Springs Hospital Addition

Location: Colorado Springs, Colorado
Client: Boulder Associates Architects

Parker Adventist Hospital Parking Garage and Addition

Location: Parker, Colorado
Client: Boulder Associates Architects

Wheat Ridge Animal Hospital

Location: Wheat Ridge, Colorado
Client: Vortex Real Estate Investment
C/O Hyder Construction

Littleton Adventist Hospital Radiation/Oncology Project

Location: Littleton, Colorado
Client: Portercare Adventist Health
System C/O FSB, LLC

UHS Centennial Peaks Hospital Addition

Location: Louisville, Colorado
Client: Boulder Associates Architects

Cheyenne Regional Medical Center-Pine Bluffs

Location: Pine Bluffs, Colorado
Client: Adams

Indian Peaks Medical Center (IPMC)

Location: Dacono, Colorado
Client: Pinkard Construction

Mckee Medical Center

Laboratory Renovation

Location: Loveland, Colorado
Client: Banner Health Development
& Construction

Colorado Health Medical Office Building

Location: Dacono, Colorado
Client: GE Johnson Construction
Company

Northern Colorado Medical Center, Laboratory Relocation Project

Location: Greeley, Colorado
Client: Banner Health, Design &
Construction Department

Mckee Medical Center – Cup 2 of 4 Revision

Location: Loveland, Colorado
Client: Banner Health Development &
Construction

Biolife Plasma Services Center – Longmont

Location: Longmont, Colorado
Client: W.D.S. Construction, Inc.

Sunrise Community Health, North Greeley Campus Facility

Location: Greeley, Colorado
Client: Consilium Partners

Proposed Medical Center at 2015 35th Avenue

Location: Greeley, Colorado
Client: RKMS Greeley, LLC

Lutheran Medical Center

Location: Wheat Ridge, Colorado
Client: Kiewit Building Group

Northern Colorado Medical Center- Cancer Center

Location: Greeley, Colorado
Client: Northern Colorado Medical
Center

Banner Health – Skyline Medical Pavilion Addition/Expansion

Location: Loveland, Colorado
Client: Banner Health Development &
Construction Department

Denver International Airport



West Expansion of Concourse A, Frontier

Location: Denver International Airport
Client: Wong Strauch Architects

Child Care Facility

Location: Denver International Airport
Client: Denver International Airport

Cellular Monopole Tower

Location: Denver International Airport
Client: Alvarado Construction, Inc.

Air Cargo Parking Lot

Location: Denver International Airport
Client: MacGregor-Wathen Construction

Module 4 West Parking Structure

Location: Denver International Airport
Client: Walker Parking Consultants

6th Runway and 6th Runway Vault Structure

Location: Denver International Airport
Client: CH2M Hill

Rental Car Facilities: Dollar Rent-A-Car, Advantage Rent-A-Car, Thrifty Car Rental, Alamo Rent-A-Car, and Avis Rent-A-Car

Location: Denver International Airport
Client: Coover-Clark & Associates

De-Icing Pad WA and DE, Geotechnical Engineering Study

Location: Denver International Airport
Client: Carter & Burgess, Inc.

Apron Expansion, Taxiway CN

Location: Denver International Airport
Client: Washington Airport Services

United Hangar

Location: Denver International Airport
Client: Phelps Program Management

Terminal Expansion Canopy

Location: Denver International Airport
Client: PCL Construction, Inc.

Westin Hotel

Location: Denver International Airport
Client: NBBJ West Limited Partnership

Expansion of Concourse

CR on DS East Apron

Location: Denver International Airport
Client: CH2M Hill

De-Icing Pad J

Location: Denver International Airport
Client: Washington Infrastructure Airport Services

Passenger Loading Bridge, West End Concourse B

Location: Denver International Airport
Client: Richard Weingardt Consultants

DIA Laboratory Management and Operations, 5 Year Contract

Location: Denver International Airport
Client: Denver International Airport

Concourse A, Gate A26 & A28 Relocation

Location: Denver International Airport
Client: Hensel Phelps Construction Company

Frontier Line Maintenance Hangar

Location: Denver International Airport
Client: Ghafari Associates, Inc.

Regional Jet Facility

Location: Denver International Airport
Client: MWH Americas, Inc.

Concourse C, East Expansion

Location: Denver International Airport
Client: Carter & Burgess, Inc.

CE304 Central Plant

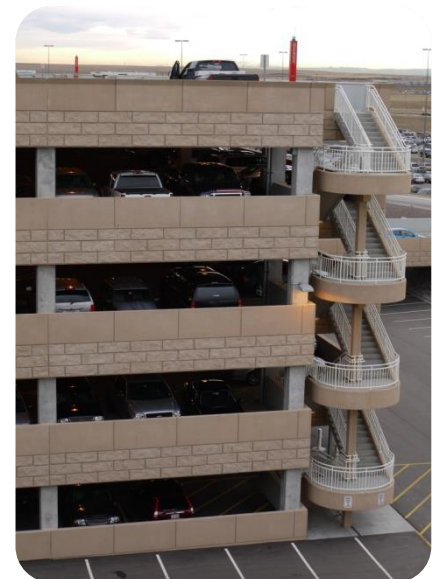
Location: Denver International Airport
Client: Hensel Phelps Construction Company

Hertz Parking Lot Expansion

Location: Denver International Airport
Client: Hertz Corporation

DEN Quality Assurance Laboratory, 2012-2017

Location: Denver International Airport
Client: Denver International Airport



Highway/Road Project Experience



CDOT, I-70 Overlay, Highway 2 to Colorado Boulevard

Location: Denver, Colorado
Client: CDOT

E-470 and I-70 Interchange Project

Location: Aurora, Colorado
Client: DMJM Harris

CDOT, I-70 East of Hidden Valley Exit

Location: Clear Creek County, Colorado
Client: CDOT

SH 58 and I-70, Phase I ESA

Location: Denver
Client: Clear Creek Developers, LLC
C/o Sullivan Group, Inc.
Carolyn Abahrams

US 285/Simms Street Interchange Project

Location: Jefferson County, Colorado
Client: Jefferson County Department of Highways and Transportation

Crystal Valley Parkway over Plum Creek

Location: Douglas County, Colorado
Client: Hartwig & Associates, Inc.

Sand Creek & C.P. Bridges at Smith Road

Location: Denver, Colorado
Client: URS Corporation

Tabernash Highway 40 Turn Lanes

Location: Grand County, Colorado
Client: Morrow & Sons, Inc.

E-470, Segment 4, Support Services

Location: Adams County, Colorado
Client: URS Corporation

Jefferson County Road & Bridge, Highway 126 Culverts Phase III, REC-10401

Location: Colorado
Client: Jefferson County Road and Bridge

State Highway 115 Widening

Location: Fremont, Colorado
Client: Rocky Mountain Materials & Asphalt

CDOT, I-25, US 36 HOV, Phase IV

Location: Adams County, Colorado
Client: CDOT

Highway 85 and Titan Road

Location: Denver County, Colorado
Client: RE Monks

Washington Street, 38th, Platte to I-70

Location: Denver, Colorado
Client: HNTB Corporation

CDOT Region 6, I-70 Resurfacing, IM 0703-268

Location: Denver, Colorado
Client: CDOT, Michael Klobnock

Vasquez Boulevard / I-70 Superfund Site

Location: Denver, Colorado
Client: Knight Piesold Consulting

CDOT, Broadway Viaduct Phase III

Location: Denver, Colorado
Client: CDOT, Jake Koenig

CDOT, Highway 36 Phase V

Location: Denver, Colorado
Client: Nolte Associates, John Tracy

CDOT, State Highway 7, 28th Street to US 287

Location: Denver, Colorado
Client: CDOT, Corey Stewart

CDOT, State Highway 36, STRO 362-017

Location: Denver, Colorado
Client: CDOT, Rick Gabel

I-25 and 144th Avenue Interchange

Location: Westminster/Thornton, Colorado
Client: Felsburg Holt & Ullevig

Front Street Flyover

Location: Castle Rock, Colorado
Client: Felsburg Holt & Ullevig

I-25, Bijou to Fillmore

Location: Colorado Springs, Colorado
Client: Wilson & Company

CDOT, State Highway 119 Widening

Location: Black Hawk, Colorado
Client: CDOT

CDOT, I-225, 6th Avenue to Colfax

Location: Lakewood, Colorado
Client: CDOT

Higher Education Project Experience



University of Colorado at Boulder

Visual Arts Complex

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Center for Community

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Atlas Building

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Law School Building

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Eaton Humanities/Woodbury Hall

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Auditorium Acoustic Renovation

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Macky Auditorium Distress Evaluation

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Farrand Hall

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Integrated Teaching and Learning Laboratory (ITLL)

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Storm Drainage & Roadway Removal & Improvements

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Regent Parking Structure

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Tissue Lab Project Chemical Engineering Building

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Campus Storm Water Drainage

Location: Boulder, Colorado
Client: CU Department of Facilities Management

University Memorial Center Expansion and Renovation

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Athletic Practice Field Lighting Towers

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Campus Bus Shelter

Location: Boulder, Colorado
Client: University of Colorado at Boulder

South Campus Tennis Complex

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Expansion of Environmental Health and Safety Center

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Steam Tunnel Improvements

Location: Boulder, Colorado
Client: Stanley Consultants, Inc.

Additions to Wardenberg Hall

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Police Building and Parking Garage Structure

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Parking Structure, Site 205

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Hale Sciences Building Renovation

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Addition to IMIG Music Building

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Renovation of Research Laboratory #3/3A

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Folsom Field Seating Addition

Location: Boulder, Colorado
Client: University of Colorado at Boulder

Libby Hall

Location: Boulder, Colorado
Client: University of Colorado at Boulder

FMRI Remodel at CINC

Location: Boulder, Colorado
Client: University of Colorado at Boulder, Department of Facilities Management



Higher Education Project Experience



Colorado School of Mines

Hill Hall Addition

Location: Golden, Colorado
Client: Colorado School of Mines

Student Recreation Center

Location: Golden, Colorado
Client: Colorado School of Mines

Center for Technology and Hearing

Location: Golden, Colorado
Client: Colorado School of Mines

Student Health Center Addition

Location: Golden, Colorado
Client: Colorado School of Mines



Colorado State University

Multi-Purpose Stadium

Location: Fort Collins, Colorado
Client: CSU Office of Facilities Management

As-Needed Materials Testing and Special Inspection Contract (2015)

Location: Fort Collins, Colorado
Client: Colorado State University Office of Facilities Management



Argos Tumor Research Center

Location: Fort Collins, Colorado
Client: Clark Construction Company, Inc

Diagnostics Medicine Center & Chiller Building

Location: Fort Collins, Colorado
Client: Colorado State University
c/o G.H. Phipps

Addition to Hazardous Waste Facility Bldg.

Location: Fort Collins, Colorado
Client: Colorado State University
Dept. of Facilities Management

Additions to Grounds Bldg., 05-011

Location: Fort Collins, Colorado
Client: Colorado State University
Dept. of Facilities Management

Agricultural Research Facility

Location: Fort Collins, Colorado
Client: Colorado State University

Microbiology Addition

Location: Fort Collins Colorado
Client: Hensel-Phelps Construction Company



Chemistry and Biological Sciences Lab, Colorado State University

Location: Fort Collins, Colorado
Client: Hensel-Phelps Construction Company

Chemistry and Biology Building Infrastructure

Location: Fort Collins, Colorado
Client: Colorado State University Office of Facilities Management

South Campus Utility Relocation

Location: Fort Collins, Colorado
Client: Colorado State University
Dept. of Facilities Management

Aggie Village and Eddy Hall Revitalization

Location: Fort Collins, Colorado
Client: Colorado State University Office of Facilities Management

Carriage House Apartments

Location: Fort Collins, Colorado
Client: Catamount Properties, LTD

West Parking Lot Construction, Colorado State University Diagnostics Medical Center

Location: Fort Collins, Colorado
Client: Dept. of Facilities Management
c/o Tom Moss Consulting

Utility Bid Package I, Engineering II Building

Location: Fort Collins, Colorado
Client: Colorado State University, Facilities Management

Chill National Weather Radar Antenna and Dome

Location: Greeley, Colorado
Client: Colorado State University
Dept. of Facilities Management

University of Northern Colorado

Butler Hancock Interior Renovation

Location: Greeley, Colorado
Client: University of Northern Colorado

Butler Hancock Addition

Location: Greeley, Colorado
Client: University of Northern Colorado

Handrail Maintenance Welding Inspections,

Location: Greeley, Colorado
Client: University of Northern Colorado

Higher Education Project Experience



University of Colorado at Colorado Springs

UCCS Village at Alpine Valley (First Year Experience Housing Facility)

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs

Parking Garage and Recreation Field

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs

Parking Lot (West of Parking Garage)

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs

Event Center

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs

Parking Structure Expansion

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs

Family Development Center

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs

Public Safety Sidewalks and Student Services Sidewalk Repair

Location: Colorado Springs, Colorado

Client: Wells & West General Contractors

National Cybersecurity Center Parking Lot

Location: Colorado Springs, Colorado

Client: University of Colorado at Colorado Springs, Facilities Services

Other Higher Education Projects

CU Denver Academic Building I

Location: Denver, Colorado

Client: University of Colorado Denver, Facilities Management

Auraria Higher Education Center Science Building Addition

Location: Denver, Colorado

Client: Auraria Higher Education Center

Metro State Colorado Student and Success Building

Location: Denver, Colorado

Client: Auraria Higher Education Center

CSU Pueblo Communication Equipment Shelter Expansion

Location: Pueblo, Colorado

Client: Apex Companies, LLC

Charis Bible Colorado Parking Garage

Location: Woodland Park, Colorado

Client: Andrew Womack Ministries

K-12 Educational Facilities



Northeast Jr. High School and Wyco Elementary School

Location: Adams County, Colorado
Client: Adams 12 Five Star Schools

Falcon Middle School and Falcon High School No. 3

Location: Colorado Springs, Colorado
Client: Falcon School District No. 49

Cherry Creek Elementary Schools 35, 36 and 37

Location: Englewood, Colorado
Client: Cherry Creek School District

Southwest Denver School

Location: Grant Ranch, Colorado
Client: Denver Public Schools

Steck, Teller, Garden Place, Monroe and Whittier Elementary Schools

Location: Denver, Colorado
Client: Denver Public Schools

Kullerstrand, Bear Creek and Fremont Elementary School Additions

Location: Jefferson County, Colorado
Client: Jefferson County Public Schools

Bradford, Mortenson, South Lakewood, Westwoods Ranch, Foothills, Secrest, Peyton, Elk Creek, Wilmot, West Jefferson and Zerger Elementary Schools

Location: Jefferson County, Colorado
Client: Jefferson County Public Schools

Additions to Harrison & Sierra High Schools

Location: Colorado Springs, Colorado
Client: Harrison School District #2

Aspen Valley High School

Location: Colorado Springs, Colorado
Client: Academy School District #20

DPS Stapleton II K-8

Location: Denver, Colorado
Client: M+O+A Architectural Partnership

Strasburg Middle School

Location: Arvada, CO
Client: Desperado Enterprises

Elementary Schools 15A and 15B

Location: Colorado Springs, Colorado
Client: Academy School District #20

New Early Childhood Learning Center

Location: Walsenberg, Colorado
Client: Huerfano School District RE-1

Northeast Elementary School Addition, North Elementary School, South Elementary School Addition, Henderson Elementary School Addition and Transportation Facility

Location: Brighton, Colorado
Client: Brighton School District

Conifer High School, O'Connell Middle School, Arvada High School and North Area Stadium, Evergreen High School Additions

Location: Jefferson County, Colorado
Client: Jefferson County Public Schools

St. Mary Academy Middle School

Location: Englewood, Colorado
Client: St. Mary's Academy

Berthoud High School Addition

Location: Berthoud, Colorado
Client: Thompson School District R2-J

Kent Denver School

Location: Denver, Colorado
Client: Denver Public Schools

Thomas Jefferson High School

Location: Denver, Colorado
Client: Denver Public Schools

Summerfield Elementary School

Location: Colorado Springs, Colorado
Client: Academy School District #20

Greeley West High School

Location: Greeley, Colorado
Client: Weld County School District

James Irwin Charter Elementary School/Field House

Location: Colorado Springs, CO
Client: James Irwin Charter School

Freedom Elementary School

Location: Colorado Springs, CO
Client: Colorado Springs School District 11

Thompson Middle School

Location: Loveland, Colorado
Client: Thompson School District



Water Related Projects



North Sterling Dam Rehabilitation

Location: Near Sterling, Colorado
Client: North Sterling Irrigation District

Prospect Lake Liner Design

Location: Colorado Springs, Colorado
Client: Colorado Springs Parks and Recreation

Miller Reservoir

Location: Commerce City, Colorado
Client: Muller Engineering/Denver Water and South Adams County

Jackson Reservoir Dam Rehabilitation

Location: Morgan County, Colorado
Client: W.W. Wheeler & Associates

Winter Park Ranch 500,000 Gallon Water Tank

Location: Fraser, Colorado
Client: Winter Park Ranch Water & Sanitation

South Adams County Water and Sanitation District Water Tank

Location: Adams County, Colorado
Client: Burns & McDonnell

Several Filings, Blackstone Waterline Trench Backfill

Location: Aurora, Colorado
Client: East Plains Metro District c/o Nolte Associates

Zone 1 Waterline Replacement, Quincy and Wadsworth to Kipling and Lehigh

Location: Jefferson County, Colorado
Client: Lakehurst Water & Sanitation District c/o Meurer & Associates

Children's Hospital Storm Sewer Line

Location: Aurora, Colorado
Client: Vanir Construction Management

Bobtail Street & Gregory Street Storm Sewer Improvements

Location: Black Hawk, Colorado
Client: American Civil Constructors

Lorson Ranch Roadways and Drainage Construction

Location: El Paso County, Colorado
Client: Lorson, LLC c/o Mallon Development Company

Rampart Dam Seepage Evaluation

Location: Woodland Park, Colorado
Client: Black & Veatch

Northwest Reservoir Dam, Cherokee Station Power Plant

Location: Denver, Colorado
Client: W.W. Wheeler & Associates, Inc.

2.0 MG Elevated Water Tank

Location: Thornton, Colorado
Client: Burns & McDonnell

Foothills Water Treatment Plant, Storage Tank

Location: Denver, Colorado
Client: Plains Engineering, Inc.

South Platte Waterline Project

Location: Adams County and Aurora, Colorado
Client: MWH Americas, Inc.

Hampden Avenue and Picadilly Road Waterline

Location: Arapahoe County, Colorado
Client: East Cherry Creek Water & Sanitation District c/o Meurer & Associates

Ketchum Storm Sewer Sanitary Sewer Chilled Waterline

Location: Boulder, Colorado
Client: CU Boulder Department of Facilities Management

Sangre De Cristo Road Reconstruction/Storm Sewer

Location: Jefferson County, Colorado
Client: Jefferson County Department of Highways and Transportation

East Tollgate Creek Drainage Improvements, Dove Hill Subdivision

Location: Arapahoe County, Colorado
Client: Olsson Associates

Subsurface Drainage Improvements, Westminster City Park

Location: Westminster, Colorado
Client: Westminster Department of Parks and Recreation



Sports and Recreation Facilities

Colorado Rapids Soccer Stadium

Location: Commerce City, Colorado
Client: Kronke Soccer Stadium, LLC

Jefferson County Stadium Improvements

Location: Lakewood, Colorado
Client: Jefferson County Public Schools

Coors Field

Location: Denver, Colorado
Client: Colorado Rockies Baseball Club

Adams County School District Stadium

Location: Thornton, Colorado
Client: Adams 12 Five Star Schools

Denver Nature & Science Museum Parking Structure

Location: Denver, Colorado
Client: Jirsa Hedrick & Associates, Inc.

Westerly Creek South Park, Stapleton Redevelopment

Location: Denver, Colorado
Client: EDAA, Inc.

Denver Zoo - Parking Structure, Carousel, and Several Exhibits throughout the Zoo

Location: Denver, Colorado
Client: Denver Zoological Foundation

Invesco Field at Mile High Broncos Stadium

Location: Denver, Colorado
Client: Metropolitan Football Stadium District

Jefferson County North Stadium Complex

Location: Jefferson County, Colorado
Client: Jefferson County School District

Prairie Gateway Sports Complex

Location: Commerce City, Colorado
Client: Kronke Sports Enterprises

Hyland Hills Water World Additions (Rides) and Golf Course

Location: Federal Heights, Colorado
Client: Hyland Hills Park & Recreation District

La Junta Sports Complex

Location: La Junta, Colorado
Client: Bucher Willis & Ratliff

Jefferson County Sports Complex, All Star

Location: Lakewood, Colorado
Client: M.A. Mortenson

Gold Crown Field House

Location: Lakewood, Colorado
Client: Gold Crown Foundation

Youth Center Building Addition, USAFA

Location: Colorado Springs, Colorado
Client: Lantz-Boggio Architects

Colorado School of Mines Student Recreation Center

Location: Golden, Colorado
Client: Colorado School of Mines

The Edge Ice Arena at West Meadows

Location: Littleton, Colorado
Client: Foothills Park & Recreation District

Jefferson County Sports Complex, All Star

Location: Lakewood, Colorado
Client: M.A. Mortenson

Buchanan Recreation Center

Location: Evergreen, Colorado
Client: Evergreen Park & Recreation District

South Platte Recreation Facility

Location: Adams County, Colorado
Client: Camp Dresser & McKee

Natorium Addition to Martin Luther King Recreation Center

Location: Denver, Colorado
Client: Harold Massop Associates Architects, P.C.

Montbello Recreation Center

Location: Denver, Colorado
Client: Michael Brendle Architects, P.C.

Ashland Recreation Center

Location: Denver, Colorado
Client: Christopher Carvell Architects, P.C.

Link Recreation Center

Location: Lakewood, Colorado
Client: City of Lakewood

Proposed Ray & Joan Kroc Community Center

Location: Aurora, Colorado
Client: Eikenhorst & Associates

Denver Family Golf Center

Location: Denver, Colorado
Client: Sear-Brown Group

Hudson Gardens

Location: Littleton, Colorado
Client: K.C. and E.L. Hudson

Willis Case Golf Course Club House

Location: Denver, CO
Client: City & County of Denver

Skyland Recreation Center

Location: Denver, Colorado
Client: Chamberlin Architects

Secrest Youth Center Skating Rink

Location: Arvada, Colorado
Client: North Jefferson County Park & Recreation District

Crestridge Recreation Center

Location: Highlands Ranch, Colorado
Client: Highlands Ranch Community Association

Montclair Recreation Center

Location: Denver, Colorado
Client: City and County of Denver

West Gold Meadows Park

Location: Jefferson County, Colorado
Client: J.F. Sato & Associates

Gold Crown Field House

Location: Lakewood, Colorado
Client: Gold Crown Foundation

Schaefer Athletic Complex

Location: Lakewood, Colorado
Client: Foothills Park & Recreation District

Curecanti National Recreation Center

Location: Gunnison, Colorado
Client: Washington Group Infrastructure Services

Coors Technology Center Recreation Area

Location: Golden, Colorado
Client: Drexel Barrell & Company

Thornton Recreation Center Master Plan

Location: Thornton, Colorado
Client: RNL Design

Skating Rink Addition

Location: Northglenn, Colorado
Client: Pinnacle Charter School

Superior South Recreation Center

Location: Superior, Colorado
Client: RG Consulting Engineers, Inc.

The Pinnacle at Winter Park

Location: Fraser, Colorado
Client: Cascade Engineering & Drainage, Inc.

Ridge at South Park Ice Arena

Location: Littleton, Colorado
Client: DSP Builders

Prairie Gateway Sports Complex

Location: Commerce City, Colorado
Client: Kronke Sports Enterprises

Ray & Joan Kroc Community Center

Location: Aurora, Colorado
Client: Eikenhorst & Associates

Colorado School of Mines Student Recreation Center

Location: Golden, Colorado
Client: Pinkard Construction Company

LEADERSHIP PERSONNEL



Narender (Ned) Kumar, P.E., F. ACEC | CEO/Chairman of the Board

Mr. Kumar is responsible for overall administration and management of geotechnical investigations for the design of structures, including commercial, industrial, public and private, buildings, highways, roads, bridges, airports, and associated structures. In water resources areas he has worked on several dams, lakes and appurtenant structures. Mr. Kumar has over **45 years of experience** in the field of geotechnical engineering, including transportation, land development and water resources.



Jim Noll, P.E. | President

Mr. Noll has over **35 years of experience** in geotechnical, geological and materials engineering. He has performed a wide variety of investigations and engineering services for projects including transportation; drainage/ waterways; retail, industrial and commercial buildings; water and wastewater treatment/distribution facilities; residential development; earthen dams; and mining operations. His background includes project management ranging from small-scale projects to large, multi-year contracts for various governmental agencies.



Wade Gilbert, P.E. | Principal/Manager of Engineering

Mr. Gilbert has over **30 years of experience** in geotechnical engineering related to design and construction of a wide variety of commercial, port, utility, and transportation facilities. He has been the project manager and lead geotechnical engineer for routine and complex geotechnical investigations and construction monitoring services related to highway and railroad bridges and embankments, deep and shallow foundations, large-mat foundations, flexible and rigid pavements, earth retaining structures, slope stabilization, and off-shore structures.



Steven L. Pawlak, P.E. | Principal/Project Manager

Mr. Pawlak has over **34 years of experience** in geotechnical, geological engineering. He has extensive experience in special mountain terrain problems such as landslide stability analysis, hillside grading and groundwater drainage. He is responsible for planning and management of geotechnical and geologic assessments on private and public projects throughout western Colorado. His background includes design of foundations on expansive, collapsible and soft soils.



Joshua L. Barker, P.E. | Associate Principal/Senior Geotechnical Engineer

Mr. Barker has more than **25 years of experience** in the geotechnical engineering field. He has extensive experience with both field and laboratory testing of concrete, soils and reinforcing steel. He also has experience on highways, bridge work, retaining walls, airfield runways and taxiways, and pavement rehabilitation projects. His experience includes transportation related experience includes testing and analysis of pavements through the use of a Falling Weight Deflectometer and structure foundations ranging from residences to multi-story commercial buildings.



Scott Hougard | Associate Principal/Construction Services Manager

Mr. Hougard has over **30 years of experience** in field engineering activities, including observation and testing of fill placement and pavement materials, concrete and masonry materials, observation of pier drilling and pile driving, observation and sampling of fireproofing, structural steel and steel concrete reinforcing, post-tensioning construction and floor flatness/levelness profile testing. Mr. Hougard is responsible for policies and procedures unique to the department to ensure that testing and inspection work in the field are accomplished with high quality and efficiently.



Dave Scott | Senior Associate/Laboratory and Safety Manager

Mr. Scott has **32 years of experience** in material testing and construction observation of soils, asphalt, concrete, masonry and concrete reinforcing steel. Mr. Scott is responsible for the day-to-day operations of the Denver Laboratory. He is responsible for implementing the Kumar & Associates safety program and coordinating the company training program for laboratory and field technicians. He also oversees the laboratory quality assurance programs and procedures, and assists in maintaining accreditation by AASHTO and validation by the US Army Corps of Engineers (USACE).



Duane P. Craft, P.E. | Associate Principal/Senior Engineer

Mr. Craft has over **22 years of experience** in the areas of geotechnical engineering, subsurface exploration, project management, and construction inspection and materials testing. He routinely performs analyses and develops recommendations for shallow and deep foundations, and earth retaining walls. He has extensive experience in design of flexible and rigid pavements, including subgrade stabilization methods utilizing geogrid, and chemical treatments such as lime, flyash and cement.



Richard Hepworth, P.E., P.G. | Senior Consultant

Mr. Hepworth has over **40 years of experience** as a registered professional engineer and has been practicing with consulting firms in Denver and overseas during that time. His projects include building foundation studies, dewatering and stabilization of soft soil deposits, expansive soil problems, Phase I site assessments, dam safety inspection and dam design, engineering geology reconnaissance and overall quality assurance. Other project experiences involve rehabilitation of old dams, high rise buildings, mining complexes, mine subsidence evaluations, mine waste impoundments, dewatering, seismic risk analysis, pavement analysis and design transmission lines, remedial repair of distressed structures, landslide analysis and stabilization and research on expansive and collapsing soils.

