



Professional Registrations

Geotechnical Engineer, California
No. 2259

Civil Engineer, California No. 44918

Education

MS Civil (Geotechnical) Engineering
California State University, Long
Beach

BS Geotechnical Engineering,
University of Arizona

Years of Experience: 29

SUMMARY

Mr. Reader has more than 29 years of experience performing geotechnical investigations for a wide range of projects in the Southern California area. His experience includes investigations for highway and bridge development, public works projects, commercial development, city redevelopment studies, landslide analysis and stabilization, water and wastewater treatment plants, hospitals, educational facilities, mid-rise structures, liquefaction, and seismicity. His specialties include soil dynamics, faulting and ground motion analysis, liquefaction, and computer programming. He has developed a number of sophisticated in-house geotechnical computer programs for use in pile capacity, ground motion, liquefaction, response spectra, and foundation settlement. Mr. Reader has extensive knowledge of piles and pile placement techniques. He has given seminars in the subject and is continually seeking updated information and ideas in order to for him to keep up with the latest developments and specifications.

MAJOR PROEJCT EXPERIENCE

Anaheim Region Transportation Intermodal Center (ARTIC) Anaheim, California: This multi-year project offers transportation services as an intermodal hub for several transit modes such as Amtrak, Metrolink, local and international buses, shuttles, bicycles, and support development. Significant features of ARTIC include a new Architectural Iconic Terminal Building reaching 117-feet high with an approximate footprint of 48,000 square feet. The project also features a Concourse Bridge extending from the southern end of the Terminal Building and over the current LOSSAN railroad corridor. Mr. Reader was the Principal-In-Charge for the materials testing for ARTIC project, which was performed in accordance with the UP Quality Management Plan and Caltrans Local Assistance Procedure Manual.

MTA Goldline Phase 2 Iconic Bridge Design/Build, Arcadia, California: Geotechnical Manager for the geotechnical investigation for this highly complex bridge supporting the Goldline Phase 2 light rail tracks. The bridge is founded on 10' CIDH piles and crosses simultaneously over SR-210 and the active Raymond Fault. Due to the Raymond Fault, detailed design consideration were incorporate including very high site accelerations and a lateral offset of 0.5 m (1.6 feet) between the 2 abutments.

Gerald Desmond Bridge Replacement Project, Port of Long Beach, California: Principal-In-Charge for this nearly \$1 billion Gerald Desmond Bridge replacement Design-Build project that will ensure the safety of commuters and truck drivers and protect southern California's important role as a major trading hub. Group Delta is the geotechnical engineering firm responsible for site investigation and geotechnical design of this project. The replacement bridge has a total length of more than 1.6 miles, including a 1,000-foot main span crossing the deep-water navigable channel, connecting the Port's middle and inner harbors, and vertical clearance of up to 200 feet. The main span includes two towers with a height of more than 500 feet, and when complete will be the first cable-stayed Caltrans structure. As Principal-In-Charge Mr. Reader was responsible for the geotechnical investigation, which included more than 150 mud-rotary borings to depths of up to 250 feet and more than 100 Cone Penetration Tests (CPT) to depths up to 150 feet. Group Delta is responsible for design engineering of the foundations which are groups of large

diameter Cast-in-Drilled-Hole (CIDH) ranging from 5 to 8 feet in diameter with lengths up to 230 feet, and for engineering of approach embankments and retaining walls.

Van Buren Bridge Replacement, Riverside County, California: Principal-In-Charge for the twin 600-foot CIP/PS box girder bridges crossing the Santa Ana River. Large 8-foot diameter CIDH piles with 7-foot diameter, 15-foot long rock sockets founded in the highly variable pinnacled granodiorite bedrock underlying the liquefiable recent alluvium soils. Due to irregular rock profile and boulders, a bid item boring was performed at each CIDH/rock socket location prior to pile construction to determine rock socket location/length.

Orange Line BRT Design-Build, Los Angeles, California: Principal-In-Charge responsible for providing geotechnical investigation reports for this 14-mile-long, \$320 million construction of the new Orange Line bus rapid transit system. The project included design of over 14 miles of new pavement supporting specialized articulated busses, two new structures and seven stations.

Wilshire Bus Rapid Transit Project, Los Angeles, California, Los Angeles, California: Mr. Reader was responsible for the geotechnical and geologic investigations for the development of dedicated bus lanes along a 13.2-mile stretch of Wilshire Boulevard between Los Angeles and downtown Santa Monica. This project involved the use of new 60- to 80-foot-long articulated buses.

Hollywood Fault Investigation, Various Clients, Hollywood, California: After the California Geologic Survey issued their preliminary Alquist-Priolo Earthquake Fault Study Zone for the Hollywood Fault, Mr. Reader was Principal-In-Charge for the series of fault evaluation studies as part of the redevelopment of the Hollywood area. The studies initially integrated data by conducting and evaluating the regional area with literature searches, geomorphic methods and historic topography and aerial photo analysis. After initial studies, the subsurface was explored by using seismic refraction velocity and reflection profiling, soil coring, trenching, numeric dating using radiocarbon and optical stimulus luminous methods and relative soil dating by evaluating the degree of weathering of paleosoils per the standard of practice for a fault study.

Big Tujunga Dam Seismic Retrofit, Los Angeles, California: Principal-In-Charge for the on-site materials evaluation and testing during construction of the retrofit. Group Delta established a full-time, on-site laboratory for testing of all construction materials including coring of the existing 1930 concrete for final materials evaluation. The project schedule required that all concrete placements be performed at night to limit the thermal expansion of the 80,000 cubic yards of new concrete.

San Vicente Dam Raise, San Diego, California: Principal-In-Charge for the crown jewel of the San Diego County Water Authority's Emergency Storage Project, the \$145 million San Vicente Dam Raise project. The dam was at 220 feet and stored up to 90,000 acre-feet of water at the beginning of the project. The dam raise project increased the height by 117 feet making it the tallest dam raise in the United States, and more than doubling the capacity of the reservoir by adding another 152,000 acre-feet.

Playa Vista Development, Marina Del Rey, California: Principal-In-Charge/Project Manager for this project where Group Delta is serving as the lead geotechnical engineer for the design and construction of the 1,100 acres, \$11 billion Playa Vista Development project in West Los Angeles. The project encompasses all of the major geotechnical aspects of development in coastal areas, including liquefaction analyses, soft ground settlement and surcharging, lateral spreading mitigations, ground acceleration analysis, permanent and temporary de-watering, deep foundations, mat foundations, MSE walls, utility design, and mass grading. He served as the Project Manager in charge of geotechnical



testing, materials testing and special inspections during the initial construction phases of the Playa Vista developments as well. Mr. Reader has been the prime geotechnical consultant for this environmentally sensitive project and has designed and implemented pile placement techniques which have saved Playa Vista clients millions of dollars in construction and inspection fees.

Little Tokyo Block 8, Los Angeles, California: Principal-In-Charge for the construction of two 20-story apartment towers that included an 850-unit, market-rate complex featuring a mix of condos and apartments, as well as 50,000 square feet of retail. The property known as Block Eight in Little Tokyo was a parking lot south of Second Street between Los Angeles and San Pedro Streets in downtown Los Angeles. Group Delta completed a foundation investigation and provided design level recommendations

City of Rancho Palos Verdes On-call Geotechnical Engineering and Engineering Geology, Rancho Palos Verdes, California: Project Manager for this city-wide on-call contract which Group Delta has maintained since 2000. The contract has involved geotechnical investigations city-wide for storm drains, water lines, sewers, and pavement, as well as emergency response for flood damage to streets and storm drains.

Los Angeles State Historic Park, Los Angeles, California: Principal-In-Charge for the Los Angeles State Historic Park, a 32-acre parcel located north of downtown Los Angeles. The continued development of the park included a welcome pavilion, restroom building, roundhouse plaza, turntable stage, pedestrian bridge, maintenance building, concession stand, parking lots, storytelling center, pathways, parking lots, hardscape, earthen mounds and landscaping.

Exposition Line LRT Phase 2 Design-Build, Los Angeles, California: Mr. Reader was responsible for providing geotechnical investigation reports for this 8-mile-long, \$600 million extension of the Exposition Line. The project includes six structures, over 5 miles of soundwalls and retaining walls, six stations, and the materials and geotechnical analysis of the Kenter storm drain tunnel, a 1930s masonry tunnel below a portion of the new LRT alignment.

Pasadena Gold Line LRT, Pasadena, California: Serving as Principal-In-Charge, Group Delta provided geotechnical investigation reports for each of the 10 segments and the 13 stations for this \$300 million project. Particular geotechnical challenges for this project included the design of a box structure in Highland Park and the depressed section through Old Town Pasadena. The box structure in Highland Park was in an area of high groundwater and limited area for excavation.

MetroLink Phase II, On-Call Geotechnical Services, California: Principal Engineer for the geotechnical investigations for various phases of the on-going design and construction of MetroLink, Phase II.

On-Call Inspection and Materials Testing, Caltrans District 7, Los Angeles, California: Project Manager responsible for on-call inspection and materials testing services for Caltrans District 7 (Los Angeles and Ventura Counties). Duties included observation and testing of fill placement and pavement construction, as well as laboratory testing for materials acceptance. In addition, Group Delta provided materials testing for the project in our in-house, Caltrans Certified Materials Testing Laboratory.

Terminal Island / Ocean Boulevard Interchange, Port of Long Beach, Long Beach, California: Project Manager for the geotechnical investigation and development of geotechnical recommendations for the design of the proposed roadway and bridges. The Port of Long Beach, in cooperation with the California Department of Transportation (Caltrans), constructed a new traffic interchange to replace the existing Ocean Boulevard / Terminal Island Freeway intersection on Terminal Island in the City of Long Beach.



SR-22 Design-Build Improvements Project, Orange County, California: Principal-In-Charge responsible for the geotechnical investigation and preparation of preliminary geotechnical reports for 34 bridges along the recently completed SR-22 improvements project which included construction of auxiliary lanes, car pool lanes, retaining walls, soundwalls, and bridge widening and new bridge construction. During construction, Group Delta provided quality control testing of soil, concrete, and asphalt to the program manager, Parsons Transportation. Group Delta reviewed all geotechnical submittals by the Design-Build Contractor for compliance with Caltrans requirements and provided geotechnical support to the program manager for OCTA.

Interstate 5 Freeway Widening, Orange County, California: Project Geotechnical Engineer for the geotechnical investigation of the widening of the I-5 Freeway from Fourth Street to Santiago Creek in Santa Ana, including an intricate HOV network. The project included 12 structures, and over 10,000 feet of soundwalls and retaining walls.

Los Angeles Community College District Harbor Community College On-Call Geotechnical Engineering and DSA Materials Inspection/Testing: Principal Geotechnical Engineer for on-call work for this large Community College District. Projects have included:

- Library/Learning Center – geotechnical and DSA materials testing - \$8 million
- North and South Parking Structures - \$50 million – first D/B structures at HCC
- Solar Collecting Photo-Voltaic Support Structures

Los Angeles Unified School District: Geological Hazard Reports and Geotechnical Investigations for 18 School Sites, Los Angeles, California: Principal Geotechnical Engineer for this project where Group Delta performed geologic and geotechnical investigations that included new school campuses, new classroom buildings, building addition, parking lots, and underground parking structures. All of the 18 school sites investigated are located in Los Angeles County. The geologic hazard reports address the requirements of Title 24 of the California Code of Regulations and the California Division of Mines and Geology requirements for California Public Schools, Hospitals, and Essential Services Buildings, including a determination of expected ground motions, and evaluation of the potential for fault rupture, soil liquefaction, lateral spreading, ground lurching, seismic compaction, seismic slope stability and other geologic hazards. The geotechnical investigation report included subsurface exploration, laboratory testing, engineering analysis and recommendations for site grading, excavation, shoring, foundation design, retaining walls and pavements and slabs.

Robert F. Kennedy Community Schools, Former Ambassador Hotel Site, Los Angeles, California: Principal-In-Charge for the redevelopment of the original Ambassador Hotel / Coconut Grove site, located west of downtown Los Angeles. The 23.8-acre property is currently being graded to accommodate a \$575 million integrated campus to be named the Robert F. Kennedy Community Schools. The project is the most expensive facility built by the Los Angeles School District, and includes an 800-student K–3 School, 1000-student Middle School and a 1000-student High School. Group Delta developed design level recommendations to incorporate a 36 foot high soil nail wall into one of the building walls for the proposed multi story building structure. The soil nail wall was designed to retain the earth, and to be structurally separated from the building wall, in order to eliminate the large unbalanced seismic earth pressures on the building from a conventional retaining wall. The wall was designed to be stable with minimal movements for the Upper Bound Earthquake (975 year return period) with peak ground accelerations of 0.73g. This is the first school project under Division of State Architect (DSA) review that included incorporation of a soil nail wall into a building structure.

