

DAVID HANSEN, M.Sc., PE, GE

Associate Engineer



PROFESSION

Geotechnical Engineer
Civil Engineer

REGISTRATIONS

Registered Civil Engineer –
State of California
Registered Geotechnical
Engineer - State of California

EDUCATION

M.S. Civil Engineering
(Geotechnical Emphasis) –
California State University,
Long Beach
B.S. Geological Engineering –
University of Arizona, Tucson

PROFESSIONAL EXPERIENCE

GMU Geotechnical, Inc.
(2012-Present)
Associate Engineer,
Rancho Santa Margarita, California

Petra Geotechnical, Inc.
(1991-2012)
Senior Staff Engineer to Associate
Engineer

Kenneth G. Osborne & Associates
(1988-1990)
Staff Engineer

Converse Consultants-Irvine
(1987-1988)
Field Soils Technician to Staff
Engineer

AFFILIATIONS

ASCE - Member

SUMMARY OF EXPERIENCE & QUALIFICATIONS

Mr. Hansen has over 30 years of progressively responsible positions, from field soils technician to associate engineer and project manager. He has managed and completed multiple projects on time and on budget. Mr. Hansen is experienced with planning, implementing, and supervising geotechnical investigations, percolation investigations, landslide investigations, and residential distress evaluations for a wide variety of commercial and residential projects ranging from large single-family custom home lots to large scale mass-grading projects and master planned communities. He has also performed engineering analysis and prepared geotechnical investigation reports for numerous educational and medical facilities. He has provided services to a wide range of clients including homeowners, homeowners associations, developers, architects, water districts, and school districts throughout Southern California, and has excellent knowledge of local and state regulations and building codes in providing third-party geotechnical review and technical advice for the building departments of several southern California cities. Selected types of projects representative of Mr. Hansen's experience are listed below:

- Residential Development Projects/
Master Planned Communities
- Apartment Sites
- Retirement Communities
- Luxury Custom Home Projects
- Commercial Development Projects
- Hotels
- Churches and Religious Facilities
- Educational Facilities
- Medical Buildings
- Recreational Facilities and Sportsparks
- Water Resource Projects
- Onsite Sewage Absorption System Design Reports
- Mechanically Stabilized Earth (MSE) Walls
- City Geotechnical Consultant and Third-Party Review

GEOTECHNICAL ENGINEERING

RESIDENTIAL DEVELOPMENT PROJECTS/MASTER PLANNED COMMUNITIES:

- Moulton Ranch, Brock Homes, Nellie Gail, Laguna Niguel, California – Project Geotechnical Engineer – Geotechnical investigation and design for residential tract (400+ homes, park sites)
- San Joaquin Hills Residential Development, S&S Development, Laguna Niguel, California - Project Geotechnical Engineer – Geotechnical investigation and design for residential tract (500+ homes, recreation centers, park sites)
- Alberhill Ranch, Castle & Cooke Development, Lake Elsinore, California California - Lead Geotechnical Engineer - Geotechnical investigation and design for major master planned community (1200+ homes, water reservoirs, recreation centers, park sites), geotechnical engineering issues such as hard rock, blasting, and rockfall issues.
- Bridlewood Estates, Avalon Homes, Yorba Linda, California - Lead Geotechnical Engineer - Oversight of geotechnical engineering for rough and precise grading and residential development, (400+ homes, recreation centers, park sites), geotechnical engineering issues such as landslide mitigation and highly expansive and corrosive soils.
- Sierra Peak, Capital Pacific Homes, Corona, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and residential development (450+ homes, recreation centers, park sites), geotechnical engineering issues such as landslide mitigation, rockfall, and geogrid-reinforced slopes.
- Amalfi Hills Residential Development, S&S Development, Yorba Linda, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and residential development (600+ homes, recreation centers, park sites), geotechnical engineering issues such as landslide mitigation and highly expansive and corrosive soils.
- Aurora, William Lyon Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (90 attached homes, pocket parks).
- Aubergine, TriPointe Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (66 detached homes, pocket parks).
- Aria, Phases 1 and 2, Tri-Pointe Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (151 attached homes, pocket parks).

- Viridian, Tri-Pointe Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (72 detached homes, pocket parks).
- MR-18, Warmington Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (97 detached homes, pocket parks).
- Reverie, William Lyon Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (118 detached homes, pocket parks).
- Topaz, The New Home Company, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (25 detached homes, pocket park).
- Vida, Pulte Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (66 attached homes, pocket parks).
- Alma, Pulte Homes, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (66 detached homes, pocket parks).
- Azure, The New Home Company, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (80 attached homes, paver courtyards, pocket parks).
- Cobalt, The New Home Company, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (36 multi-family, three-story attached homes, pocket park).
- Sterling, The New Home Company, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and residential development (63 detached homes, MSE retaining wall, pocket park).

APARTMENT SITES:

- Sendero Bluffs Apartments, Western National Properties, Sendero, Rancho Mission Viejo, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development.

- Esencia Sur Apartments, Western National Properties, Esencia, Rancho Mission Viejo, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development.
- Esencia Norte Apartments, Western National Properties, Esencia, Rancho Mission Viejo, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development.

RETIREMENT COMMUNITIES:

- Sun Lakes Master Planned Community, Presley Homes, Banning/Beaumont, California - Lead Geotechnical Engineer - Geotechnical investigation and design for major master planned community (1500+ homes, 18-hole golf course, country club, shopping centers), geotechnical engineering issues such as hard rock, blasting, hydro-collapsible alluvial soils.
- Reata Glen Continuing Care and Retirement Center, Sendero Area, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development (3-story apartment complex with underground parking structure, multi-story condominiums, townhomes, recreation center), geotechnical engineering issues such as highly expansive and corrosive soils.

LUXURY SEMI-CUSTOM AND CUSTOM HOME PROJECTS:

- Artisan I & II, William Lyon Homes, Covenant Hills, Ladera Ranch, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development (29 custom homes and exterior improvements), geotechnical engineering issues such as highly expansive and corrosive soils.
- Coral Crest and Coral Canyon, The New Home Company, Crystal Cove, Newport Coast, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development (28 custom homes and exterior improvements), geotechnical engineering issues such as expansive and corrosive soils, deep fills.
- Sky Ranch, The New Home Company, Covenant Hills, Ladera Ranch, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development (28 custom homes and exterior improvements), geotechnical engineering issues such as highly expansive, corrosive soils, post-tension foundations, and deepened foundations for slope setback issues.
- Villa Del Lago, Pelican Crest, Newport Coast, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development (large custom home complex with main residence, guest/pool house, pool, lake with bridge

and waterfall, equestrian barn and arena, tennis court), geotechnical engineering issues such as highly expansive, corrosive soils, deepened foundations for slope setback issues.

- The Strand at the Headlands, Dana Point, California - Lead Geotechnical Engineer - Geotechnical investigations and designs for precise grading and site development (multiple custom home sites), geotechnical engineering issues such as expansive soils, shoring, deepened foundations for slope setback issues, evaluation of influence of construction on existing MSE walls).
- Crystal Cove, Newport Coast, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigations and designs for precise grading and site development (multiple custom home sites), geotechnical engineering issues such as expansive soils, shoring, deepened foundations for slope setback issues).
- Emerald Bay, Laguna Beach, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigations and designs for precise grading and site development (multiple custom home sites), geotechnical engineering issues such as expansive soils, shoring, hard rock conditions.
- 2 Via Terracaleta, Coto De Caza, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development (9 custom homes, access roadways, and exterior improvements), geotechnical engineering issues such as expansive soils, slope stability issues.

COMMERCIAL DEVELOPMENT PROJECTS:

- Del Prado Mixed-Use Development, Pacific Coast Highway, Dana Point, California - Lead Geotechnical Engineer – Geotechnical investigation and design for precise grading and site development - Two 4-story mixed-use buildings over 2-story subterranean parking structures. Design included mat foundation design, spread footing design, shoring design, and permanent retaining wall design.
- Sendero Gateway Marketplace, Western National Properties, Sendero, Rancho Mission Viejo, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – retail buildings , gas station, grocery building. Design included mat foundation design, spread footing design, retaining wall design
- The Gathering at Los Patrones Retail Site, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Two self-storage buildings, three tilt-up retail buildings. Design included mat foundation design, spread footing design.
- Capistrano Mazda and Volkswagon Dealerships, Valle Road, San Juan Capistrano, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise

grading and site development – New showroom buildings and parking. Design included foundations for highly expansive soils.

CHURCHES AND RELIGIOUS FACILITIES:

- Gloria Dei Lutheran Church, Stonehill Drive, Dana Point, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Sanctuary, Preschool/Administration building, gymnasium. Design included mat foundation design, spread footing design, deepened foundations, retaining wall design, soldier pile wall.
- St. Michaels Abbey, Silverado Canyon Road, Silverado Canyon, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development – Hydro-arch bridges, Monastery, church, chapel, administration building, school, and gymnasium. Design included mat foundation design, spread footing design, retaining wall design, and onsite sewage absorption system design.

EDUCATIONAL FACILITIES:

- Engineering Building, California Polytechnic University at Pomona, California – Project Geotechnical Engineer - Geotechnical investigation and design for remedial grading and site development – Design included, settlement analysis, spread footing design, retaining wall design.
- Parking Structure and Engineering Building, California State University Northridge, California – Project Geotechnical Engineer - Geotechnical investigation and design for remedial grading and site development – Design included settlement analysis, liquefaction analysis, foundation design.
- Child Care Facility, Naval Air Weapons Station, Point Magu, California – Project Geotechnical Engineer - Geotechnical investigation and design for remedial grading and site development – Design included, liquefaction analysis, remediation of adverse shallow groundwater conditions, settlement analysis, foundation design.
- Chemistry Building, University of California, Irvine – Project Geotechnical Engineer - Geotechnical investigation and design for remedial grading and site development – Design included settlement analysis and deep foundation design.
- Rancho Mission Viejo Joint-Use Pavilion, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Geotechnical design for joint-use gymnasium and community building with OSHPD compliance

MEDICAL BUILDINGS:

- The Orchards Assisted Living and Skilled Nursing Facility, Reata Glen, Sendero Area, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for rough and precise grading and site development, geotechnical engineering issues such as OSHPD compliance, highly expansive and corrosive soils.

RECREATIONAL FACILITIES AND SPORTSPARKS:

- Belmont Plaza Revitalization, Olympic Plaza, Long Beach, California - Lead Geotechnical Engineer - Geotechnical investigation and design for remedial grading and site development – Geotechnical design for temporary Olympic pool and stadium, geotechnical engineering issues such as shallow groundwater and liquefaction.
- Bonita Canyon Synthetic Turf Fields - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Geotechnical design for sportspark complex with synthetic fields – baseball fields, tennis courts, recreational pool, and community building. Infiltration design of subsurface field drainage system.
- Newport Beach Country Club – Pacific Coast Highway, Newport Beach, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Geotechnical design for new country club recreation building, swimming pool, tennis courts, townhome and access roadways.
- Oso Creek Trail, Forbes Road, Laguna Niguel, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development. Geotechnical design of retaining walls and permeable pavement systems.
- Hilltop Club – Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Geotechnical design for recreational facility with two community buildings, recreational pool and spa, bocce ball courts. Design included post-tension foundation design and retaining wall design.
- Esencia Sportspark – Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development – Geotechnical design for sportspark complex with synthetic fields – baseball fields, tennis courts, recreational pool, and community building. Infiltration design of subsurface field drainage system.

HOTELS:

- Hampton Inn and Suites, Dupont Drive, Irvine, California – Project Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development, geotechnical engineering issues such as collapsible soils, expansive and corrosive soils.
- The Wave Resort, Pacific Coast Highway, Dana Point, California – Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and site development, geotechnical engineering issues such as bedrock/fill transitions, hard rock conditions, highly expansive soils, shoring, and impact on stability of existing Soil Nail wall.

WATER RESOURCE PROJECTS:

- 30-inch San Juan Creek Effluent Transmission Main Replacement, Moulton Niguel Water District, San Juan Capistrano, California - Lead Geotechnical Engineer - Geotechnical investigation and design for replacement of main effluent line below San Juan Creek. geotechnical engineering issues such as deep shaft excavation and shoring, micro-tunneling, dewatering.
- La Sienna Mainline Replacement Project, Moulton Niguel Water District, Laguna Niguel, California - Lead Geotechnical Engineer - construction oversight of water line removal and replacement.
- Esencia PA-2 Zone B Pump Station, Santa Margarita Water District, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for precise grading and construction. geotechnical engineering issues such as bedrock/fill transitions, soldier pile retaining wall design.
- Middle Chiquita Canyon Water Facilities, Santa Margarita Water District, Chiquita Canyon, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for installation of main transmission lines, geotechnical engineering issues such as bedrock/native soil transitions, shallow groundwater, shoring, dewatering
- La Paz/Moulton PW System Reconfiguration Project, Moulton Niguel Water District, Laguna Hills, California - Lead Geotechnical Engineer - construction oversight of water line removal and replacement.
- Upper Salada Lift Station Site Expansion and Generator Replacement, Moulton Niguel Water District, Niguel Road, Laguna Niguel, California - Lead Geotechnical Engineer - Geotechnical investigation and design for expansion of site and installation of new generator and retaining walls.

- 2016-2017 Reservoir Management Systems Replacement Project, Moulton Niguel Water District, Aliso Viejo, Laguna Niguel, Mission Viejo, California - Lead Geotechnical Engineer - construction oversight of precise grading and installation of new Chemical Facility buildings and associated water line removal and replacement.
- 2017-2018 Reservoir Management Systems Replacement Project – Phase 2, Moulton Niguel Water District, Aliso Viejo, Laguna Niguel, Mission Viejo, California - Lead Geotechnical Engineer - construction oversight of precise grading and installation of new Chemical Facility buildings and associated water line removal and replacement.

ONSITE SEWAGE ABSORPTION SYSTEM DESIGN PROJECTS:

- Iacono Residence, Rose Canyon Road, Trabuco Canyon, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for onsite sewage absorption system design with shallow rock concerns.
- Ramsey Residence, Jackson Ranch Road, Santiago Canyon, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for onsite sewage absorption system design.
- St. Michaels Abbey, Silverado Canyon Road, Silverado Canyon, Orange County, California - Lead Geotechnical Engineer - Geotechnical investigation and design for secondary sewage treatment plant and onsite sewage absorption system design.

CITY GEOTECHNICAL CONSULTANT/THIRD PARTY REVIEW:

- City of Buena Park (2005-2011): Review of geotechnical reports, general geotechnical consultation, Public Works project design and geotechnical and materials inspection.
- City of Mission Viejo (2005-2011): Review of geotechnical reports, general geotechnical consultation, Public Works project design and geotechnical and materials inspection.
- City of Laguna Niguel (2012-Present): Review of geotechnical reports, general geotechnical consultation.
- City of Chino Hills (2012-Present): Review of geotechnical reports, general geotechnical consultation.

GEO-STRUCTURAL ENGINEERING

MECHANICALLY STABILIZED EARTH (MSE) WALLS:

- La Chance Residence, Via Colinas, Coto De Caza, County of Orange, California: Design and construction oversight of 8- to 12-foot-high MSE wall to support rear yard improvements.
- Topaz Residential Development, MR30, The New Home Company, Esencia, Rancho Mission Viejo, Orange County, California - Lead Geotechnical Engineer - Design and construction oversight of 8-foot-high MSE wall to support side yard improvements.
- Private Residence, Waves End, Crystal Cove, Newport Coast, County of Orange, California: Design and construction oversight of six tiered 4- to 8-foot-high MSE walls to support rear yard improvements.

REDI-ROCK GRAVITY WALLS:

- El Camino Real Wall, City of San Juan Capistrano, California: Design and construction oversight of 12- to 18-foot-high stacked gravity block wall to support El Camino Real Road.
- St. Margaret's Episcopal Church Parking Lot, San Juan Capistrano, California: Design and construction oversight of 10- to 12-foot-high stacked gravity block wall to support Ortega Highway.

PROJECT AWARDS

The following project awards are projects on which Mr. Hansen served a primary role in either the geotechnical engineering design or management of the project.

- Project Award – APWA 2014
 - Belmont Revitalization Project and Temporary Pool, Long Beach
- Project Award– APWA 2014
 - El Camino Real Wall, San Juan Capistrano
- Outstanding Bikeways and Trails Project – ASCE 2015
 - Oso Creek Multi-use Trail
- Outstanding Urban or Land Development Project – ASCE 2016
 - Esencia Residential Development, Rancho Mission Viejo
- Community Improvement Project of the Year – ASCE 2018
 - Rancho Mission Viejo Joint-Use Pavilion, Rancho Mission Viejo