PERSONNEL QUALIFICATIONS

Ariel Suselo | Associate III

EDUCATION

- Bandung Institute of Technology
  - Bachelor of Science, Civil Engineering, 2011
  - Master of Science, Civil Engineering, 2012
- University of Texas at San Antonio
  - Doctor of Philosophy, Civil Engineering, 2021

PRACTICE AREAS

- Nondestructive Evaluation
- Condition Assessment
- Structural Analysis/ Computer Modeling
- Bridges and Civil Infrastructure
- Instrumentation/Load Testing

REGISTRATIONS

- ACI Nondestructive Testing Specialist - Concrete Strength
- NHI Course 130055 - Safety Inspection of In-Service Bridges
- Professional Engineer in TX
- Transportation Worker Identification Credential

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- Structural Engineers Association of Texas (SEAoT)

TECHNICAL COMMITTEES

- ACI 228 and ACI 369

CONTACT

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EXPERIENCE

Since joining WJE, Ariel Suselo has been involved in various condition assessments, evaluation, and repair/rehabilitation designs of existing structures, including concrete, steel, and wood. Dr. Suselo specializes in applying nondestructive evaluation (NDE) technologies, including but not limited to mechanical wave/vibration, electromagnetic, and electrochemical-based techniques utilizing multimethod approaches.

Prior to joining WJE, Dr. Suselo worked as a research assistant at the University of Texas at San Antonio, where he contributed to several sponsored research projects, including the calibration of concrete column nonlinear behavior, low-cycle fatigue test of high-strength reinforcing bars, and image-based analysis for concrete column damage assessment. Before and during his graduate studies, he accumulated more than five years of experience in engineering and laboratory services, including the application of NDE technologies, performance-based structural analysis and design, load testing, instrumentation, vibration analysis, and construction material testing.

REPRESENTATIVE PROJECTS

Nondestructive Evaluation

- Historical Buildings Reuse - Abilene, TX and Port Arthur, TX: As-built condition evaluation on concrete structure and foundation
- Schools, Bridges, Light-Trail Transit Stations, and Breakwater Structures - TX and WA: Cover survey of concrete slab on ground/bridge deck
- Parking Garages - MS and TX: As-built condition of post-tensioned tendon layout of elevated slab/beam
- Office Buildings, Parking Garages, and Wastewater Treatment Plants in TX: Internal void assessment under concrete slab-on-ground, wall, post-tensioned (PT) beam-column joint, inverted-T bent cap
- Various Structures - TX: Verification/assessment of deep foundation depth/quality/reinforcement detailing
- Port Structure - Bali, Indonesia: Concrete homogeneity and resistivity; reinforcing bar layout, and corrosion potential *

Condition Assessment

- Parking Garages - Houston, TX: Visual condition assessment on precast and composite structures
- Condominium and Turbine Foundation - Houston, TX: Evaluation of fire-damaged concrete
- George Bush Intercontinental Airport Utility Tunnel - Houston, TX: Visual condition assessment and crack mapping
- Apartment Complex - Houston, TX: Visual assessment and relative elevation measurements of wood-framed structures

Structural Analysis/Computer Modeling

- Turbine Foundation Structure - Houston, TX: Design of post-installed anchor for embedded steel plate replacement
- George Bush Intercontinental Airport Utility Tunnel - Houston, TX: Limited structural assessment on concrete tunnel wall under hydrostatic pressure
- Pennzoil Place - Houston, TX: assessment of steel rail support structure
- Electrical Vault Cover - Houston, TX: Modeling, analysis, and code review of as-built concrete structure
- High-Rise Buildings - Jakarta, Indonesia: Nonlinear modeling of concrete frames/walls, analysis, and performance-based design *

Bridges and Civil Infrastructure

- Sound Transit - Seattle, WA: post-installed anchors potential conflict evaluation on PT concrete bridge
- Various Bridges - TX: Evaluation of deck with low-strength concrete
- In-Service Bridges - Houston, TX: Routine inspections

Instrumentation/Load Testing

- University of Houston Hub Buildings, Audi Central Building - TX: Construction vibration monitoring

** Indicates with previous firm*