Dr. Ganeshan has over 33 years of experience in all aspects of geotechnical engineering works, not only in the design but also in supervision and management of field operation.

Professional History
2005 – Present
AECOM Singapore Pte Ltd
09/2012 to Date
Executive Director, Geotechnical, SE Asia
01/2012 – 09/2012
Executive Director, Geotechnical, Singapore
2005 – 2011
Technical Director, Geotechnical

1988 – 2004
L&M Geotechnic Pte Ltd, Singapore
Asst. General Manager (Tech)

1983 – 1987
National University of Singapore
Research Assistant

1982
Y S Lau Chartered C&S Engineer
Civil Engineer

1978 – 1980
Mahaweli Development Board, Sri Lanka
Project Engineer

Academic Training
B.Eng, University of Sri Lanka, 1978
M.Eng, Asian Institute of Technology, Bangkok, Thailand, 1982
Ph.D, National University of Singapore, 1989

Key Experience
Dr. Ganeshan has more than 33 years of experience in all aspects of geotechnical engineering works involving over 100 projects in various parts of Asia. Most of these projects are design and build projects. His involvement in various projects include deep excavations for mass transit structures and basements of various buildings, tunnelling and microtunnelling, deep foundations, ground improvement including grouting, ground anchors and, instrumentation for excavations, tunneling, test piles and structures. He has extensive experience in the use of finite element and other numerical programs in the analysis and design of geotechnical structures. He had worked in land reclamation projects during his PhD (Thesis; “Layered Clay-Sand Scheme of Reclamation”).

Dr. Ganeshan is currently the project director for the feasibility study of underground development at Tanjong Kling for JTC. His experience is not only in design but also in supervision and management of field operation. His in-depth knowledge in specialist works such as tunnelling, diaphragm wall, secant pile wall, ground anchors, micropiles, underpinning, mining, jet grouting, vibroflotation, etc. is significant.

During his career with L&M Geotechnic Pte Ltd (17 years), he was involved in many microtunnelling projects. He did or supervised the design of all jacking and receiving shafts and undertook PE responsibility for many of them.

Dr. Ganeshan has a PhD in Civil Engineering from National University of Singapore, MEng from Asian Institute of Technology and BEng from University of Sri Lanka.

Dr. Ganeshan is a registered Professional Engineer, a Specialist Professional Engineer and a Specialist Accredited Checker in the field of geotechnical engineering.
He was actively involved in the development of CP4 - Code of practice for Foundation and TR 26 - Technical Reference for Deep Excavation.

Affiliations
Registered Professional Engineer (Civil), Singapore, 1994

Specialist Professional Engineer (Geotechnical), Singapore, 2007

Specialist Accredited Checker (Geotechnical), Singapore, 2008

Member, Institute of Engineers, Singapore

Member, Tunnelling & Underground Construction Society, Singapore

Associate Member, Institution of Civi Engineers, UK

Member, Deep Foundation Institute, USA

Member, Geotechnical Society of Singapore

Citizenship
Singaporean

Year of Birth
1954

Project History

2005 – Present

Jurong Island - Pioneer Cable Tunnel Project for Singapore PowerAssets Ltd
Project Director for the development of Jurong Island to Pioneer Cable Tunnel project. It comprises the design and construction of the Jurong Island to mainland Singapore transmission cable tunnel, including two M&E equipment buildings, and two ventilation shafts along the tunnel alignment.

Singapore PowerAssets Ltd East-West Transmission Cable Tunnel, Singapore
Project Director for this East-West transmission cable tunnel which consists of a 6m internal diameter and approximately 16.5km long proposed to connect existing Ayer Rajah substation with Paya Lebar substation. The project involved advanced engineering studies including design of bored tunnels, mined adits, shafts, preparation of Geotechnical Interpretative Baseline Report (GIBR), supervision of additional SI and damage assessment of existing buildings and structures.

Downtown Line Stage 3 Bored Tunnel Compressed Air Audit, (Pacakge C)
Project Director for Contract 9186C involving procurement of pre-tunnelling consultancy and on-site audit services for DTL Stage 3 (CT3) bored tunnel compressed air works.

Downtown Line Stage 3 Bored Tunnel Compressed Air Audit (Package B)
Project Director for Contract 9186B procurement of pre-tunnelling consultancy and on-site audit services for DTL Stage 3 (CT1) bored tunnel compressed air works.

C2104 - Thomson Line Mainline Package C, Singapore
Geotechnical Advisor for the geotechnical and tunnel design of this contract comprising 6km long twin tunnels and 6 underground MRT stations. Scope of works include detailed design to facilitate the calling of build contract. The design scope includes ERSS (Earth Retaining or Stabilisng Structures) for stations, launching, retrieval, ventilation and escape shafts, detailed design of tunnels, cross passages, planning of additional ground investigation works, preparation of Geotechnical Interpretative Baseline Report (GIBR), damage assessment and visual inspections along tunnel route.

Klang Valley MRT, Circle Line Phase 3, Malaysia
Geotechncal Team Leader for Stage 1 Engineering Design of the proposed Circle Line (Phase 3) in Kuala Lumpur city. The project consists of 4 underground MRT stations and twin bored tunnel, and elevated viaduct. The scopes involve planning and interpretation of ground investigation works and proposed temporary retaining system for station / shaft excavations that is technically feasible and economically viable. The scopes also include design of bored tunnel segmental lining with cross passages using NATM method and assessments of potential damage to structures along the tunnel route and adjacent to excavations.

Feasibility Study for Underground Warehousing and Logistics Facility at Tanjong Kling and Jurong Hill, Singapore. Underground Cavern Development. This is a feasibility study for the use of underground cavern development as warehousing and data centre facilities. Scope of work includes mater planning, market research and conceptual rock cavern, ventilation, fire engineering design and environment and traffic assessment.

QP(S) services for Common Services Tunnel Phase 3B
Project Director and Qualified Person (Supervision) for Geotechnical Works.

QP(S) services for Downtown Line Stage 2 Contract 917
Project Director and Qualified Person (S) for Structural and Geotechnical works for Contract 917 - Design and construction of stations and tunnels at Sixth Avenue and King Albert Park for Downtown Line Stage 2

QP(S) service for Downtown Line Stage 2 Contract 918
Project Director and Qualified Person (Supervision) for Geotechnical Works for Contract 918 - design and construction of station at Duchess and tunnels for Downtown Line Stage 2.

C8240A - Geotechnical Services for Circle Line Stages 4 & 5 projects
Geotechnical Manager for LTA Circle Line 4 & 5 project, and heading the Geotechnical Team of 11 Geotechnical Engineers, 2 Structural Engineers and 12 Technical Officers many of whom possess more than 10 years of experience.

This project comprises:

- 13 underground stations (Thomson, Bukit Brown, Botanic Garden, Farrer, Holland Village, Buona Vista, One North, Kent Ridge, West Cost, Pasir Panjang, Labrador, Telok Blangah & HarbourFront)
- 5 cut & cover tunnels (Bukit Brown, Farrer, One North, Pasir Panjang cripple siding & HarbourFront crossover)
- 12.5 km of twin bored tunnels (Marymount to HarbourFront)
- 27 Cross Passages
- 2 Mined shotcrete tunnels (NATM, below Ayer Rajah Avenue & Ayer Rajah Expressway slip road)
- 1 Escape Shaft

The team is responsible for the following:

- Review of all Temporary Earth Retaining Structures (TERS)-design submission by the contractors.
- Independent analysis and design of all TERS.
- Review and acceptance of Instrumentation and Monitoring proposals.
- Supervision of all geotechnical works including Instrumentation and Monitoring. Support in claim-related issues to the client LTA.

1982 - 2004

Biopolis (JTC) and One North MRT Station (LTA)
Preliminary design of temporary works (soldier piles, ground anchors and soil nails) to excavate 32m in residual soil and soft rock for the construction of 6 level basement, MRT station and civil defence structure.

National Library Board Building
Design and construction of diaphragm wall with jet grouting for 16.5m deep excavation in soft ground close to existing MRT tunnels, Foundation piles and ground and MRT structures monitoring.

Changi New Development
Micro-tunneling and design and construction of jacking and receiving shafts.

Tuas Hockey Stick
Micro-tunneling and design and construction of jacking and receiving shafts.

Singapore Management University City Campus
Design and construction of foundation piles.

One Marina Boulevard (OMB)
Instrumentation and monitoring including automated tunnel monitoring. Also involved in the 1st automated tunnel monitoring during Bugis Junction project.

Advance Works for Kim Chuan MRT Depot (LTA C3370)
Design and construction of temporary works for 18m deep excavation (30m on one side) with soldier piles and ground anchors.

Circle Line Stage 1 C824
Design and execution of jet grouting and installation, and monitoring of instrumentations.

Circle Line Stage 1 C825
Construction of diaphragm walls.

Circle Line C823
Design and construction of foundation piles and jet grouting.

Tuas Power Station 3 & 4
Design and construction of foundation piles, vibroflotation and jet grouting.

Maritime Square Development
Design and construction of diaphragm wall.

KL Sewer, Pantai Treatment Plant
Construction of diaphragm wall and design and construction of slurry trench.

Other LTA Projects:

- NEL C706 - Pipe roof for pedestrian underpass below Bukit Timah Canal
- CAL C503 - Diaphragm wall for shaft excavation
- NEL C705 - Jet grouting for cross passages

- NEL C708 - Complete ground and adjacent structure monitoring, design of jet grouting at Clarke Quay Station.
- Clementi Avenue 6 Underpass - Design and construction of diaphragm wall
- Flyover - Pandan River; foundation piles in limestone formation with cavities.
- Flyover - Jurong River. Foundation piles in marine environment.

Other Sewerage and Pipe Jacking projects:

- Sewer to Serve New Development in Changi - Pipe Jacking Works (1800mm I.D., 800mm I.D.)
- Sewer Diversion MRT 702 - Pipe Jacking Works (400mm I.D.)
- Pipe Jacking at Sungei Sembawang Cable Laying - Pipe Jacking Works (2200mm I.D.)
- Crawford Street Underpass - Pipe Jacking Works (800mm I.D. Steel Pipe)
- PIE Crossing - Pipe Jacking Works (1500mm I.D.)
- Provision of Sewerage Facilities to Phase Out Tanglin Pumping Station (Contract 1 Trunk Sewer Along Alexandra Road and Commonwealth Ave 1 to 5 - Pipe Jacking Works (900mm I.D., 1350mm I.D., 1800mm I.D., 2100mm I.D.)
- Cycle & Carraige Headquarter along Alexandra Road - Pipe Jacking Works (450mm I.D., 1350mm I.D.)
- Construction of Trunk Sewer (Part 3) at Tampines New Town Neighbourhood 3 - Pipe Jacking Works (225mm, 375mm, 450mm, 600mm I.D.)
- Trunk Sewer along Pasir Ris Drive 10 and Drive 3 (Between Drive 10 and Drive 12) at Pasir Ris New Town Neighbourhood 7 Contract 1 to 5 - Pipe Jacking Works (225mm, 450mm, 600mm I.D.)
- Pedestrian Underpass Across Orchard Road (Pipe Roofing) – Pipe Jacking Works (605mm I.D.)
- Paya Lebar Flow Diversion at Upper East Coast Contract 2 – Pipe Jacking Works (2100mm I.D.)