

TECHNICAL TEAM *Profile*



Barlaw Technical Team

The firm is comprised of a technical team made up of civil engineers, technicians and environmental engineers. To enhance the firm's capability, two senior engineers, an engineering surveyor and several associates with specialization in related fields are retained to provide services as and when required.

The Curricula Vitae of the technical team are provided below:

Position : Managing Director
Profession : Civil Engineering
Expertise : Structural, Drainage and Geotechnical Engineer
Professional Experience : 14 years
Date of Birth : 12th September 1982
Nationality : Kenyan

Academic Qualifications:

- BSc. in Civil Engineering from the University of Nairobi
- M.Sc. in Civil Engineering (Structural Engineering option), University of Nairobi.

Membership in Professional Bodies:

- Registered Professional Engineer, Engineers Board of Kenya (EBK), Number A2934
- Corporate Member of Institution of Engineers of Kenya (IEK) Number M.4578

Key Qualifications:

I have fourteen (14) years post-graduation and eight (9) years post registration experience in planning, design, costing, construction supervision and management of various civil and structural engineering works. I have been involved in technical audit, structural, geotechnical and forensic engineering investigations, evaluation and retrofitting of existing structures, design and construction supervision of low-rise and high-rise reinforced concrete buildings, steel and reinforced concrete bridges, industrial steel structures and various civil engineering works.

In addition I have over ten (10) year engineering teaching experience in the department of Civil and Construction Engineering at the University of Nairobi. I lecture structural engineering at undergraduate level in the department of Civil and Construction Engineering at the University of Nairobi since February 2012. I have interests in and have been involved in research in civil engineering construction material covering concrete and steel.

I am a holder of a Master of Science degree in Structural Engineering from the University of Nairobi (year 2013) and a Bachelor of Science degree in Civil Engineering (First Class Honors) from the University of Nairobi (year 2008). I am currently pursuing a PhD in Civil Engineering (Structures) at the same institution, ongoing since Feb. 2020.

I serve as a member of the board of management of Mahero Secondary School and Patron of Nyandheho Primary school in Siaya.

I am professional Civil Engineer registered with Engineers Board of Kenya (EBK) and also a member of Institution of Engineers of Kenya (IEK). I am proficient in computer programmes such as Autodesk Revit, Civil CAD, Prokon, STAADPro, Robot, AutoCAD and Microsoft Office.

Education Background:

- PhD. Civil Engineering, University of Nairobi, ongoing since Feb 2020
- M.Sc. Civil Engineering (Structural Engineering option), University of Nairobi, 2013
- B.Sc. Civil Engineering, First Class Honours, University of Nairobi, 2008
- Kenya Certificate of Secondary Education, Ambira High School, 2001

Academic Honors and Awards:

- University of Nairobi Davis and Shirtliff Award; Best Fourth year Civil and Construction Engineering student in fluid mechanics
- Best student UON 2005/2006 Examination for the Degree of Bachelor of Science (Civil & Construction Engineering)
- Best student 2001 KCSE Examination (Ambira High School)
- An outstanding School Captain during the year 2001 at Ambira High School
- Overall best student in Maths- 2001 Siaya District Mock Exams
- Overall best student in Commerce- 2001 Siaya District Mock Exams
- Best student 2001 Siaya and Bondo District Secondary Schools
- Mathematics Association Examination (Ambira High School)

Engineering Teaching (Academic) Experience:

March 2012 - June 2015: Graduate Assistant,

DEPARTMENT OF CIVIL AND CONSTRUCTION ENGINEERING, UNIVERSITY OF NAIROBI

Responsibilities:

- Teaching, research, and consultancy
- Library Coordinator

June 2015 - Currently: Tutorial Fellow,

DEPARTMENT OF CIVIL AND CONSTRUCTION ENGINEERING, UNIVERSITY OF NAIROBI

Responsibilities:

- Teaching, research, and consultancy
- Coordinating Fourth Term Industrial visits for students

Projects Experience:

I joined Multiscope Consulting Engineers Limited in August 2008 as a Graduate Trainee Engineer and rose through the ranks to Director (Structures); a position which I held until October 2019.

My key responsibilities while working at Multiscope Consulting Engineers Limited included the following: quality assurance, value engineering, structural design of buildings, bridges, and industrial structures, production of working drawings, bending schedules, derivation of unit rates and engineers' estimates and construction supervision of projects.

The projects in which I have been involved in are as below:

From 2014 to currently: I have participated in the following Structural and Civil Engineering design projects as an individual consultant:

- ***April 2022; Geotechnical Investigations at Mbogolo, Mtwapa Market and Mtwapa Bridge sites for the Dualling and Upgrading of Mtwapa- Kwa Kadzengo-Kilifi (A7) Road for Kenya National Highways Authority (KeNHA).***

My assignment involved undertaking field investigations (drilling of 4 No. boreholes to depths of between 25 meters and 4 No. boreholes to depths of between 25 meters), laboratory testing and preparation factual and engineering geotechnical report.

- ***January 2022 to currently; Construction of Kambu River Bridge and Approach Roads. Kololo Bridge on Old Mombasa Road for Kenya National Highways Authority (KeNHA).***

Engaged as the Deputy Resident Engineer, my assignment involved undertaking the design review and construction supervision of the 40m span vehicular bridge. The bridge consists of 250mm reinforced cast in-situ concrete deck, supported on 2200mm deep steel plate girders which are subsequently supported on concrete abutments at the two ends. Due to the presence of highly weathered rock, piled foundation was adopted.

- ***April 2021 to currently; Construction of Kololo Bridge on Mwitika – Twambui (B87) Road for Kenya National Highways Authority (KeNHA).***

Engaged as the Structures and Drainage Engineer, the project involved undertaking the design review and construction supervision of the 17.5m span vehicular bridge. The bridge consists of 250mm reinforced cast in-situ concrete deck, supported on 1200mm deep precast concrete beams which are subsequently supported on concrete abutments at the two ends. Due to the presence of highly weathered rock, the abutments a proposed to be carried on piled foundation to a depth of 20m.

- ***April 2021 to currently; East Africa Regional Transport, Trade and Development Facilitation Project (EARTTDFP); Consultancy Services for the Design Review and Construction Supervision of the 40km Lokichar-Loichang'amatak Road(A1) for Kenya National Highways Authority (KeNHA). Civil and Structural Engineer for Social Infrastructure. A World Bank Funded Project***

Engaged as the Civil and Structural Engineer for Social Infrastructure projects. The project involved undertaking the planning, preliminary and detailed engineering design and construction supervision of the various social infrastructure projects along the road corridor covering schools, hospitals, water supply, slaughterhouses, markets etc. The structural design takes into consideration use of locally available construction materials and labour. Currently on the design and documentation stage.

- ***February 2021 to Currently; The Proposed Development On Plot No.53, at The Konza Metropolis for Tumaini Ministries.***

I am engaged in this project as the Civil/ Structural Engineer. My assignment involves undertaking preliminary and detailed civil and structural analysis and design and construction supervision of the entire project on a 4-acre land covering residential houses and the education centre. Currently we are on the preliminary design stage.

- ***August 2020 to Currently; Consultancy services for Preparation of Non-Motorised Transport (NMT) Master plan and Preliminary and Detailed Design for Nakuru Town for Kenya Urban Roads Authority (KURA).***

The project entails creation of a walking and cycling master plan for the city, preliminary/ draft design for the streets and detailed engineering design for the selected streets within the study area. I am engaged as the Structural Engineer for the project.

- ***February 2021 to April 2021; Geotechnical Investigations for Proposed Serviced Apartment development on plot L.R. No.Gigiri, Nairobi.***

My assignment involved undertaking field investigations (drilling of 3 No. boreholes to depths of between 15 to 20 meters, laboratory testing and preparation factual and engineering geotechnical report.

- ***January 2021 to March 2021; Geotechnical Investigations for Proposed Apartments along Bhanderi Road Parklands Nairobi for Krishna Estates Ltd.***

My assignment involved undertaking field investigations (drilling of 6 No. boreholes to 20 meters, laboratory testing and preparation factual and engineering geotechnical report.

- ***October 2020 to Currently; Proposed Wespeak Apartments in Kileleshwa for Golden Century Limited.***

My assignment involved undertaking preliminary and detailed civil and structural analysis and design and construction supervision of the 16 -storey apartment building. Currently I am supervising construction of the same.

- ***November 2020 to Currently; Proposed Staff Housing Development for Kenya revenue Authority at OSBP Malaba, Busia County Kenya.***

My assignment involved undertaking planning, preliminary and detailed civil and structural analysis and design and construction supervision of the staff housing project. The project is currently at the preliminary design stage.

- ***May 2020 to Currently; Emergency Repair of Road Over Rail Bridge at Graren School Bridge (Km 3+500) along Naivasha – Mai Mahiu – Rironi (A8 South) Road.***

Engaged as the Structural Engineer. The project involved demolition of the entire precast panel deck slab and replacement with cast in-situ concrete deck. My assignment involved undertaking the design review of the entire bridge, design of the new deck slab and construction supervision of the 25m span (skewed) composite vehicular bridge. The bridge consists of 275 mm reinforced cast in-situ concrete deck, supported on 920mm deep plate girders which are subsequently supported on concrete abutments at the two ends. Currently carrying out construction supervision.

- ***May 2020 to December 2020; Emergency Repair of Road Over Rail Bridge at Fai Amario (Km 9.0) along Naivasha – Mai Mahiu – Rironi (A8 South) Road.***

Engaged as the Structural Engineer. The project involved demolition of the entire precast panel deck slab and replacement with cast in-situ concrete deck. My assignment involved undertaking the design review of the entire bridge, design of the new deck slab and construction supervision of the 25m span (skewed) composite vehicular bridge. The bridge consists of 275 mm reinforced cast in-situ concrete deck, supported on 920mm deep plate girders which are subsequently supported on concrete abutments at the two ends.

- ***From October, 2019 to Currently; Proposed Kaka Medical Clinic Hospital in Kakamega County, Kenya;***

I carried out preliminary and detailed civil and structural analysis and design of the multi-storey building. Currently I am supervising construction of the same.

- ***January 2018 to currently; Proposed Pedestrian Crossing Facility (Footbridges) across Mombasa Road at Mlolongo for Kenya National Highways Authority (KeNHA)***

The project involved undertaking the planning, preliminary and detailed engineering design and construction supervision of the footbridge. The main crossing structure consists of thin concrete decks on braced steel plate girders supported on concrete columns while the side ramps structure is made of reinforced concrete. I am currently supervising the construction of the same.

- ***From Jan, 2019 to Currently; Proposed Construction and Equipping of Cancer Centre at Garissa County Referral Hospital, Garissa Township Sub-County for Garissa County Government;***

I carried out preliminary and detailed civil and structural analysis and design of the multi-storey building. Currently I am supervising construction of the same.

- ***From Jan, 2018 to Currently; Proposed Cancer Treatment Centre at Kenyatta National Hospital***

I carried out preliminary and detailed civil and structural analysis and design of the multi-storey building. Currently I'm supervising construction of the same

- ***From Jan, 2018 to Currently; Proposed Expansion of Renal Unit at Kenyatta National Hospital***

I carried out preliminary and detailed civil and structural analysis and design of the 3 storey renal facility. Currently I'm supervising the construction of the same

- ***From Jan, 2018 to Currently; Proposed Residential Apartment on Plot L.R No. 209/3761 South B Nairobi Kenya for Limpopo Developers Ltd***

I carried out preliminary and detailed civil and structural analysis, design, and production of the engineering drawings and bar bending schedules of the 9storey apartment block. Currently I'm supervising construction of the same

- ***From Jan, 2017 to Currently; Proposed Tuition Complex at Kirinyaga University***

I carried out preliminary and detailed civil and structural analysis, design, production of the engineering drawings and bar bending schedules of the 6 storey teaching complex, offices and administration facilities. Currently I'm supervising construction of the tuition complex 1

- ***From March, 2016 to Currently; Proposed Residential, guesthouse and conferencing facility in Siaya for Mr. Tobias Otieno.***

This project comprises five number two storey contemporary buildings, swimming pool and cottages. The adopted structural system is reinforced concrete framed system where the slab-beam-column frame takes both gravity and lateral loads. The foundation system is reinforced concrete pad footings for columns and strip footing for walls. The projected construction cost is about Kshs.500 million.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, and foundations, production of the engineering drawings and bar bending schedules. Currently I'm supervising construction of the project.

- ***January 2016 to December 2018; Proposed Staff Housing Development for Kenya revenue Authority at Shimoni, Kwale County Kenya.***

My assignment involved undertaking planning, preliminary and detailed civil and structural analysis and design and construction supervision of the staff housing project. Key structural design feature was the use of EPS panels for walls. The project was successfully completed and handed over to the client.

- ***January 2016 to Currently; Proposed 64 Resorts and Spotting Club in Eldoret Kenya***

My assignment involved undertaking preliminary and detailed civil and structural analysis and design and construction supervision of the various building projects within the resort, covering, kitchen, restaurant, club house, hotel rooms, business centre, pizza palace etc. Several parts of the project are completed while other are ongoing.

- ***From February, 2015 to 2017; Proposed Completion of Office Block at Kirinyaga Univerty College.***

This is a two storey stalled building situated at Main Campus in Kutus which is to be completed and refurbished for use as conference rooms and staff offices.

I carried out design review, production of detailed engineering drawings and currently construction supervision of the project.

- ***From November, 2014 to 2017; Proposed Kitchen and Dining Hall at Kirinyaga University College.***

This is a two storey building comprising of dining hall and kitchen situated at Main Campus in Kutus. The projected construction cost was about Kshs.40 million.

The adopted structural system is reinforced concrete framed system where the slab-beam-column frame takes both gravity and lateral loads. The foundation system is reinforced concrete pad footings for columns and strip footing for walls.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, and foundations and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules and construction supervision of the project to completion. The project is complete, handed over to the client and currently on defect liability period.

From January, 2015: Director, MultiScope Consulting Engineers Ltd. The Structural and Civil design projects which I have participated in within this period includes the following:

- ***July 2018 to currently: Proposed Dualling of Magongo (A109L) Road in Mombasa County***

I am the structural and drainage engineer for the project. My responsibilities involve undertaking engineering design checks and construction supervision.

- ***January 2017 to currently; Proposed Pedestrian Crossing Facilities (Footbridges) across Thika Superhighway.***

The project involved undertaking the preliminary & detailed engineering design and construction supervision pedestrian crossing facilities across Thika Superhighway. The proposed structures include overpass footbridges at Mangu Road junction, at Witeithie, at Garden Estate and at Kenya School of Monetary Studies. The main crossing structure consists of thin concrete decks on curved steel truss supports on concrete columns while the side ramps structure is made of pure reinforced concrete deck and columns.

I carried out the preliminary and detailed structural engineering designs, involved in the production of the engineering drawings and bar bending schedules. Currently I am supervising the construction of the same.

- ***January 2016 to Currently; Proposed Science Research and Technology Park at Chuka University.***

This is a thirteen storey building meant to host mainly science and research laboratories, conference halls and offices. It is located at Chuka University, Tharaka-Nithi County.

The adopted structural system is reinforced concrete framed system where the slab-beam-column frame takes both gravity and lateral loads. The foundation system consists of a combination of reinforced concrete raft, pads and strip footings at different sections of the foundation for columns and walls.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, lift walls, and foundations and structural steel for roof. He was also involved in the production of the engineering drawings and bar bending schedules. In addition, I am currently carrying out the construction supervision of the project to completion.

- ***January 2015 to currently; Proposed Greenwood Park Meru.***

This project is situated in Meru town and consists of the following: a four (4) storey building intended for usage as mall for shopping with one basement level storage space for supermarkets and vehicle parking, a 9 storey apartment block and an 8 storey office block buildings.

I have been the project engineer in charge of the structural design team carrying out the coordination, specifications, checking the designs and tender documentations in addition to carrying out preliminary and detailed engineering analysis and design of all structural elements of the shopping mall which comprises of reinforced concrete ribbed slabs, beams, columns, lift walls, foundations and the retaining wall and structural steel for roof. He has also involved in the production of the engineering drawings and bar bending schedules.

From February, 2013 to December 2014: Senior Structural Engineer, MultiScope Consulting Engineers Ltd. The Structural and Civil design projects which I participated in within this period includes the following:

- ***October 2013 to currently; Proposed Shopping Mall in Juba South Sudan.***

This project is situated in Juba South Sudan and is a four (4) storey building intended for usage as mall for shopping with one basement level storage space for supermarkets.

I carried out preliminary engineering analysis and design of all reinforced concrete and structural steel elements which comprises of composite profiled steel slabs, ribbed slabs, beams, columns, lift walls, foundations and the retaining wall and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules. Currently I am carrying out detailed Engineering design.

- ***February 2013 to 2015; Proposed Refurbishment and New Works for African Diatomite Industries Ltd.***

The project is situated on plot L.R.No Gilgil/Gilgil Kikopey Ranch/Block 1/3198 at Gilgil. It involves refurbishment of the existing factory sheds, new 2 storey administration block, cafeteria, workshops, boundary walls, changing rooms and factory stores. The construction cost was about Kshs.450 million.

The factory sheds structures are founded on reinforced concrete pad and strip footings and carried by reinforced concrete stub columns and structural steel portal frame spanning 26m with a heave height of 12m and are spaced at 6m centers. The other new structures are founded on reinforced concrete pad and strip footings and carried by reinforced concrete columns, beams and slabs.

I carried out preliminary and detailed engineering analysis and design of the steel portal framed structure and the structural elements which comprises of slabs, beams, columns, foundations and the retaining wall and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules. The project is complete, handed over to the client and currently on defect liability period.

- ***February 2013 to currently; Proposed Mixed Urban Development for Sansora Limited.***

The project is situated on plot L.R.No 3/188B, Kisii town, and is a six (6) storey building intended for mixed urban usage with one basement level for vehicle parking, ground floor level for supermarket, first floor level for offices and three upper floors levels as residential apartments.

The structures are founded on reinforced concrete pad footings and carried by reinforced

concrete columns, beams and slabs. I carried out preliminary and detailed engineering analysis and design of all reinforced concrete structural elements which comprises of slabs, beams, columns, lift walls, foundations and the retaining wall which is a water excluding structure and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules. Currently I am supervising construction of the project.

From August 2009 to February 2013: Assistant Engineer, MultiScope Consulting Engineers Ltd. The Structural and Civil design projects which I participated in within this period includes the following:

- ***November 2011 to August 2012; Senior Structural Engineer for Proposed University of Nairobi Towers.***

The project is situated on plot L.R. No. 209 / 18319, Harry Thuku road Nairobi and is a 25 storey (inclusive of 3 basements) reinforced concrete building approximately 98 m overall height and is intended for mixed usage; lecture rooms/ theaters halls, offices, senate and council chambers and a helipad.

In this project I was involved in carrying out the schematic and detailed engineering analysis and design of reinforced concrete structural elements which comprises of slabs, beams, columns, lift walls, shear walls, foundations and the basement retaining wall. I was also involved in the production of the engineering drawings and bar bending schedules.

The adopted gravity load resisting system was reinforced concrete slab-beam-column system while the lateral load resisting system is combined shear wall- frame where both the shear walls and the beam-column frame resist a proportion of lateral loads. The foundation adopted is reinforced concrete large diameter rock-socket-end-bearing-drilled piers. The structure was modeled in three dimension and analysed using prokon version 2.5 together with hand calculations. The analysis was found to be controlled mainly by serviceability limit state of deflection as a result of lateral loads and the accompanying P-Delta effect. This was due to the architecture of the tower which is very slender in one axis. This necessitated the adjustments of various structural elements including the slab-beam system to increase the diaphragm action and reduce deflection to acceptable limits.

One major challenge encountered was the presence of approximately 7m depth of volcanic ash with negligible bearing strength at approximately 13m below existing ground level as indicated in both geophysical and geotechnical reports. The challenge here was to find a solution for the buildings foundation which is structurally sound and economical. Several solutions were

considered; one solution fronted was to increase the basements to five (5) but this was dropped since the additional costs were way above the clients budget, the other solution was the use of 900mm diameter piles about 200 in number and again this was found to be very costly, finally after carrying out research, large diameter rock-socketed-end-bearing-drilled piers were adopted with each column directly supported by a single pier and socketed into rock by twice the diameter, a thicker lower basement slab was used to tie the piers.

- ***April 2011 to 2014 Proposed Pedestrian Crossing Facilities across Mombasa Road for Kenya National Highways Authority.***

The project involved undertaking the feasibility study, preliminary and detailed engineering design for pedestrian crossing facilities along Mombasa road from Nyayo stadium to City Cabanas. The proposed structures include underpasses across Mombasa road and across Langata road at Nyayo stadium round about, overpasses at Imara Daima, Belle Vue estate and at General Motors.

I carried out preliminary and detailed structural engineering designs of the overpasses at Bellevue and at General Motors. I was also involved in the production of the engineering drawings and bar bending schedules. These overpasses are basically ramps which are gently sloped and roofed to solve the problem of non-usage of overpasses. Currently I am assisting with construction supervision which is being undertaken by KeNHA.

- ***April 2011 to October 2011: Design Review of Nginyang Bridge and Lomut Bridge for Kenya National Highways Authority.***

Nginyang Bridge is a 120 m span bridge across River Nginyang in Baringo East district while Lomut Bridge is an 80 m span bridge across River Siya on B4 road. The bridge decks are of reinforced concrete supported on steel girders while the sub structure is of reinforced concrete founded on piles.

I was involved in the design of various structural elements which include the decks, girder, piers, abutments and piles, participated in the derivation of the unit costs, material specification, and production of the engineers estimate and drafting of the design report.

The presence of loose sandy soil up to a depth of 18m presented a challenge in the design of the foundations; however this was solved by provision of piles. Also the area experiences flash floods which carry a lot of debris and uprooted tree which impacts negatively on the sizing of the openings as derived from hydrological estimations. In order to take care of the uprooted trees and debris, the deck was raised higher than that required to allow for the flow. Due to the loose sandy soil and the rolling terrain, the river changes its course frequently by eroding the banks:

this was solved by providing for gabions along the river channel to protect the banks.

- ***November 2010 to 2015 Proposed Student and Recreation Centre for Chuka University.***

This is a five storey building meant to host retail shops, bank, gymnasium, and conference halls and staff offices. It is located in Chuka , Tharaka-Nithi County.

The adopted structural system is reinforced concrete framed system where the slab-beam-column frame takes both gravity and lateral loads. The foundation system is reinforced concrete pad footings for columns and strip footing for walls.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, lift walls, and foundations and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules. In addition, I carried out the construction supervision of the project to completion.

- ***April 2010 to June 2010; Proposed Bonyunyu Dam for National Water Conservation and Pipeline Corporation.***

The project involved undertaking the feasibility study, preliminary and detailed engineering design and environmental impact assessment the proposed Bonyunyu dam on Gucha River. The dam was intended to act as reservoir storage for water supply to Kisii town and its environs.

I carried out preliminary and detailed designs of a 30m span steel footbridge over the spillway, 60m span reinforced concrete Vehicle Bridge and reinforced concrete storage tanks, and development of working drawings and bending schedules for the same.

- ***February 2010 to November 2013; Proposed Business School Complex for Chuka University***

This is a five storey building comprising of lecture theaters and staff offices meant to host the school of business. The adopted structural system is reinforced concrete framed system where the slab-beam-column frame takes both gravity and lateral loads. The foundation system is reinforced concrete pad footings for columns and strip footing for walls.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, lift walls, and foundations and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules and construction supervision of the project.

- ***November 2009 to April 2012; Proposed Embankment Plaza for Embankment Investment Ltd***

The project is located on plot L.R. No. 209 / 2384, Upper hill, Nairobi. This is 15 storey office building inclusive of two basement levels for vehicular parking.

The floor system was solid slab for basement and roof floor slabs and ribbed slabs for other upper floors. The adopted gravity load resisting system was reinforced concrete slab-beam-column system while the lateral load resisting system is combined shear wall- framed where both the shear walls (lift core walls) and the beam-column frame resist a proportion of lateral loads. The foundation adopted is reinforced concrete pad footings for columns and raft foundation for lift core.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, lift walls, foundations and the basement retaining wall and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules and supervision of construction of the project. One challenge encountered here was the presence of underground water in the lower basement. To solve this problem, in addition to chemical waterproofing, a basement sump was created (with openings into the hardcore fill) for pumping out accumulated seepage.

- ***August 2009 to October 2010; Proposed Mayfair centre for Ralph Bunche Suites Ltd***

The project is located on plot L.R. No. 209 / 2072/3 along Ralph Bunche Road, at Upper hill, Nairobi. This is 11 storey office building inclusive of two basement levels for parking.

My assignment consisted of detailed design review of the reinforced concrete structure, development of all revised working drawings and construction supervision for the 11 storey building and preparation of as built structural drawings.

One major challenge encountered was water leakages through the basement walls into the building especially during the rainy seasons. This was solved by creating water channels (French drains) around the basement walls and within the hardcore of the lower basement slab.

From January 2009 – August 2009: Graduate Engineer, MultiScope Consulting Engineers Ltd.
The Structural and Civil design projects which I have participated in within this period includes the following:

- ***November 2009: January 2010; Proposed Mixed Urban Building for Ngewa Ltd***

The project is situated on plot L.R.No 37/261/11, Nairobi West, and is a six (6) storey building intended for mixed urban usage with one basement level for parking, ground floor level and first floor level for banking and offices and three upper floors levels as residential apartments.

The adopted structural system is reinforced concrete framed system where the beam-column frame takes both gravity and lateral loads. The foundation systems reinforced concrete pad footings.

I carried out preliminary and detailed engineering analysis and design of all reinforced concrete structural elements which comprises of slabs, beams, columns, lift walls, foundations and the basement wall and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules.

- ***September 2009 to September 2010; Proposed New Chiromo Human Anatomy Annex for the University of Nairobi***

This was a two (2) storey new Human Anatomy Annex for the University of Nairobi located in Chiromo Nairobi.

The main structural elements were reinforced concrete pad footings for column and strip footings for walls, reinforced concrete beams and slabs for the suspended floor and combined steel/timber roof structure.

My assignment here involved design review, construction supervision and preparation of as built structural drawings.

- ***August 2009 – Currently; Proposed Lecture Rooms, Library, Hostels and ICT Center*** These were part of vision 2030 flagship projects which eventually enabled the university to be accorded full status. They consisted of 7 storey ICT centre, 4 storey library block, two number 4 storey hostel blocks, two number 3 storey lecture room blocks and a 300 seater lecture theater.

I carried out preliminary and detailed engineering analysis and design of the lecture rooms and ICT centre. The adopted structural system is reinforced concrete framed system where the beam-column frame takes both gravity and lateral loads and comprises of reinforced concrete slabs, beams, columns, and foundations and structural steel for roof. The foundation system is reinforced concrete pad footings for columns and strip footing for walls. Currently I am

supervising construction of the project.

One major challenge is slow pace of works due to lack of funds making it very difficult to properly coordinate supervision.

- ***July 2009 to August 2009; Proposed Gated Housing for Ali Shire Hussein***

These were 4 number 5 bed roomed residential maisonettes situated along Bogani road on Plot L.R. No. 26964 Karen area of Nairobi.

The main structural elements were strip footings for the foundations, load bearing masonry walls, reinforced concrete columns as ties, reinforced concrete beams and slabs for the suspended floor and combined steel/timber roof structure.

My key responsibilities in the project included carrying out engineering design, production of the engineering drawings and bar bending schedules.

- ***May 2009 to July 2009; Proposed Ngara Hotel for Mukami Enterprises Ltd***

The project is situated in Ngara Nairobi, and is a five (5) storey building intended for use as hotel rooms and conference halls while ground floor level dedicated entirely for vehicular parking.

The adopted structural system is reinforced concrete framed system where the beam-column frame takes both gravity and lateral loads. The foundation systems reinforced concrete pad footings for columns and strip footing for walls.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, lift walls, foundations and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules.

- ***March 2009 to March 2010; Proposed Luxury Apartments for British American Insurance Ltd***

These were four number three bed roomed apartment blocks located in Lavington area of Nairobi with each block having four storeys inclusive of a penthouse.

The main structural elements were strip footings for the foundations, load bearing masonry walls, reinforced concrete columns as ties, reinforced concrete beams and slabs for the suspended floors and combined steel/timber roof structure. My key responsibilities in the project was construction supervision.

- ***January 2009 to May 2009; Proposed Central Radioactive Waste Processing Facility for Radiation Protection Board -Ministry of Health***

The project involved construction of a Central Radioactive Waste Processing Facility which included a two storey radioactive waste storage block, a three storey administration block,

a three storey laboratory block, two storey residential apartment blocks, 0.5km access road and 15m span bridge.

The structural system for the radioactive waste storage block was 750mm thick reinforced concrete slab and wall. For the other blocks, the adopted floor system was reinforced concrete solid slab-beam construction. The gravity load resisting system was reinforced concrete slab-beam-column system with steel roof structure. The foundation adopted is reinforced concrete pad footings for columns and strip footing for reinforced concrete walls.

I carried out preliminary and detailed engineering analysis and design of all structural elements which comprises of reinforced concrete slabs, beams, columns, foundations and the retaining and structural steel for roof. I was also involved in the production of the engineering drawings and bar bending schedules and partly supervised the construction of the project.

From August 2008 – January 2009: Graduate Engineer, MultiScope Consulting Engineers Ltd.

The Structural and Civil design projects which I have participated in within this period includes the following:

- ***December 2008 to January 2009: Proposed Residential Maisonette for Mr. Ombui***

This was a five bed roomed residential houses built in Karen area of Nairobi. The main structural elements were strip footings for the foundations, load bearing masonry walls, reinforced concrete columns as ties, reinforced concrete beams and slabs for the suspended floor and combined steel/timber roof structure.

My key responsibilities in the project included carrying out engineering design, production of the engineering drawing and bar bending schedules

- ***September 2008 to December 2008; Proposed Residential Apartment Block for Mr. Noor Mohamed***

This was a seven-storey residential apartment block with entire ground floor level dedicated to vehicle parking. The project is located along Serengeti Road- Arusha, Tanzania.

The main structural elements were reinforced concrete pad footings for column and strip footings for walls, reinforced concrete beams and slabs for the suspended floor and combined steel/timber roof structure.

Here I carried out preliminary and detailed design of the reinforced concrete structure and development of all the working drawings for the 7 storey Apartment Block.

- **August 2008 to September 2008; Proposed Residential House for Dr. Matiangi**

This was a five-bed roomed residential houses built in Karen area of Nairobi. The main structural elements were strip footings for the foundations, load bearing masonry walls, reinforced concrete columns as ties, reinforced concrete beams and slabs for the suspended floor and combined steel/timber roof structure.

My key responsibilities in the project included carrying out engineering design, production of the engineering drawing and bar bending schedules.

From August 2006 to December 2006: Assistant site engineer (Intern), Cell Arc Systems, Building & Civil engineering contractors.

Second Industrial Training: Attached to the site Engineer, where I familiarized himself with the following:

- Work measurements
- Interpreting of civil engineering drawings
- Taking control in supervision of the works
- Surveying and setting out works for the Upgrading works on Kisumu- Kakamega Highway

Languages:

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Swahili	Good	Good	Good

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience.



[Signature]

Date: 03/ 11/ 2022

Full Name of staff member: **Barrack Omondi Okoya**

Referees:

1. Prof.(Eng) S.O. Abuodha
Associate Professor, Department of Civil and Construction Engineering,
The University of Nairobi,
P.O. Box 30197-00100 Nairobi
Tel: 0722742745
2. Eng. S.N. Mugo
Managing Director, Multiscope Consulting Engineers Ltd
P.O. Box 12012-00100 Nairobi
Tel: 0722703475
3. Arch. Robinson Manguro
Project Manager,
Kenyatta National Hospital,
Tel: 0721286228

THE REPUBLIC OF KENYA

The Engineers Board of Kenya Certificate of Registration



THIS IS TO
CERTIFY THAT

Eng. Barrack Omondi Oliga

HAS BEEN DULY
REGISTERED AS A
PROFESSIONAL
ENGINEER

pursuant to and in accordance with the
provisions of the Engineers Act 2011, and that
on this

18th December 2014

such name was entered in the Register under
the Serial Number

A2034

Given under our hands and Common Seal at the
Engineers Board of Kenya on this date

18th December 2014

CHAIRMAN

Eng. J. N. Njoroge

MEMBER

Eng. Peter E. J. Omondi

MEMBER

Eng. S. C. Omondi

REGISTERAR

Eng. A. N. Njoroge





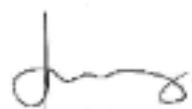
The Institution of Engineers of Kenya

Certificate of Membership

This is to certify that **Barrack Omondi Ohoya**
has been elected **Corporate Member M-4578**
of the Institution of Engineers of Kenya
on the **1st March 2018**
given under our hands and the common seal
of the said Institution on the **8th March 2018**




Member


President


Secretary



ENGINEERS BOARD OF KENYA

Engineer's Practising Licence

Pursuant to Section 32 of the Engineers Act, 2011, I hereby certify that

.....
is duly registered as **Eng. Barack Omondi Okaya**
a **Professional Engineer**
in the field of **Civil Engineering** for the year.....
.....
Issued this^{4th} day of **January 2022** and is hereby licenced to practice as such.

Issued under the Seal of the Board

Eng. Margaret N. Ogai

Registrar

Serial No. EBK ... **2022 / A 2934 / O 939**

JKF(C002)14/10/19

PLE - 5212

UNIVERSITY OF NAIROBI



This is to certify that

Harrack Omondi Ojoya

having satisfied the requirements
for the award of the degree of the

**MASTER OF SCIENCE
(IN CIVIL ENGINEERING)**

was admitted to the degree
at a Congregation held at
this University on the

Sixth Day of December in the Year
2013

VICE-CHANCELLOR

DEPUTY VICE-CHANCELLOR (ACADEMIC AFFAIRS)

9576

UNIVERSITY OF NAIROBI



This is to certify that

Emack Omondi Okeya

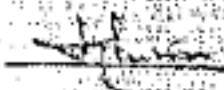
having satisfied the requirements
for the award of the degree of the

**MASTER OF SCIENCE
(IN CIVIL ENGINEERING)**

was admitted to the degree
at a Congregation held at
this University on the

Sixth Day of December in the Year
2013


VICE-CHANCELLOR


DEPUTY VICE-CHANCELLOR (ACADEMIC AFFAIRS)

2576

UNIVERSITY OF NAIROBI



This is to certify that

Barrack Omondi Okoya

having satisfied the requirements
for the award of the degree of the

**BACHELOR OF SCIENCE
(IN CIVIL ENGINEERING)**

First Class Honours

was admitted to the degree
at a Congregation held at
this University on the

Seventeenth Day of October in the Year
2008

A handwritten signature in black ink, likely belonging to the Vice-Chancellor.

VICE-CHANCELLOR

A handwritten signature in black ink, likely belonging to the Deputy Vice-Chancellor (Academic Affairs).

DEPUTY VICE-CHANCELLOR (ACADEMIC AFFAIRS)

0001

Maurice Kagwi Njoroge (PE, MIEK)

Profession	: Civil Engineering
Expertise	: Materials and Geotechnical Engineer
Professional Experience	: 7 years
Date of Birth	: 30th August 1989
Nationality	: Kenyan

Membership in Professional Bodies:

- Professional Engineer, Engineers Board of Kenya (EBK-A.3663)
 - Corporate Member, Institution of Engineers of Kenya (IEK-M.7034)
 - Member, Association of Consulting Engineers-Future Leaders (ACEK-FL-064)
 - Member, Geotechnical Engineering Committee, Kenya Bureau of Standards
 - Member, Eurocodes Implementation Committee, Kenya Bureau of Standards
 - Member, Policy, Research and Advocacy Committee, IEK
-

Current Engagement:

- Lead, Bridge and Materials Engineer: Ruiru–Githunguri-Uplands Road (C560) – 47.0 km

Detailed Tasks Assigned:

- Conduction of geotechnical investigations, analyses and reporting for bridges
- Design of vehicular and pedestrian bridges, pile foundations, design reviews and production of construction drawings
- Preparation of the Specifications, Bill of Quantities and Engineering Estimates
- Construction supervision and quality control to ensure work complies with specifications
- Improvement of the Construction and Quality Control Processes in the Project
- Review of Shop/Fabrication Drawings for steel structures received from the contractor
- Preparation of Snag lists and As-Built Drawings
- Design of pavement and concrete materials, testing of road materials and reporting to ensure compliance with the specifications
- Supervision of and training of assistant engineers, technologists and technicians

- Assisting the Resident Engineer in the coordination of site teams, issuance of instructions, measurement of works, review of construction programs, certificates, as well as reporting and documentation.
- Assisting the Resident Engineer in evaluation of contractual claims from the contractor

Key Qualifications:

Eng. Maurice Kagwi is a multi-skilled, devoted and reliable civil engineering professional with 6 years' experience in the planning, design, costing, supervision and management of varied civil and structural engineering works in Kenya and beyond. He has been involved in the conduction of feasibility studies, technical audits, structural, geotechnical and forensic engineering investigations, evaluation and retrofitting of existing structures, design, testing and construction supervision of buildings, industrial structures, bridges, hydropower structures, deep foundations, military facilities and various other civil engineering works.

He has worked in Kenya, Rwanda and Somalia with Government and Non-governmental agencies including Kenya National Highways Authority, Kenya Urban Roads Authority, Kenya Rural Roads Authority, Kenya Medical Research Institute, Trade Mark East Africa, United Nations, Qatar Fund, World Bank, European Union, Somalia Forces, AMISOM and US Forces.

Maurice Kagwi is a holder of a Bachelor of Science degree in Civil Engineering (First Class Honours) from the University of Nairobi (Year 2015) and is currently pursuing his Master of Arts degree in Construction Management from the University of Nairobi.

He serves in the Policy, Regulations and Advocacy Committee of the Institution of Engineers of Kenya which reviews, formulates and improves policies to ensure Engineers' interests and those of their clients are represented. He also serves in the Geotechnical Engineering and Eurocodes Committees of the Kenya Bureau of Standards where he takes part in the research, formulation and development of standards and guidelines purposed to improve the practice of engineering in Kenya and the region. He has future research interests in geotechnical engineering.

Maurice is a Professional member of the Engineers Board of Kenya (EBK), a Corporate member of the Institution of Engineers of Kenya (IEK) and a Member of the Association of Consulting Engineers of Kenya-Future Leaders (ACEK-FL).

He is proficient in the adoption of CAD/CAE software including MIDAS Civil (Bridges),

Autodesk Bridge, Autodesk Robot Structural Analysis, Autodesk Autocad Civil 3D, Tekla Structures, Revit Structures, and Plaxis Geotechnical Software for pavements and soil-structure interaction. He has a good understanding of the different FIDIC Conditions of Contract Suites and varied standard specifications for roads and bridges including Kenyan Standards, AASHTO and ASTM standards and those adopted in the region-South Africa-SADCC-Tanzania-Uganda and Ethiopia.

Projects Experience:

- ***September 2020-December 2020: Structural and Pavement Engineer: Haile Selassie Avenue Upgrade and Design- Central Bank of Kenya (CBK), GoK***

I was involved in the design of the Proposed Haile Selassie Avenue Structures and Pavements which are meant to improve the face of the avenue to modern standards as the gateway to Nairobi and promote African History. These efforts are geared to meet the needs of non-motorized and motorized traffic. Project currently in tender stage

- ***August 2020-October 2020: Offshore Bridge Engineer, Design Review of the Floating Bridge, Likoni, Mombasa - GoK***

Involved in the Design and Design Review of the Likoni Floating Bridge, the Bailey Truss Spans (2 no.-248/188 m), The Transition Spans (2 no. -21 m), the Floating Span (1 no. 248 m), Pile Foundations and Mooring Systems. The Bridge is an emergency facility meant to ease mobility across the Likoni Creek (721 m) and allow for the operation of sea-borne vehicles. Bridge currently in construction stage.

- ***June 2020-September 2020: Bridge and Pavement Engineer: Design Review, Nairobi Expressway Project - KeNHA***

Nairobi Expressway project is a PPP project currently at construction stage. I have been part of the design review team whose responsibility is to progressively review the geotechnical investigations, structural and pavement designs and drawings submitted for approval to the client (KeNHA) by the PPP contractor before construction to ensure they meet the specifications and the future expectations of the nation.

- May 2020-September 2020: Bridge and Pavement Review Engineer: Design Review of the Detailed Engineering Design of Multi-National Malindi-Lungalunga Road Corridor Development: Mombasa-Mtwapa-Kwa Kazdengo-Kilifi (A7) Road - KeNHA**

Assisting Kenya National Highways Agency, I was involved in the development and review of geotechnical investigations, engineering designs of 11 No. bridges, 9 No footbridges and the proposed pavement designs which are part of the first phase of the project meant to improve mobility across the Kenya/Tanzania Border.
- March 2018-June 2020: Bridge Design Engineer and Assistant Resident Engineer, Design and Construction of Thika Road Footbridges Lot 1- KeNHA**

The project involved design and construction supervision of two modern footbridges at Garden City Mall and at Kenya School of Monetary Studies (KSMS), along Thika Superhighway. Responsible for the conduction of geotechnical investigations, preliminary and detailed designs of the footbridges, supervision of the construction of the bridge works to ensure compliance with the specifications, chairing meetings, taking minutes and managing the works contract with the Resident Engineer.
- May 2017-June 2020: Bridge and Pavement Engineer, Design and Construction of Thika Road Footbridges Lot 2 - KeNHA.**

The project involved design and construction supervision of two modern footbridges and service roads at Mang'u Road junction and at Witeithie, along Thika Superhighway. Responsible for the conduction of geotechnical investigations, preliminary and detailed designs of the footbridges & pavement structure, supervision of the construction and quality control of the works to ensure compliance with the specifications, review of fabrication details and methodology of works received from the contractors and preparation of as-built drawings.
- May 2019-July 2020: Structural Engineer, Engineering and Project Management Consultancy Services for Design and Construction of New Security Facilities and Data Centres - United Nations (Nairobi; Somalia)**

The project involved conduction of geotechnical investigations, preliminary and detailed designs of new Anti-terrorism structures as well as repurposing and retrofit design of existing facilities. Working in conjunction with ARUP (UK), I was responsible for geotechnical investigations and designs of all structural works as the project structural engineer. The project is currently in the tender Stage.

- ***June 2019-April 2020: Design Engineer, Design and Construction of Kipkaren Dam Works: LVNWSB***

The project involved the design and supervision of Kipkaren Dam works and associated pipelines. Responsible for conducting and reporting geotechnical studies, the design of earth dam walls and cores, all hydraulic and ancillary structures including intakes, weirs, treatment works, sludge beds, access ramps, storage tanks and buildings, costing of the works using CESSM3 and support to the site team during construction.

- ***February 2019-October 2019: Bridge and Pavement Engineer, Design of the Yoontoy Vehicular Bridge and Approaches, Somalia-US Army, Somalia Army and Allied Forces (AMISOM)***

The project involved conduction of a feasibility study, geotechnical investigations, preliminary and detailed design as well as costing of 120 m span steel (Bailey-type) vehicular and pedestrian bridge across river Juba near Kismayu and road approaches in Kismayu, Somalia. Acted as team leader, responsible for evaluation of the technical feasibility of the bridge, conduction, analysis and reporting of geotechnical investigations, evaluation of most feasible bridge types for adoption as well as the design and detailing of the bridge which is currently in construction.

- ***January 2019-August 2019 – Bridge and Pavement Engineer, Design Review and Supervision of the Construction of Mogadishu-Jowhar and Mogadishu-Afgoye Roads (120 km): Qatar Fund***

The Project involved evaluation of geotechnical investigations, design and reviews and construction supervision of overpass and river bridges, box culverts and retaining walls. Responsible for the supervision of the conduction of geotechnical investigations, design reviews of the pavement structures and their foundations and preparation of design review reports, and construction supervision using FIDIC Conditions of Contract Suite (Silver Book).

- ***October 2018-February 2019: Assistant Civil and Structural Engineer-Military Installations: Design and Construction of Force Protection Works, Kismayu, Jubaland Somalia: US Forces, KDF Forces, Danab***

Involved in the design, costing and supervision of the construction of emergency force protection works under the auspices of the US forces, AMISOM and the Jubaland Forces.

- September 2018-September 2019: Assistant Structural and Forensic Engineer: Structural Integrity Audit and Restoration of KIRDI, Anniversary Towers and AMREF Headquarters**

Involved as team lead in the conduction of structural integrity audits, reporting and repair of the proposed Kenya Industrial Research Institute Laboratories and Technology Centres after cracks emerged; the AMREF Headquarters at Wilson Airport after razing by fire and the 25 storey Anniversary Towers in Nairobi after cracks emerged in basements.
- March 2018-July 2018: Assistant Materials and Structural Engineer, Design Review and Supervision of the Dualing of Magongo Road, Mombasa; TMEA, KeNHA**

The project involved provision of review and supervision services for the construction of 4.0 km pavement, 2 No. overpass bridges, approach retaining walls and pedestrian bridges. Responsible for assisting the project structural and materials engineers with reviewing and reporting of the geotechnical investigations and analyses, review of the structural designs, test reports, methodologies and other submittals from the EPC contractor.
- December 2017-May 2018: Assistant Structural and Pavement Engineer: Area 2 Road Improvement Projects in Laikipia and Nyeri-KeRRA-European Union**

Took part in the conduction of geotechnical investigations, design of bridges, drainage structure and pavement structures, design review, cost estimating, documentation of bids and evaluation of contractors after tender.
- November 2017-June 2018: Assistant Civil Engineer, Construction of the Independent Water Supply Schemes along Northern Collector Tunnel-Gatango Water Supply, AWSB**

The project involved the design, design review and supervision works for water treatment and supply works. Responsible for reviewing of geotechnical studies, improvement of the designs of all hydraulic and ancillary structures including intakes, weirs, treatment works, sludge beds, access ramps, storage tanks and buildings; reviewing of the costing of the works using CESSM3 and supporting to the site team during construction.
- Oct 2017- July 2018: Assistant Bridge and Materials Engineer, Engineering Design of Homabay Town Roads and Bridges, KURA**

The project involved the conduction of feasibility study, preliminary and detailed designs as well as provision of cost estimates for the project. Responsible for the reviewing the geotechnical report, conducting the designs of the pavement,

bridge and box culvert structures and generation of cost estimates of the project for tender.

- ***July 2017- June 2018: Assistant Structural Engineer, Nairobi Ring Associated Substations Project, KeTRACO***

The project involved provision of design support services to the EPC contractor, which included design of towers, substation structures and bridges for access.

I was responsible for the conduction of geotechnical investigations in proposed sites, preliminary and detailed designs, costing and value engineering of structures.

- ***October 2015-July 2017: Assistant Structural and Materials Engineer, Design Review and Supervision of Moi International Airport-Port Reitz Roads, Mombasa; TMEA, KeNHA***

The project involved provision of review and supervision services for the construction of 4.8 km A-Class Road, 2 No. overpass bridges, approach retaining walls and 3 No. pedestrian bridges.

Responsible for assisting the resident engineer with reviewing and reporting of the geotechnical investigations and analyses, review of the structural designs, supervision of works, testing materials and reporting reports as well as evaluating methodologies, contractual claims and other submittals from the EPC contractor.

- ***January 2016-May 2016: Assistant Engineer, Design and Supervision of Lower Nyamindi and South Mara Hydropower Plant Projects; GoK, KTDA***

The Project involved the conduction of feasibility studies, geotechnical investigations as well the design and construction of the hydropower infrastructure.

Responsible for preliminary and detailed design of the weirs, flood walls and ancillary structures.

- ***September 2015-April 2016: Assistant Engineer, Design and Supervision of Sugar Board Bridges, Drainage and Road Projects, South Rift Belt, GoK, EU***

The project involved provision of design and supervision services which included design of access roads, bridges and drainage structures.

Responsible for the conduction of geotechnical investigations in proposed sites, preliminary and detailed designs, costing and value engineering of structures.

Education:

- M.A. Construction Management, University of Nairobi- Thesis
- B.Sc. Civil Engineering, First Class Honours, University of Nairobi, 2015
- KCSE, Mary Mother of Grace Boys' Secondary School, Laikipia A-

Employment Record:

- **May 2015 to 2020**
: Kenya National Highways Authority (Contract Service)
: Multi-Scope Consulting Engineers Limited
- **2020 to Date**
: Graduate Trainee, Graduate Engineer, Assistant Engineer, Structural and Materials Engineer

Languages:

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Swahili	Good	Good	Good

Certification:

I, the undersigned, certify that these data correctly describe me, my qualifications, and my experience.

[Signature of staff member]

Date: 03/ 11/ 2022

[Signature of authorized representative]

Date: 03/ 11/ 2022

Full Name of staff member:

Maurice Kagwi Njoroge

Full name of authorized representative:

Eng. Barrack. O. Okoya – MD, Barlaw Ltd

Association of Consulting Engineers of Kenya - Future Leaders



CERTIFICATE OF MEMBERSHIP

This is to certify that

.....
Eng. Maurice Kagwi Njoroge.....

Has been accepted as a duly qualified member of ACEK - FL and entered into the register under serial no. **FL 064**

Given under our hands on **21st Sept 2020**.....

.....
CHAIRPERSON ACEK-FL

.....
CHAIRPERSON ACEK

.....
HON. SECRETARY - ACEK



FIDIC AFRICA

This certificate is the property of the Association and must be surrendered on demand of the council



The Institution of Engineers of Kenya

CERTIFICATE OF MEMBERSHIP

THIS IS TO CERTIFY THAT

Maurice Kagwi Mjoroge

HAS BEEN ADMITTED

Corporate Member 20.7034

OF THE INSTITUTION OF ENGINEERS OF KENYA ON THE

16th March 2020

GIVEN UNDER OUR HANDS AND THE COMMON SEAL

OF THE SAID INSTITUTION ON THE

3rd April 2020

[Signature] Member

[Signature] President

[Signature] Honorary Secretary

Serial No. **0000261**



THE REPUBLIC OF KENYA
ENGINEERS BOARD OF KENYA
Certificate of Registration

THIS IS TO CERTIFY THAT

Eng. Maurice Kagwi Njoroge
HAS BEEN DULY REGISTERED
AS A PROFESSIONAL ENGINEER

Pursuant to and in accordance with Section 16
of the Engineers Act, 2011, and that on the

26th October 2020

such name was entered in the Register under the
Serial Number

A 3663

Given under our hands and Common Seal of the
Engineers Board of Kenya, at Nairobi this

26th October 2020

Eng. Nicholas M. Musumi
Registrar

JKF(C004)14/10/19

PEA - 0194

UNIVERSITY OF NAIROBI



This is to certify that

Maurice Kagwi Mforoge

having satisfied the requirements
for the award of the degree of the

**BACHELOR OF SCIENCE
(IN CIVIL ENGINEERING)**

First Class Honours

was admitted to the degree
at a Congregation held at
this University on the

Fourth Day of September in the Year
2015

VICE-CHANCELLOR

DEPUTY VICE-CHANCELLOR (ACADEMIC AFFAIRS)

2015

Profession	: Civil Engineering
Expertise	: Materials and Laboratory Technologist
Professional Experience	: 13 years
Date of Birth	: 30th August 1983
Nationality	: Kenyan

Education Background:

- The Kenya Polytechnic University College: 2007 – 2009; Diploma Civil Engineering
- Mbita High School: 2002 – 2004; Kenya Certificate of Secondary Education (KCSE)
- Usare Primary School: 1991 – 1999, Kenya Certificate of Primary Education (KCPE)

Work Experience:

Nov 2017 – To Date: Laboratory manager, Shanxi Dikuang Kenya Laboratories Ltd

Responsibilities:

1. *Management of the Laboratory*

- Stay familiar with the regulatory requirements of the laboratory and ensures all users follow those standards.
- Review oversees test activities and protocols of laboratory and field groups to stay abreast as to what test projects are occurring in the laboratory and field at any given time.
- Ensure laboratory staff follow and adhere to the laboratory quality manual and mandatory procedures
- Update and maintain the Laboratory Safety Plan/Manual and the SDS Manual
- Accompany the EHS officers during Lab Inspections
- Make site visits to give reports on findings

2. *Laboratory Operation*

- Oversees laboratory safety and ensures that the laboratory remains in compliance with all local regulations. In cases where non-compliance is found, documents the instances as well as how they were abated.

- Ensures all reagents and supplies are available when needed.
- Manages and updates equipment and Chemical inventories.
- Communicates and enforces laboratory safety rules to internal and external staff working in the lab
- Ensure employees follow industry standards and safety regulations for handling and disposing of test samples.
- Supervise geotechnical investigations Report test results.
- Writing factual reports on the test results
- Ensures all users of the laboratory are wearing the appropriate PPE

3. Training

- Ensures lab users have been trained on the correct use of the lab equipment and test procedures, in addition to mentoring and disciplining lab users for not following safety policies/ test procedures that have been established for the lab. Schedules safety training for new lab users and retraining for laboratory users who are in need of refresher training to include but not be limited to: equipment training, safety training and/or lab safety plan reviews, test procedures and standards, and ensure the training has been documented.

4. Maintenance Housekeeping

- Ensures that the laboratory is cleaned/sanitized and kept in an orderly manner.
- Ensures all instrumentations/equipment is functioning properly to include but not limited to eyewash/safety showers, and contacts the Equipment Technician when instruments/equipment is found to be in need of maintenance/repair to have it repaired.

***August 2012 – October 2017: Assistant Laboratory manager – Geoff Griffiths & Associates
Independent Material Testing & Inspection Laboratories***

Responsibilities:

- Supervising Laboratory activities
- Inspection & Testing of Building & civil Engineering Materials according to specified Standards.
- Reporting the test results.
- Writing factual reports on the test results
- Site visits to give reports on findings
- Supervise geotechnical investigations.
- Ensure laboratory equipment are maintained in good order

January 2011 - August : 2012 Clerk Of Works, Avid Group Consulting

Responsibilities:

- Interpretation of Architectural & Structural plans.
- Coordination of construction works including supervision and related assignments
- Survey of sewer lines, access roads and storm water.
- Attendance of site meetings, regular liaison with the consultants, clients and foremen the in project excursion
- Management of resources, materials, personnel, and equipment with strict controls on cost, quality and time.
- Ensuring building code, specifications and standards are adhered to.
- Preparation of comprehensive site report.

December 2009 - January 2011: Site Supervisor, Alrie Construction Company Limited

Responsibilities:

- On site construction management to ensure building code, specifications and standards are adhered to.
- Interpretation of Architectural and structural plans
- Setting out.
- Preparation of site reports.
- Attendance of site meetings and liaison with consultants, client and foremen for project excursion.

September 2007 - December 2007: Ministry of Roads as an Attaché

Responsibilities:

- Handling and testing of soils for construction
- Site visits

September 2008 - December 2008: KCAA as an Attaché

Responsibilities:

- Leveling
- Interpretation of Architectural and structural plans
- Setting out
- Preparation of bills of quantities
- Writing site reports.

Skills and Strengths:

- Highly motivated self-starter
- Fast learner, keen on details and result oriented team player.
- Good negotiator with demonstrated interpersonal skills
- Ability to work under minimum supervision
- Good report writing skills.

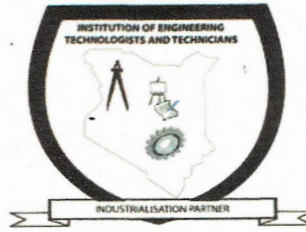
Career Objectives:

Add value to the organization's goals and strategy as I enhance my career development approach not only through self-motivation and high standards of integrity, but also working in challenging dynamic environment with minimum supervision and proof of quality results.

This is based on my fervent appreciation of the core requirements for an organization with the objective of corporate advancements in productivity and sustainable growth and expansion, i.e team work, participation and involvement in the core productive activities of the organization.

Referees:

1. Mr. Alpheus Ondiwa.
Chairman, School of Science and Built Environment
Technical University of Kenya
Mobile No. 0721538425
2. Mr. Akoko Donald.
Director Avid Group Consulting
Mobile No. 0721767289, 0736273925
3. Mr. Eric Oriyo.
Senior Technologist & Laboratory Manager - Geoff Griffiths & Associates
Independent Material Testing and Inspection Laboratories.
Mobile No. 0720173538.



Certificate of Membership

This is to certify that

Ooro Lawrence Otieno

is a recognized member of the

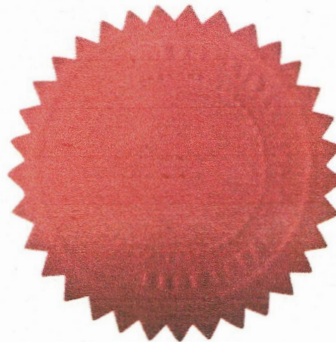
**Institution of Engineering
Technologists and Technicians of Kenya**

Registration Certificate Number *4073*

Class of Membership *Certified Engineering Technician*

Registered this day of *18/09/2020*

Honorable Secretary-IET



Chairman-IET

This Certificate was issued without any alteration and is subject to membership validity

The Kenya National Examinations Council



Diploma

IN TECHNICAL EDUCATION PROGRAMME (TEP)

This is to certify that the candidate named below sat for the Diploma in TEP examination in the subjects named below and was awarded this Diploma. The candidate attained the grades shown below:

401002/046 DORO LAWRENCE OTIENO NOVEMBER 2009 SERIES
401002 KENYA POLYTECHNIC II
2307/3 DIPLOMA IN CIVIL ENGINEERING
SUBJECT GRADE
301 MATHEMATICS 4 (FOUR)
302 SURVEYING 5 (FIVE)
303 STRUCTURES 5 (FIVE)
304 SOIL, MECHANICS AND HYDRAULICS 4 (FOUR)
305 MEASUREMENT-ESTIMATING AND COSTING 3 (THREE)
306 CIVIL ENGINEERING CONSTRUCTION AND DRAWING 5 (FIVE)
307 TRADE & ENTREPRENEURSHIP PROJECTS 4 (FOUR)

NOVEMBER 2009 SERIES

OVERALL RESULT: PASS
DATE PRINTED 08-JAN-2012

MITIHANI

Secretary
Kenya National Examinations Council



Chairman
Kenya National Examinations Council

This is a secure document using special paper and inks. Please hold it up to the light to verify that the word MITIHANI and the "GENUINE" embedded thread can be seen through the paper. This document is not valid without a hologram.

(See overleaf for conditions of issue)

D/TEP 0057952



Ominde Allan Clinton

Profession	: Civil Engineering
Expertise	: CAD Engineer and Detailer
Professional Experience	: 15 years
Date of Birth	: 12th September 1982
Nationality	: Kenyan

Skills and Strengths:

- Inspection and supervision,
- Preliminary site investigations,
- Production of working structural drawings using AutoCAD,
- Preparation of daily / weekly / monthly work progress reports,
- Taking work measurements during project progress,
- Technical skills in structural design techniques using Eurocodes,
- Skills in structural design software like Prokon and Masterseries,
- Computer skills in Engineering design software civil 3D and MS Word, MS Excel

Career Objective:

Experienced structural technician, construction supervisor and inspector with demonstrated history of working in the engineering consultancy industry with over 15 years of experience. I have a methodical, customer focused approach to work and a strong drive to see tasks through to completion. In my previous assignments, I have worked as inspector, supervisor and CAD Technician on various projects.

Education Background:

- JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
2018 – 2021: B.Sc. Civil Engineering
Grade attained: Second Class Honours (Lower Division)
- KENYA INSTITUTE OF HIGHWAYS AND BUILDINGS TECHNOLOGY
2014 – 2015: HND Civil and Building Engineering
Grade attained: Credit (Knec)

- TECHNICAL UNIVERSITY OF KENYA
2006 – 2008: Diploma Building
Grade attained: Pass (Knec)
- ST. MARK'S SECONDARY SCHOOL, OBAMBO
2000 – 2003: Kenya Certificate of Secondary Education
Grade attained: Credit (Knec)

OTHER TRAININGS:

- March 2021: Attended an IEK jointly with EBK Capacity Building & Mentorship Webinar, Focuses on Structures, Highways, Construction and Water & Sanitation among other engineering categories.
- March 2009: Bell Institute of Technology.
Certificate in AutoCAD

Membership in Professional Bodies:

- Member of Institution of Engineering Technologists and Technicians (MIET), In the process of registering in the following categories:
- EBK and IEK as a graduate engineer,
- Professional Engineering Technologist, P. Eng. Tech.

Work Experience:

February 2022 – Present: INSPECTOR, KENYA NATIONAL HIGHWAYS AUTHORITY
Construction of Kambu River Bridge and Approach Roads along Old Mombasa Road (A8), Makueni County

Responsibilities:

- Supervising bridge and road construction,
- Assisting in design review,
- Preparing and maintaining site records and other road work records,
- Selecting and locating suitable materials for Road works,
- Assisting in collecting data on road inventory,
- Ensuring that all site records are prepared on time and submitted as required

June – September 2021: SITE AGENT, BISHIN TRANSPORTERS & CONSTRUCTION
Construction of Rangwe Sub-County Commissioner's offices, a national government project in Homa Bay County

Responsibilities:

- Ensure successful delivery of project,
- Representing contractor to customers, public and suppliers,
- Manages cost plan of the project,
- Ensure smooth execution of the project

January 2020 – June 2021: TRAINER, KIAMBU INSTITUTE OF SCIENCE AND TECHNOLOGY

Responsibilities:

- Facilitating acquisition of new knowledge, skills and attitudes through instruction, demonstration, guidance and motivation to students,
- Preparing syllabi, schemes of work and lesson plans,
- Teaching, demonstrating and conducting practical exercises,
- Counselling students and developing technical skills

January 2020 – June 2021: TRAINER, KIAMBU INSTITUTE OF SCIENCE AND TECHNOLOGY

Responsibilities:

- Facilitating acquisition of new knowledge, skills and attitudes through instruction, demonstration, guidance and motivation to students,
- Preparing syllabi, schemes of work and lesson plans,
- Teaching, demonstrating and conducting practical exercises,
- Counselling students and developing technical skills

May 2012 – October 2019: INSPECTOR, MULTISCOPE CONSULTING ENGINEERS LIMITED

Responsibilities:

- Facilitating acquisition of new knowledge, skills and attitudes through Witnessed tests to ensure high quality materials are used,
- Monitored progress against programme and record keeping,
- Ensured compliance with health and safety requirements,
- Ensured compliance with the contract documents which include taking measurements and samples,
- Ensured compliance to the manufacturer's recommendations,
- Prepared daily and weekly reports,
- Production of preliminary layouts and detailed structural drawings

September 2009 – April 2012: GRADUATE CAD TECHNICIAN, MANGAT IB PATEL & PARTNERS CONSULTING ENGINEERS LIMITED

Responsibilities:

- Prepared preliminary layouts and detailed working structural drawings,
- Construction supervisions and inspection,
- Ensured all work undertaken is checked and approved by my supervisor,
- Ensured all work is carried out in conformity with company procedures, relevant regulations and codes of practices.

February 2009 – July 2009: ASSISTANT SITE AGENT, EPCO BUILDERS LIMITED

Responsibilities:

- Ensured the site complies with health and safety standards,
- Monitored progress against programme,
- Assessed whether the works are being carried out in accordance with the contract documents which include taking measurements and samples,
- Checked levels of the building and drainage system using a dumpy level,
- Ensured buildings setting-out is done as per the layout drawings.

Referees:

1. ENG. BARRACK O. OKOYA

Professional Engineer, University of Nairobi

Phone: +254 723 452 110

2. ENG. M. P. OKEYO

Professional Engineer, Taeyoung Engineering & Construction Company

Phone: +254 720 738 562

3. ENG. EDWARD K. KARIUKI

Professional Engineer

Phone: +254 723 603 624



**JOMO KENYATTA UNIVERSITY
OF
AGRICULTURE AND TECHNOLOGY**
UNDERGRADUATE ACADEMIC TRANSCRIPT*

309456

Name of Student: OMINDE Allan Clinton **Registration No.** ENC211-0265/2018
Faculty: School of Civil Environmental and Geospatial Engineering
Course: B.Sc Civil Engineering
Date of Admission: September 2018 **Academic Year:** 2020/2021
Year of Study Fifth

UNIT CODE	TITLE OF UNIT	UNIT(S)	GRADE
ECE 2501	Engineering Management I	1	B
ECE 2502	Structural Design III	1	B
ECE 2503	Water Resources Engineering I	1	C
ECE 2504	Public Health Engineering III	1	D
ECE 2507	Logistics and Systems Analysis in Transportation	1	C
ECE 2508	Geotechnical Engineering	1	B
ECE 2509	Engineering management II	1	B
ECE 2510	Harbour Engineering	1	B
ECE 2511	Civil Engineering Practice	1	B
ECE 2514	Theory of Structures VII	1	C
ECE 2515	Structural Design IV	1	C
ECE 2517	Geographical Information Systems	1	C
ECE 2519	Environmental Engineering	1	C
ECE 2505	Project	3	C
ECE 2319	Practical Attachment II	1	PASS
ECE 2417	Practical Attachment III	1	PASS

Recommendation

PASS; Awarded the Degree of B.Sc Civil Engineering with SECOND CLASS HONOURS (LOWER DIVISION)

Key to Grading System

A = 70 - 100 % -Excellent
B = 60 -69 % -Good
C = 50 - 59% -Satisfactory
D = 40 - 49 % -Pass
E = 39% and below -Fail

Signed: 
Date Issued: 

**OFFICE OF THE DEAN
SCHOOL OF CIVIL, ENVIRONMENTAL
AND GEOSPATIAL ENGINEERING
JOMO KENYATTA UNIVERSITY OF
AGRICULTURE & TECHNOLOGY**

NB: 1 Unit consists of 25 lecture hours equivalent:
(3 Practical hours or 1 tutorial hour is equivalent to 1 lecture hour)

Signed: 
Date Issued: 07 JUN 2022



* This transcript is issued without any erasures or alterations.

The Kenya National Examinations Council



Diploma

IN TECHNICAL EDUCATION PROGRAMME (TEP)

This is to certify that the candidate named below sat for the Diploma in TEP examination in the subjects named below and was awarded this Diploma. The candidate attained the grades shown below:

2305/3 DIPLOMA IN BUILDING

401002/006 ALLAN CLINTON OMINDE

401002 KENYA POLYTECHNIC II
SUBJECT

301	MATHEMATICS
302	SURVEYING
303	STRUCTURES
304	BUILDING TECHNOLOGY AND DRAWING
305	MEASUREMENT, ESTIMATING AND COSTING
306	CONSTRUCTION MANAGEMENT
307	TRADE & ENTREPRENEURSHIP PROJECTS

GRADE

6 (SIX)
5 (FIVE)
4 (FOUR)
5 (FIVE)
6 (SIX)
5 (FIVE)
2 (TWO)

OVERALL RESULT:

PASS

PRINTED ON: 23-SEP-2010

AT: 13:46:43

CYNTHIA ANNE WALUCHO
ADVOCATE
P.O. Box 59963 - 00200
NAIROBI

Secretary

Kenya National Examinations Council



Chairman

Kenya National Examinations Council

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D/TEP 0010382

(See overleaf)

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The Kenya National Examinations Council



Higher Diploma IN TECHNICAL EDUCATION

This is to certify that the candidate named below sat for the Higher Diploma in Technical Education examination in the subjects named below and was awarded this Higher Diploma. The candidate attained the grades shown below:

3082 CONSTRUCTION (BUILDING & CIVIL ENGINEERING OPTION)

401107416 ALLAN CLINTON OMINDE

M

401107 KENYA INSTITUTE OF HIGHWAYS & BUILDING TECHNOLOGY

201	MATHEMATICS	6(SIX)
202	CONSTRUCTION TECHNOLOGY, CONCRETE TECH. & PLANT	1(ONE)
203	STRUCTURES INCLUDING HIGHWAY ENGINEERING	5(FIVE)
204	SITE ORGANISATION, ADMINISTRATION & WORK STUDY	5(FIVE)
205	HYDRAULICS, GEOLOGY & SOIL MECHANICS	5(FIVE)
206	COSTING & MEASUREMENT OF FIELD WORK	5(FIVE)
207	PROJECT	1(ONE)

CYNTHIA ANNE WALUCHO
ADVOCATE
P.O. Box 59963 - 00200
NAIROBI

OVERALL RESULT **CREDIT**

LAST EXAMINATION DONE IN 2015 NOVEMBER

DATE PRINTED: 170124:15050822

*Certified true Copy
of the Original
22/06/2022*

Secretary

Kenya National Examinations Council

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(See overleaf for conditions of issue)



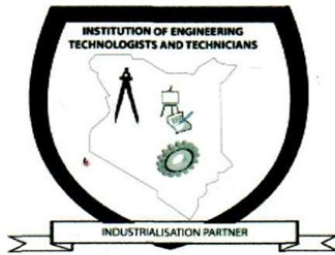
[Signature]

Chairman

Kenya National Examinations Council

HD 0021358





Certificate of Membership

This is to certify that

Allan Clinton Ominde

is a recognized member of the

**Institution of Engineering
Technologists and Technicians of Kenya**

Registration Certificate Number **3838**

Class of Membership **Member**

Registered this day of **23/06/2020**

Honorable Secretary-IET



Chairman-IET

This Certificate was issued without any alteration and is subject to membership validity

CONTACT US

**Barlaw Limited,
Greenwood Drive, off Syokimau-Katani Road
Mobile: +254 0723 452 110
P.O. Box 5956-00100 Nairobi - Kenya.
Email: info@barlaw.co.ke / okoyab@gmail.com
Website: www.barlaw.co.ke**