

CURRICULUM VITAE

A. GENERAL INFORMATION

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|--|---|
| 1. Name: | ISHOLA, Kazeem |
| 2. Date and Place of Birth: | 28th July 1984 / Ede |
| 3. Gender: | Male |
| 4. Nationality: | Nigerian |
| 5. State of Origin: | Osun |
| 6. Local Government Area: | Ede |
| 7. Marital Status: | Married |
| 8. Names and Ages of Children: | Abdullah (13), Ayisha (10) Ahmad (6)
and Abdul Rahman (3) |
| 9. Names and Relationship of Next of Kin: | Mrs. Ayantola Monsurat (Spouse) |
| 10 Permanent contact address: | Lane 1, 29 Rombay area Ede, Osun
State |
| 11 E-mail Address: | kazeem.ishola@uniosun.edu.ng |
| 12 Registration With Research Gates: | Yes |
| 13 If Yes, Provide the link: | https://www.researchgate.net/profile/Kazeem-Ishola-2 |
| 14 If No, why? | Nil |
| 15 Registration With Google Scholar: | Yes |
| 16 If Yes, Provide the link: | https://scholar.google.com/citations?authuser=1&user=ARkUeJsAAAAJ |
| 17 No, why? | Nil |
| 18 Cell Phone Number: | +234(0) 8063358031 |
| 19. College/Faculty/Unit: | Science, Engineering and Technology
(SET) Faculty of Engineering |
| 20. Department: | Civil Engineering |
| 21. Position on First Appointment: | Lecturer II |
| 22. Present Position and Salary: | Senior Lecturer, CONUASS 05/03 |
| 23. Date of Present Position: | 1 st October 2024 |
| 24. Is your Appointment Confirmed? | Yes |
| 25. If No, Why Not? | |
| 26. Date of Confirmation: | 2 nd September 2025 |

B. EDUCATIONAL BACKGROUND

1. Educational Institutions Attended with Dates:

Ladoke Akintola University of Technology, Ogbomoso, Nigeria	(2017- 2024)
Ahmadu Bello University, Zaria	(2010-2014)
Usman Danfodio University Consultancy Center, Gusau	(2008-2009)
Ladoke Akintola University of Technology, Ogbomoso, Nigeria	(2002-2007)

Government Secondary School, Ballah, Kwara State	(1994-2000)
Pake LGEA Primary School, Ilorin, Kwara State	(1989 – 1994)

2. Academic and Professional Qualifications with Dates

Ph.D. Civil Engineering	2024
Registered Engineer (R.32,772) [Council for the Regulation of Engineering in Nigeria, COREN]	2016
Corporate Member (MNSE-Num.32112) [The Nigeria Society of Engineers (NSE)]	2014
Master of Science (Civil Engineering)	2014
Postgraduate Diploma in Education	2010
Certificate in Data Processing and Information Technology	2008
Bachelor of Technology (<i>Hons</i>), 2 nd Class Lower Div. (Civil Eng.)	2007
NECO/SSCE (June/July)	2000

3. Other Relevant Qualifications: Nil

4. Honours, Awards and Distinctions:

- (i) Sponsorship award for Ph.D. programme by Osun State University, Osogbo, 2019 (*Under the NEEDS Assessment Intervention Fund for Staff Training and Development*)

5. Research Fellowship with Dates Nil

C. WORK EXPERIENCE OUTSIDE THE UNIVERSITY SYSTEM

- i. **Site Engineer:** Joe Engineering Ltd, University Road, Tanke, Oke-Odo, Ilorin, Kwara State 2016
- ii. **Assistant Site Engineer:** Ladeen Global Resources Nig. Ltd. No 51, Station Road, Ilorin, Kwara State 2015
- iii. **Assistant Site Engineer:** ESAL Engineering Limited. Hayah Buba road, Gusau, Zamfara State 2010 - 2014
- iv. **Assistant Site Engineer:** Habib Engineering Nigeria Limited. Off Zaria Road, Gusau, Zamfara State 2014
- v. **Part-time Teacher:** College of Islamic Sciences, Gusau, Zamfara State:2009 -2013
- vi. **Trainee:** (SIWES) at Yolas Consultants, No. 5 Joseph Ogbeha Road, Ilorin, Kwara State. 2006

D. WORK EXPERIENCE IN OTHER UNIVERSITY:

Nil

E. WORK EXPERIENCE IN OSUN STATE UNIVERSITY:

- 1. **Teaching:** Lecturer II, November 17, 2017, to Senior Lecturer till date

F. CO-CURRICULAR PROFESSIONAL EXPERIENCE:

- i. Supervision of the construction of a two-storey building and a warehouse at Mubo Street, Ilorin
- ii. Supervision of the Construction of Link Road from the University of Ilorin Main Campus of the College of Health Sciences.
- iii. Supervision of the construction of a parking lot for the College of Health Sciences 300-seater lecture hall, University of Ilorin.
- iv. Supervision of the construction of a storey building for Alhaji Musa Gambo, Sokoto State.
- v. Supervision of the Construction of Science Laboratory at College of Islamic Science Gusau, Zamfara State.
- vi. Supervision of Multi-Purpose Hall Construction at College of Islamic Sciences, Gusau, Zamfara State.
- vii. Supervision of the construction of the drainage system at Ahmadu Bello Way – Birnin Ruwa, Gusau, Zamfara State.
- viii. Supervision of Rehabilitation of Ahmadu Bello Way – Birnin Ruwa Gusau. Zamfara State.

G. MEMBERSHIP OF PROFESSIONAL BODIES:

- (i) Registered Engineer [*Council for the Regulation of Engineering in Nigeria, COREN*]
Registration Number: (R. 32772)
- (ii) Corporate Member [*Nigeria Society of Engineers, NSE*]
Registration Number: (MNSE-Num. 32112)

H. SERVICE:

(i) University

(a) Departmental Level:

Level Adviser (for various levels, 2017/2018 session till date)

Member, Departmental Consultancy Committee.

Student Work Experience Scheme coordinator (2018/2019 session till date)

Examination Officer: 2023/2024 to 2024/2025 session

(b) Faculty/ College Level:

Member, Faculty of Engineering, and Environmental Sciences Conference Committee, 2019, 2021.

(c) University Level:

Nil.

(ii) Community:

Member, Road Rehabilitation Committee, Oke Alafia Community Oke- Odo Tanke, Ilorin Kwara State 2019-till date

(iii) National

National Youth Service Corps (NYSC) at College of Islamic Sciences, Gusau Zamfara State (March, 2008 – February, 2009).

(iv) International: Nil

I. COURSES TAUGHT DURING THE CURRENT ACADEMIC SESSION:

(2025/2026)

Harmattan: Unit	Code	Title
	CVE 307	Soil Mechanics 1
	CVE 403	Quantity Surveying and Estimation
	CVE 527	Construction Engineering
	CVE 501	Assigned Project I
	CVE 607	Geotechnical Engineering
	CVE 727	Site investigation, Field and laboratory Measurement

Rain (assigned):	CVE 204	Fundamental of Building Construction
	CVE 206	Strength of Materials
	CVE 502	Assigned Project II
	CVE 724	Earth Retaining Structure and Ground improvement

Current Undergraduate Supervision: 10 students

J. GRADUATE STUDIES SUPERVISION:

(i) Doctor of Philosophy Research:	Two (2)
(ii) Master by Research:	Two (2)
Master by Long Essay:	Nil

K. PUBLICATIONS

(I) Thesis/Dissertation

1. **Ishola, K (2007)** "Evaluation of Air Pollutants in Some Selected Areas in Ogbomoso North" B.Tech. Thesis, Civil Engineering Department, LAUTECH, Ogbomoso
2. **Ishola, K (2014).** "Modification of Lateritic Soil with Iron Ore Tailing". Unpublished M.Sc. Thesis, Civil Engineering Department, Ahmadu Bello University, Zaria.
3. **Ishola, K (2023)** "Evaluation of Solidification and Stabilization Characteristics of Lead contaminated Lateritic Soil Treated with Gum Arabic Biopolymer " Unpublished Ph.D. Thesis, Civil Engineering Department, LAUTECH, Ogbomoso

(II) Books (Authored/Co-Authored) Nil

(III) Books (Edited/Co-Edited) Nil

(IV) Monographs: Nil

(V) Chapter in Books Nil

(VI) Articles in learned journals:

1. Yohanna, P., Babatunde, A. Q., Osinubi, K. J., Eberemu, A. O., Adeke, P. T., Etim, R. K., and **Ishola, K.** (2025). Assessing the Unconfined Compressive Strength of Lime-Stabilized Soil Blended with Iron Ore Tailings using a Probabilistic and Artificial Neural Networks Approach. *Hybrid Advances*, Published by Elsevier B.V (**Offshore**). <https://doi.org/10.1016/j.hybadv.2025.100563>
2. **Ishola k.** (2025). Evaluation of the eco-friendly contribution of cashew leaf ash in sustainable lateritic soil road pavement construction. *Hybrid advances*, 9, Published by Elsevier B.V (**Offshore**). <https://doi.org/10.1016/j.hybadv.2025.100405>
3. Oluremi, J.R. and **Ishola, K.** (2024) Compaction and strength characteristics of lead contaminated lateritic soil treated with eco-friendly biopolymer for use as road foundation material, **Hybrid Advances**, Published by Elsevier B.V (**Offshore**) <https://doi.org/10.1016/j.hybadv.2024.100158>.
4. Fadipe, O.O., Kareem, M.A., and **Ishola, K.** (2024). Influence of Climate Change on Groundwater Resources in Osogbo, Osun State, Nigeria. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, Published by **Springer (Offshore)** <https://doi.org/10.1007/s40996-024-01389-7>
5. **Ishola, K.**, Adeyemo, K.A., Kareem, M.A., and Olawuyi, M.Y. (2024). Modeling and Evaluation of the Strength Properties of Oke-Bale Soft Soil Amended With Calcium Chloride Salt. *Malaysian Journal of Civil Engineering*, 36(1):23-31. Published by Universiti Teknologi Malaysia, Faculty of Engineering (**Offshore**) <https://doi.org/10.11113/mjce.v36.21636>
6. Fadipe, O.O., Mutiu, A.F., Olawuyia, O.A., Kareem, M.A. **Ishola, K.** and Oyewole, K.A (2024) Identification of Accident Location and Degree of Vulnerability along Osogbo-Gbongan Road, Osun State, Nigeria. *Malaysian Journal of Civil Engineering* 36(1):1-7 Published by Universiti Teknologi Malaysia, Faculty of Engineering (**Offshore**) DOI: <https://doi.org/10.11113/mjce.v36.20995>
7. Oluremi, J. R. and **Ishola, K.** (2024). Effect of Gum Arabic Biopolymer on Atterberg Limit and Cation Exchange Capacity of Lead-Contaminated Lateritic Soil. *LAUTECH Journal of Engineering and Technology* 18 (1):57-63 Published Faculty of Engineering, LAUTECH. Nigeria (**Onshore**)
8. **Ishola, K.**, Adeyemo, K. A., Kareem, M. A., Oriaje, A. T., Olawuyi, M. Y., and Ayanlere, S. A. (2024). Regression Analysis on California Bearing Ratio of Selected Soft Soils in Osun State for Pavement Construction. 12(1):82-92 LAUTECH Journal of Civil and Environmental Studies. Published by Department of Civil Engineering, LAUTECH (**Onshore**) DOI: 10.36108/laujoces/4202.21.0190.
9. **Ishola, K.**, Adeyemo, K.A, Kareem, M.A., Olawuyi, O.A., Yisa, G.L. Ijimdiya, T.S. (2023). Compaction Characteristics and Workability of the Lateritic Soil-Iron ore Tailings in Pavement Construction. *Journal of Civil Engineering, Science and Technology* 14(2):117 – 128. Published by Universiti Malaysia Sarawak, Sarawak, Faculty of Engineering (**Offshore**)
10. Kareem, M.A., Akintonde, B.B., Adesoye, J.S., **Ishola, K.**, Tijani, I.A., Adebajo, A.U., Thanni, M.O., Oduoye, W.O., Adeyanjua, D.O. and Bello, A.A. (2023). Influence of cashew leaf ash as a partial replacement for cement on the properties of fresh and hardened concrete. *Cleaner waste system*. Published by Elsevier B.V. (**Offshore**) <https://doi.org/10.1016/j.clwas.2022.100063>

11. Kareem, M.A., Adebayo, A.O., Adeosun, J.O., Akinwusi, A.I., Orogade, B.O., Ayanlere, A.S., (2023). Adebani, A.A., Obadare, G.O., **Ishola, K.**, and Bello, A.A. Characteristics of interlocking paving blocks made with cashew leaf ash as partial replacement for cement. *Materials today proceedings*, 86:121-127. Published by Elsevier B.V. (Offshore) <https://doi.org/10.1016/j.matpr.2023.04.294>
12. **Ishola, K.**, Adeyemo, K. A., Kareem M.A., Fadipe, O.O., and Oriaje, A.T. (2023). Assessment of the Geotechnical Properties of Lateritic Soil in Some Selected Area at Owode Ede in Osun State. Published by Civil Engineering Department, University of Ibadan (Onshore)
13. Yohanna, P., Badamasi, A., **Ishola, K.**, Odoh, K.C, Abdulkadir, M.N, Fwangshak, G.M. (2022) A Comparative Study on the Effect of Sisal Fibre and Waste Plastic Strips in Structural Strength improvement of Tropical Black Clay. *Journal of Engineering Studies and Research*.28 (2):81-91 Publish by University of Bacau, Engineering Faculty ROMANIA (Offshore)
14. Adeyemo, K.A., Yunusa, G.H., **Ishola, K.**, Bello, A.A., Adewale, S.A.(2022). Cassava peel ash modified black cotton soil as a material for hydraulic barriers in municipal solid waste containment facility. *Cleaner Waste Systems* 3, 100045: 1–8. Published by Elsevier B.V. (Offshore) <https://doi.org/10.1016/j.clwas.2022.100045>
15. Adebajo, A., Kareem, M., Olawuyi, O., **Ishola, K.**, and Odefemi, A. (2022) Effects of Waste Steel Fibres on the Mechanical Properties of Modified Self Compacting concrete. *Journal of Engineering Studies and Research* 28 (2):7-16 Publish by University of Bacau, Engineering Faculty ROMANIA (Offshore)
16. Yohanna, P., **Ishola, K.**, Aondover, C.M., Fortunatus, J.K., Fwangshak, G.M., Badamasi, A (2022). A comparative study on properties of lateritic soil treated with rice husk Ash and metakaolin geopolymer. *ACTA TECHNICA CORVINIENSIS* 1: 65-70. Published by University POLITEHNICA Timisoara, Faculty of Engineering, Hunedoara, ROMANIA (Offshore)
17. Ameen, I. O, Bello, A. A. **Ishola, K.** and Adeyemo, K. A.(2021) Influence of admixture of Bamboo leaf ash and lime on the Compaction characteristics of lateritic soil, *LAUTECH Journal of Civil and Environmental Studies* 6 (12): 116-126 Published by Civil Engineering Department, LAUTECH (Onshore)
18. **Ishola, K.**, Olawuyi, O.A., Yohanna, P and Bello, A.A., Sani, R.O., Akin, O.O. (2021) Reliability Evaluation of Compaction Water Content of Plantain peel ash treated Lateritic Soil. *Nigerian Journal of Technological Development* 16(1):47-54 Published by Faculty of Engineering, Unilorin (Onshore)
19. **Ishola, K.** Ijimdiya, T.S, Yohanna, P. and Osinubi, K.J (2020) Evaluation of Shear Strength of Compacted Iron Ore Tailing Treated Lateritic Soil Platform-*Journal of Engineering*, 4 (3):48-58 Published by Universiti Petronas, Malaysia (Onshore)
20. **Ishola, K.**, Adeyemo, K. A. and Ajayi, O.G. (2020) Assessment of UCS and CBR Characteristics of Some Selected Lateritic Soils in Osun State Nigeria for Pavement Construction. *Journal of Civil Engineering and Technology*, 2(2): 16-24. Published by University of Ibadan (Onshore)
21. Kareem, M. A., Bamigboye, G. O., Olawale, S. O. A., Tijani, M. A., **Ishola, K.**, and Olawuyi, O. A. (2020). A Response Surface Approach for Determining Optimal Mix Parameters for Normal Strength Concrete. *UNIOSUN Journal of Engineering and*

- Environmental Sciences*, 1(1):19-27 Published by Faculty of Engineering, UNIOSUN (Onshore)
22. **Ishola, K.**, Olawuyi, O.A., Bello, A.A. and Yohanna, P. (2019) Effect of Plantain peel ash on the strength properties of tropical red soil. 4(1): 447-459. *Nigerian Research Journal of Engineering and Environmental Sciences* Published by University of Benin (Onshore)
 23. **Ishola, K.**, Olawuyi, O.A., and Kareem M.A. (2019); Compaction characteristics of the Lateritic soil –Mango leaf Admixture with Cement 1(1):95-101. *UNIOSUN Journal of Engineering and Environmental Sciences* Published by Published by Faculty of Engineering, UNIOSUN (Onshore)
 24. **Ishola, K.** Agbolade, I. C and Yohanna, P. (2019) Effect of Plantain Peel Ash on Gradation and Compaction Characteristics of Tropical Soil. *Journal of Engineering, FUOYE, Ekiti.*, 4 (2): 28-33. Published by Faculty of Engineering, FUOYE, (Onshore)

(VII) Review Articles:

25. **Ishola, K.**; Olawuyi, O.A., Bello, A. A., Etim, R.K., Yohanna, P., and Sani, J.E. (2019) Review on Agricultural waste utilization as improvement additive for residual Tropical Soil. *Arid Zone Journal of Engineering, Technology, and Environment*, 15(3):733-749. Published by University of Maiduguri, (Onshore)

(VIII) Refereed Conference Proceedings

26. Ayanlere, A. S., Kareem, M. A., **Ishola, K.**, Orogade, B. O., Babalola, A., Hamzat, I., and Olayiwola, J. (2023). Investigating the strength properties of concrete with teak (*Tectona grandis*) leaf ash as a partial replacement for cement. In *2nd International Conference on Advances in Cement and Concrete Research (CEMCON): Innovations in Cement and Concrete Production for Sustainable Development* (pp. 267-274). Ladoke Akintola University of Technology (LAUTECH), Ogbomoso, Nigeria, November 7-10, 2023 (Onshore)

(IX) Manuscripts Submitted for Publication:

1. Ishola, K., Adeyemo, K. A., Kareem, M A. and Fadipe, O.O (2024). Statistical Analysis of the Standard Proctor Test on Chemically Treated Tropical Soil. Submitted to Discover Civil Engineering. (Under review).
2. Ishola K. (2024) Evaluation of the Eco-Friendly Contribution of Cashew Leaf Ash In Sustainable Lateritic Soil Road Pavement Construction submitted to Hybrid Advances (Under review)

(X) Un-refereed conference proceedings: Nil

(XI) Book reviews: Nil

(XII) Technical Reports:

- [1] **Ishola, K. (2014).** Postgraduate Professional Experience in Civil Engineering. A Report submitted to ‘The Nigerian Society Engineers (NSE), Zaria Branch, Kaduna State, Nigeria.

- [2] **Ishola, K. (2016).** Postgraduate Professional Experience in Civil Engineering. A Report submitted to ‘The Council for the Regulation of Engineering in Nigeria (COREN), Abuja, Nigeria.

(XIII)	Patents and inventions:	Nil
(XIV)	Creative/ Design work:	Nil

L. CURRENT RESEARCH ACTIVITIES:

(I) **Funded Research:** Nil

(II) **Non-Funded/Self-Sponsored Research:**

1. Shear Strength Characteristics of Compacted Iron Ore Tailing Treated Lateritic Soil.
2. Compaction Characteristics of the Lateritic soil –Mango leaf Admixture with Cement.
3. Strength and durability Characteristics of lateritic soil treated with cashew leaf ash.

(III) **Papers and Works in Preparation**

1. Remediation of contaminated soil through the use of biopolymers
2. Evaluation of the Bearing Capacity Characteristic of Lateritic Soil – cashew leaf ash Foundation.
3. Evaluation of Volumetric Shrinkage and Hydraulic Conductivity effect on the Geotechnical properties of cashew leaf ash lateritic soil.

M. CONFERENCES ATTENDED:

- (i) *2nd International Conference on Advances in Cement and Concrete Research (CEMCON): Innovations in Cement and Concrete Production for Sustainable Development* (pp. 267-274). Ladoke Akintola University of Technology (LAUTECH), Ogbomoso, Nigeria, November 7-10, 2023
- (ii) 2nd International Conference on Engineering and Environmental Sciences on Re-thinking Engineering and Technology for Environmental Sustainability in the face of Global Pandemic held between November 23 – 25, 2021 at Olagunsoye Oyinlola Auditorium, Osun State University, Osogbo, Osun State Nigeria.
- (iii) 1st International Conference on Engineering and Environmental Sciences on Advancing Technology Burdens (Challenges and Sustainable Solutions), held between March 5 – 7, 2019 at Olagunsoye Oyinlola Auditorium, Osun State University, Osogbo, Osun State Nigeria.
- (iv) 2-Day Mandatory Continuing Professional Education Course for Prospective Corporate Members of the Nigerian Society of Engineers, held between March 16th- 17th 2014 at Ahmadu Bello University, Zaria, Kaduna State, Nigeria.
- (v) 3-Day Mandatory Continuing Professional Education Course for Prospective Corporate Members of the Nigerian Society of Engineers, held between March 19th -21st, 2014 at NSE Secretariat, Maitama, Abuja, Nigeria.
- (vi) 3- Days Nigerian Engineering Conference on Engineering and Technology for Economic Transformation held between March 15th -18th September 2014 at the Faculty of Engineering Ahmadu Bello University, Zaria, Kaduna State, Nigeria

N. EXTRA-CURRICULAR ACTIVITIES:

Traveling, listening to Radio, Meeting people.

O. ANY OTHER RELEVANT INFORMATION:

Reviewer for:

- [1] Uniosun Journal of Engineering and Environmental Sciences (UJEES), Faculty of Engineering Osun State University, Osun State, Nigeria; 2019 till date.
- [2] Malaysian Journal of Civil Engineering, Universiti Teknologi Malaysia, UTM, Johor Bahru, Johor, Malaysia.
- [3] Cement and Concrete Research group, Ladoke Akintola University of Technology (LAUTECH), Ogbomoso, Nigeria.

P. SUMMARY OF CONTRIBUTION TO KNOWLEDGE

In my studies, the incorporation of waste materials from agriculture and industries into soil has provided valuable insights into sustainable construction practices. By utilizing waste materials and natural additives, geotechnical properties of soil can be enhanced, promoting eco-efficiency and performance in civil engineering applications. Successful examples of these waste materials include iron ore tailings, plantain peel ash and cashew leaf ash.

Iron ore tailings (IOT) were employed to modify properties of lateritic soil for road pavement materials using various laboratory tests such as cation exchange capacity, compaction, and California bearing ratio (CBR). It was concluded that an optimal IOT content of 10% improved the strength of lateritic soil when modified with IOT. Similarly, Laboratory tests and regression analysis were utilized to assess the cation exchange capacity with an improvement of up to 8% IOT and 2% waste wood ash (WWA) content. An optimal blend of 8% IOT and 6% WWA was identified, which improved soil consistency indices for subgrade material in lightly trafficked roads. Plantain peel ash (PPA) was used to enhance lateritic soil properties through laboratory tests including specific gravity, compaction, UCS, and CBR. The study concluded that a 4% PPA content is suitable for subgrade material when used with additional stabilizers. In another study comparing Sisal Fibre and Waste Plastic Strips for improving the geotechnical properties of black cotton soil, it was found that the CBR values with an optimal 2% waste plastic strips content enhanced road pavement applications over sisal fibre. Therefore, waste plastic strips are recommended for sustainable engineering practices. The study on bamboo leaf ash admixed with lime for lateritic soil improvement used three compactive efforts: British standard light (BSL), British standard Heavy (BSH) and West Africa standard (WAS). It was determined that a range of 6-8% bamboo leaf ash and a constant 3% lime content were required for effective stabilization. Additionally, a study on the suitability of various lateritic soils across different locations within Osun State revealed variability in their geotechnical properties, with some soils deemed unsuitable for construction purposes. The conclusion emphasized the need for stabilization using conventional materials such as cement and lime for use as base course material. Comparative studies using iron ore tailings and waste wood ash to improve the properties of lateritic soil focused on enhancing plasticity characteristics and cation exchange capacity for construction purposes. Lastly, exploring the potential of Gum Arabic biopolymer (GAB) as an eco-friendly additive to improve the strength and compaction characteristics of lead-contaminated lateritic soil (LCLS) highlighted its effectiveness when used up to 25% by the dry weight of soil. However, while GAB enhances soil characteristics, the ultimate strength values do not

meet recommended thresholds for standalone sub-base stabilization. Therefore, GAB at 10% is best utilized as an admixture in conjunction with cement stabilization methods, underscoring its efficacy for sustainable road pavement construction.

ISHOLA, KAZEEM



28/06/2026

STAFF NAME

SIGNATURE

DATE