

Position Title and No.:	Centre Director- Transport Specialist		
Name of Expert:	<b>Charles Anum ADAMS</b>		
Date of Birth:	17 February 1968	Country of Citizenship/Residence:	Ghana

**Education:**

Institution (Date: from – Date to)	Degree(s) or Diploma(s) obtained
Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana (2006-2013)	Ph.D. Civil Engineering (Transport)
Indian Institute of Technology Madras, Chennai (October 2010- January 2011)	Visiting PhD Scholar
University of Birmingham (UK)- 2007	Visiting PhD Scholar
Imperial College/University College, London, UK (1992-1993)	M.Sc. (Transport), Diploma Imperial College (DIC)
Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana (1987-1991)	B.Sc. Civil Engineering
<b>Professional Short Courses</b>	
Maastricht School of Management (MSM), Netherlands, January 2019	Certificate in Strategic Leadership and Change management
KOENIG solutions Limited, Dubai, 29th April 2019 to 3rd May 2019	Certificate in Project Management Professional (PMP)® Over 40 hours of professional training
Ghana Institution of Engineering, Engineers Centre, Roman Ridge Accra, November 2019	20 hours Road Safety and Traffic Management
International Road Federation -Global Ghana Institution of Engineering, Engineers Centre, Roman Ridge Accra, May 2018	Certificate of participation in the Course Safer Roads by Design

**Employment record relevant to the assignment:**

Period	Employing organisation and title/position Contact info references	Country	Summary of activities performed relevant to the Assignment
February 2021- August 2020	Ghana Urban Mobility and Accessibility Project (GUMAP), Ministry of Local Government and Rural Development- Transitec/Delin /TRECK <i>Principal Consultant</i>	Ghana	Principal consultant for the diagnosis of Traffic management challenges, Traffic Safety Enforcement and Parking management in the six municipalities of the Greater Accra Metropolitan Area.
June 2020 – December 2021	High Volume Transport (HVT) research Project (Transitions) - Vectors/Transitec/University of Cape Town <i>City Research Coordinator</i>	Ghana	Ghana Case study research coordinator- undertook research on informal public transport transitions including, formalization, new modes, safety, business models etc.
January 2020- July 2021	Volvo Research and Educational Foundations (VREF) <i>Principal Investigator</i>	Ghana	Research on Comparative Analysis of Combined Effects of Transport and Urban Morphology on Public Health in Two African Capitals

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2019-date	<b>Centre Director</b> , Africa Centres of Excellence (ACE) Regional Transport Research and Education Centre Kumasi (TRECK). Kwame Nkrumah University of Science and Technology, Kumasi	Ghana	Africa Centre of Excellence (ACE) Regional Transport Research Centre, Kumasi is a WorldBank Centre for West Africa. The Director of TRECK is responsible for the Education programmes, Applied research and technology transfer to Transport Sector in West Africa. Main research themes for the research include <ul style="list-style-type: none"> <li>Traffic management and Intelligent traffic Systems, Resilient Infrastructure, Sustainable Transport in Smart cities and Integrated Logistics and transport Finance.</li> </ul>
2016-2019	Client: Kwame Nkrumah University of Science and Technology, Kumasi <b>Associate Professor, Road and Transportation Engineering Manager,</b> <b>Road and Transportation Engineering Programme</b> Prof. Mark Adom- Asamoah Markadomasamoah@gmail.com	Ghana	<ul style="list-style-type: none"> <li>Training, supervision and consultancy</li> <li>Activities performed: teaching courses in road asset management, geometric design of roads</li> </ul> <p>Undertaking consultancy on design of road management systems, supervision of MSc and PhD thesis including road safety, geographical information systems application in Transport.</p> <p>Training of professional engineers in road maintenance data collection, budgeting</p>
2008-2016	Client: Kwame Nkrumah University of Science and Technology, Kumasi <b>Senior Lecturer, Road and Transportation Engineering Manager,</b> <b>Road and Transportation Engineering Programme</b> Prof. S.I .K Ampadu <a href="mailto:sikampadu@hotmail.com">sikampadu@hotmail.com</a>	Ghana	Training and supervision Activities performed: <b>Teaching</b> and conducting research, supervision of coursework design; undertaking departmental <b>consultancy in Road Data collection and Management for the Road sector.</b>
01/2018-12/2018	Client: Civil Design Solutions National Peer Review Expert,  Project manager Robert Geddes, Civil Design Solutions, SA.	Ghana - Homebased	Review of Low Volume Road design manuals including The documents to be reviewed by the National Peer Reviewer (Ghana) will include: <ul style="list-style-type: none"> <li>Volume A: Geometric Design and Road Safety;</li> <li>Volume B: Materials, Pavement Design and Construction;</li> <li>Volume C: Hydrology, Drainage and Roadside Stabilisation;</li> <li>Volume D: Complementary Interventions.</li> </ul>

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06/2018-14/2019	Client: <b>Ghana Highway Authority.</b> Decongestion of Roundabouts on the Ejisu- KNUST Section of the N6 Highway. Ing Paul Adanse Pipin Duah	Ghana	Redesign and Construction Supervision of 4 Congested Roundabouts at KNUST Police Station, Boadi Junction, Oduom Junction and Ejisu Junction. Near Kumasi. It included Traffic studies for the evaluation of the existing conditions at the site, Simulation using PTV Vissim Software Suite, Preparation of Traffic management plans for Work zone Construction Traffic management,
09/2014	Client :Design Network Architects <b>Team Leader/Civil and Geotechnical engineering Consultant</b>	Ghana	Project: Proposed Development of the Nyanba Hospital complex at Dodowa, Dangbe West District, Greater Accra Region  Project features: The project involves subsurface exploration, geotechnical engineering (foundation) assessment for the design of structural foundation for the hospital complex. The Hospital will consist of several three to six storey blocks in Reinforced concrete. The investigation also covered subgrade evaluation for roadwork. Dynamic cone penetration tests were undertaken along with Test pits. Sampling both disturbed and undisturbed were made and tested. The report was used to information foundation design and application for development permit.
19/08/2014	Client: National Accreditation Board, Republic of Ghana <b>Team Leader/ Highway Engineering Expert</b> The National Accreditation Board is the highest body responsible for accrediting all Tertiary and Professional programmes in Ghana	Ghana	Accreditation assessment of the KAAF University College Proposed Master of Science Programme in Highway Engineering Project features. Led a Panel of Professional engineers and Academics to assess the proposed Curriculum, assess staff competencies and qualification, Library, Text books and Teaching facilities, Laboratories, funding sources, forecasted enrolment etc. and entry qualifications for students and degree to be awarded. We made recommendations to the National Accreditation Board on various areas needing improvement and made presentation to the College staff in a debriefing meeting before the draft final report was submitted.

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01/2014	<p>Client: National Authorizing Officer /Ministry of Finance and Economic Planning/Ghana Highway Authority.</p> <p><b>Key Expert/ Highway Engineer</b></p> <p>Financed by: European Union Jean Claude Mounnet, Team Leader <a href="mailto:jcmounnet@aol.com">jcmounnet@aol.com</a> Olivia Scuppa , ARS Progetti Project Manager <a href="mailto:o.scuppa@arsprogetti.com">o.scuppa@arsprogetti.com</a></p>	Ghana	<p>Project: European Union Audit Team for Tarkwa Bogoso Ayamfuri Road</p> <p>Project features: 94km of reconstruction with Asphalt surfacing and Bridges</p> <p>Activities performed: Along with a Team leader, undertook rehabilitation works including assessment of pavement works of natural gravel subbase quality, crushed stone base course and Asphalt layer quality test, assessment of mix design and Asphalt plant, trial mixes responsible for the auditing of construction practices, procedures, materials and workmanship quality control and assurance, application of specification and contractual requirements and forecasting of risks of project management. Two additional missions were completed</p>
08/2006-02/2013	<p>Kwame Nkrumah University of Science and Technology, Kumasi/ Indian Institute of Technology Madras, Chennai, India.</p> <p><b>PhD Scholar</b></p>	Ghana India	<p>Doctoral studies on Accident Prediction Models for Two lane Urban Roads, this included aspects in Accident data collection and analysis, Road safety Audit of road links, assessment of Geometric factors and Traffic on causation of accidents. Analysis of trends,</p>
02/2012 – 06/2013	<p>Client: National Authorizing Officer /Ministry of Finance and Economic Planning/Ghana Highway Authority.</p> <p>Key Expert/ Material Engineer</p> <p>Financed by: European Union Jean Claude Mounnet, Team Leader <a href="mailto:jcmounnet@aol.com">jcmounnet@aol.com</a> Olivia Scuppa, ARS Progetti Project Manager <a href="mailto:o.scuppa@arsprogetti.com">o.scuppa@arsprogetti.com</a></p>	Ghana	<p>Project: European Union Audit Team for Tarkwa Bogoso Ayamfuri Road</p> <p>Project features: 94km of reconstruction with Asphalt surfacing and Bridges</p> <p>Activities performed: Along with a Team leader, responsible for the auditing of road design and construction practices, procedures, materials and workmanship quality control and assurance, application of specification and contractual requirements and forecasting of risks of project management. The assignment consists of five missions of two weeks duration per each site. Five missions were accomplished</p>
05/2013 – 10/2013	<p>Client National Authorizing Officer/Uganda Road Fund EU Capacity Building and Technical Assistance to Uganda Road Fund, Kampala, Uganda</p> <p><b>Road Asset Management Expert</b> SOFRECO, France Raphael Mabenga, Team Leader <a href="mailto:raphael.mabenga@googlemail.com">raphael.mabenga@googlemail.com</a></p>	Uganda	<p>Two Mission to make a client analysis and determination of a suitable Road Maintenance Management System for the Uganda Road Fund. It involved the assessment of Road Maintenance Management Systems in all road Agencies and also the definition of requirements and specification, development and implementation of a computer based system (RMMoS). The Implementation included need assessment and capacity building and training measures for 65 Road engineers from District, Municipal and District councils and Station Engineers from Uganda National Roads Authority. The system stores road network reference, inventory and condition, traffic and assist in the preparation and monitoring of maintenance annual routine and periodic</p>

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2013	Client Department of Urban Roads <b>Team Leader, Road Maintenance Expert</b> Road and Transportation Engineering Section. KNUST, Kumasi. Ghana	Ghana	Training of Observers and supervision of Data collection and management Led a team to undertake road inventory and condition data collection for Urban road network in six cities of Ghana including roughness measurement by Roughometer, my role also including training of the observers and supervising teams and data cleaning and quality assurance.
04/2012 - 05/2012	Client: National Authorizing Officer/ Sierra Leone Road Authority Financed by European Union <b>Road Maintenance Management Specialist</b> RRI Rhein Ruhr International GmbH/GIZ Germany Helmut Giesa, Team Leader <a href="mailto:giesahelmut@wed.de">giesahelmut@wed.de</a> Hans Maennchen <a href="mailto:hans@maennchen.com">hans@maennchen.com</a>	Sierra Leone	Technical Assistance to the Sierra Leone Roads Authority: (SLRA) This aspect of the project focused on the development of road geometric design manual (D), Pavement Design Manual, Drainage design manual and Bridge design manual. It also included mentoring two young engineers from SLRA. Activities performed: Development and Adaptation of Road and Bridges Design Manual for Sierra Leone Road Authority. Analysis and review of various road design manuals and bridges design manuals and revisions and updating of the existing Road Design Manuals to reflect best practices in ECOWAS sub-region, including presentation at stakeholder workshops and training of local staff.
11/2011 - 12/2011	Client: National Authorizing Officer/ Sierra Leone Road Authority Financed by: European Union <b>Road Maintenance Management Specialist</b> RRI Rhein Ruhr International GmbH/GIZ Germany Helmut Giesa, Team Leader <a href="mailto:giesahelmut@wed.de">giesahelmut@wed.de</a> Hans Maennchen <a href="mailto:hans@maennchen.com">hans@maennchen.com</a>	Sierra Leone	Technical Assistance to the Sierra Leone Roads Authority: Project involved the setting up of a Road <b>Maintenance Management system</b> . This included road network referencing and preparation of road network register. The system software PMMP II was adapted for the trunk roads which can be link to GIS based mapping. This was after assessing whether VisRoads could be used Activities performed: Implementation of Road Condition Surveys and Pavement Design. Implementation of a data collection and monitoring system for pavement management system. The assignment involved development of a Pavement Design Manual and adaptation of Technical Specifications for Roadworks to suit local conditions and local practices. Also, six (6) young engineers were trained in Freetown, Bo, Makeni and Port Lokko to collect, input and undertake analysis of road condition and budget using the system.

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09/2008 – 09/2007	Client: Kwame Nkrumah University of Science and Technology, Kumasi <b>Senior Lecturer, Road and Transportation Engineering Division</b> Prof. S.I.K Ampadu, <a href="mailto:sikampadu@hotmail.com">sikampadu@hotmail.com</a>	Ghana	Training and teaching Courses in Road assets management  Activities performed: Teaching postgraduate <b>Road management systems and Operations and Road Maintenance Management, Traffic engineering and operations</b>  Also taught undergraduate courses in Entrepreneurship for Engineers, Construction management, Transportation Engineering, Geometric design and Engineering technology.
2006 – 2011	Client: Civil Engineering Department, KNUST <b>Road and Transportation Engineering Division</b> Prof. Mohamed Salifu, Head of Department <a href="mailto:msalifu.coe@knust.edu.gh">msalifu.coe@knust.edu.gh</a> <a href="mailto:salifum@hotmail.com">salifum@hotmail.com</a>	Ghana	Training and supervision Supervised Postgraduate thesis on Development and Testing of Road Asset Management Systems Software for roads in Ghana as follows <ul style="list-style-type: none"> <li>▪ Emmanuel Yaw Osei - Feasibility of Rehabilitate Maintain, Operate and Transfer (RMOT) Contracts on Selected Trunk Roads in Ghana</li> <li>▪ Emmanuel Baah - Frimpong: Determination of Input Parameter Values for the Highway Development and Management system (HDM-4) Vehicle Operating Cost (VOC) submodels for Ghana MPhil (2006)</li> <li>▪ Emmanuel Afful: Development of New Road Asset Management Software for Trunk Roads in Ghana MSC(2007)</li> <li>▪ Solomon Buenor Adi : Development of Road Asset Management System for Tamale Urban roads Network MPhil (2008)</li> </ul>
2006	Client: Lighthouse Chapel Int. Angelo Diocese, Kumasi Consultant Civil Engineer Bishop Patrick Bruce <a href="mailto:pckbruce@gmail.com">pckbruce@gmail.com</a>	Ghana	Construction supervision Activities performed: Supervision of the construction of Five (5) No. Church Building in reinforced concrete including access roads. I supervised the construction and undertook quality control of concrete works and testing of both subgrade and pavement materials including monitoring completion of bases and testing of bitumen.
1993- 2008	Client: Kwame Nkrumah University of Science and Technology, Kumasi <b>Lecturer, Road and Transportation Engineering Division</b> Prof. S.I .K Ampadu <a href="mailto:sikampadu@hotmail.com">sikampadu@hotmail.com</a>	Ghana	Training and supervision Activities performed: <b>Teaching</b> and conducting research, supervision of coursework design; undertaking departmental <b>consultancy</b> testing of both bituminous and natural gravel pavement materials for <b>roadworks</b> and foundation construction. <b>Quality control and supervision of soil testing and or roadworks for various road projects.</b> Improvement of sub base material to base material by means of stabilization with chemicals and soil blending.



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2006,2008	Client Road and Transportation Engineering Programme, KNUST <b>Study Tour Coordinator</b>  Prof Yaw Tuffour Programme manager RTEP <a href="mailto:yatuffour@yahoo.com">yatuffour@yahoo.com</a>	United Kingdom	Training and Continuing Professional Development Led a team of Graduate students to visit Transport Research Laboratory and University of Birmingham. To learn about Road Mentor, attended a lecture by Public Administration International on Private Finance Initiative UK Experience on concessions including Design Build Operate and Maintain, Rehabilitate Operate and Transfer (DBOM), Build Operate and Transfer schemes (BOT), their risk and how to manage risks. Also learn about Performance Based Road Maintenance Contracts (OPRC)
2006-2009	Client: Kumasi Metropolitan Assembly  Goldstreet Real Estate Ltd, Kumasi  Theodore Quaye, Chief Engineer, Kumasi Metro Roads Unit <a href="mailto:tquaye@yahoo.com">tquaye@yahoo.com</a> <b>Team Leader/Transport Specialist</b>	Ghana	Citywide Traffic management and development of Parking Facilities for Off street and On street sites Phase I and Phase II under Public Private Partnership ( <b>PPP</b> ).  Activities performed include survey and site selection, traffic data collection and forecasting. Financial analysis and modeling. Managing the entire design and implementation of the scheme which has been running since 2006. Negotiating contract agreement and raising funds from the private sector for the project. Monitoring project performance and all technical aspects of the project
2005-2007	Client: Databank Asset Management Ltd <b>Highway Engineer</b>  Rev Ogbamey Tetteh Director, DAMSEL Ltd, Databank Group <a href="mailto:ogbameytetteh@databankgroup.org">ogbameytetteh@databankgroup.org</a>	Ghana	Construction design and supervision Odumse Housing Scheme, Dodowa, Accra <b>Planning, Design and Build and Maintain (DBM)</b> of residential housing including the design of road and drainage network, water and other utilities.  Activities performed: Design and construction supervision of residential facilities including bituminous surface dressed roads and drainage works
2003-2005	Kwame Nkrumah University of Science and Technology, Kumasi <b>University Road Consultant</b> Prof. SI.K. Ampadu Provost <a href="mailto:sikampadu@hotmail.com">sikampadu@hotmail.com</a>	Ghana	Road maintenance preparation and management  Maintenance Management of 20km of Paved roads network including <b>development of a software</b> for the capture of <b>road inventory</b> and condition RMMS software which used visual road condition and Roughness (IRI) measurements Preparation of annual maintenance budget, supervision of maintenance facilities and staff. Road inventory and condition data collection for running the road Management system of KNUST.  Activities performed: Responsible for the management and maintenance of entire paved network. Supervision of contracts undertaken by external contractors.

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2005	Client: TRANSTECH LTD/Dept. of urban Roads, Ministry of Transportation, Ghana <b>Highway Engineer</b>  Mr. De Graft Afful - Deputy Director (Maintenance), Department of Urban Roads <a href="mailto:degraffafful@yahoo.com">degraffafful@yahoo.com</a>	Ghana	<b>Development of national road management system</b> for the Department of Urban Roads  Consultancy Services for the Development of <b>Road management System for Department of Urban roads:</b> <b>Setting up of a Computer based Road management system</b> with features to <b>enable mapping and Export of Data to the Highway Development and management system HDM4</b>  Activities performed: <b>Road condition data collection</b> including <b>pavement evaluation studies and analysis for the entire urban road network</b> in two metropolitan and municipal cities.
2005	National Road Safety Commission , Ghana <b>Road Safety Expert</b>	Ghana	Analysis of National accident data and Report for the setting up of Road Safety Strategy Objectives. It included highlighting areas of special interest and proposals for consideration at a national workshop. Results were also presented to stakeholders at the National strategy workshop at Miklin Hotel, Accra.
2004 – 2006	Client: /National Authorizing Officer/ Ministry of Roads and Highways, Ghana <b>Consultant Road Maintenance Engineer</b> HYDROARCH SRI.  De Graft Afful; Deputy Director( Maintenance) Department of Urban roads <a href="mailto:degraffafful@yahoo.com">degraffafful@yahoo.com</a>	Ghana	Technical Assistance Towards an Efficient and Sustainable Management of maintenance in the road subsector. Service contract 8.ACP.GH.009/03: <b>Development and Implementation of maintenance management System</b> for 38,000 km of Feeder Roads and 6,000km <b>of Urban roads including Network referencing and classification of roads.</b>  Activities performed: <b>Road network data collection, classification of feeder and urban roads. Training of staff engineers in road inventory, road condition and traffic data collection. We set up a system software Road manager which is interface able with the HDM 4 and ARC GIS for thematic map display</b>



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1998-2003	<p>Client: Ghana Highway Authority</p> <p>Financed by: German Government under Technical Assistance through German Technical cooperation GTZ</p> <p><b>Road Maintenance Engineer</b> Hans Maennchen Team Leader <a href="mailto:hans@maennchen.de">hans@maennchen.de</a></p>	Ghana	<p>Technical Assistance Towards setting up a <b>Road Maintenance Management System</b> for the trunk Roads Network [13]</p> <p>Involved Network referencing, and setting up the <b>computer based system software PMMP</b>, Implementation of the system in Head office and rollout to Ten regional capitals. <b>Training of Engineers</b> in all regions to undertake <b>annual data collection for planning and Budgeting for maintenance and road condition assessment.</b></p> <p>Activities performed: include development of technical manuals, preparation of plans and programmes for maintenance, Training of engineers and supervision and monitoring of road condition surveys and analysis of data for planning and budgeting as part of pavement management system, road asset management system. This was carried out annually for <b>five (5) years</b></p>
2002-2003	<p>Client: Ministry of Transport, Ghana Highway Authority. Tabcon Ltd</p> <p>Financed by Government of Ghana</p> <p><b>Highway Engineer</b> Mr Michael Abbey Chief Executive Ghana Highway Authority <a href="mailto:maabbey04@yahoo.com">maabbey04@yahoo.com</a></p>	Ghana	<p>Project: Accra Kumasi Dualization Project Redesign of 260Km of roadway into a 4 lane expressway with several interchanges and bypass of major towns and Toll Facilities under Public Private Partnership (PPP) :</p> <p>Activities performed: <b>Coordination and Analysis of traffic data</b> at nine locations on the Accra –Kumasi Highway for the design of Four lane expressway including <b>Classification counts</b>, 24h volume counts, Intersection turning movement counts, Analysis of alternative toll plaza locations <b>Traffic projections</b> and design of at grade and interchanges <b>Analysis of toll plaza location</b>, <b>Supervised the team</b> that undertook subgrade evaluation</p>
2001	<p>Client: Ghana Highway Authority</p> <p>Financed by DANIDA AID</p> <p><b>Highway Engineer</b></p>	Ghana	<p>Project: Kumasi Ejisu -Konongo Rehabilitation Project</p> <p><b>Redesign and Reconstruction (DB)</b> of the 40km of Asphalt surfaced road with crawler lanes and Project features:</p> <p>Activities performed: <b>Traffic studies</b> including axle load measurement and analysis for the design of dual carriageway. <b>Road condition survey</b> and <b>detailed pavement evaluation</b> studies for the redesign of the Kumasi Konongo Road Project</p>

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1993	Client: Imperial College, London, United Kingdom.	United Kingdom	<b>Economic evaluation of the maintenance of gravel roads in Developing Countries.</b> This involved the use of the TRL Road Transport Investment Model (RTIM 3) to determine optimal maintenance strategies for gravel road maintenance. The <b>network database</b> for trunk roads in Ghana was used for the work.

#### Membership of Professional Associations and committees:

- President, Ghana Institution of Engineering- GhIE (March 26, 2021 – March 2023)
- President elect- Ghana Institution of Engineering- GhIE (March 2019 – March 2021)
- Fellow, Ghana Institution of Engineering
- Chair, National Council of GHIE (since March 2019)
- Chair, Executive Committee of GhIE (March 2021-March 2023)
- Member, Sectoral Advisory Board (SAB), TRECK (December 2019 – December 2024)
- Member, International Scientific Advisory Board of TRECK (July 2020- July 2024)
- Member, World Road Association (PIARC)
- Member, International Road Federation-Global
- Member, Ghana Geotechnical Society
- Member, Ghana Geosynthetic Society

#### Technical Reports and Manuals

- Proposal for the Aviation Science and Engineering Programme at KNUST
- Proposal for the MSc Road and Transportation Engineering Programme at KNUST
- Proposal for the Intercollegiate MSc Transportation Planning in collaboration with Department of Planning KNUST and EPFL (Lausanne).
- Ghana Infrastructure Report Card 2016
- Review of Curriculum for the BSc Civil Engineering Degrees at KNUST
- Road Condition Survey Manual, Ghana Highway Authority, Ministry of Roads and Highways
- Road Maintenance Activities Manual, Ghana Highway Authority, Maintenance Operation Manuals
- Road Maintenance supervision Manual, Ghana Highway Authority, Maintenance Operation Manuals

#### Master Research Supervision and Experience as the Principal Supervisor

##### *PhD Thesis supervision*

- *Kwame Kwakwa Osei – Studies on travel time reliability on Arterial with Public Transport (Fourth year PhD scholar)*
- *Ajayi Samuel Akintomide - Environmental Mapping and Modelling of the impacts of Urban Transport on Public Health in Selected African Cities (Accra, Lagos)*
- *Ukam George Stephen- Modelling Travel Time and Reliability of Public Transport in Selected Cities in West Africa (Lagos, Accra)*
- *Fidelma Ibili- Spatial statistical analysis and GIS based modelling of the effects of urban form on road-traffic noise exposure and health in Selected African Cities (Kumasi, Freetown, Monrovia)*
- *Emmanuel Nii Okaidza Afful - Big Data and Analytics for Urban Public Transport Operations Management using Mobile Phone Probe data*
- *Akua Pokuaa Timpabi- Effects of Street Connectivity and Accessibility on Active Transport, and Road Safety in selected West African Cities*

##### *MSc Thesis 2008-17*

- *Amos Y. Barclay – Assessment of Walkability of Pedestrian Facilities and Perception of the KNUST Campus*

- Paul Adanse Pippin Duah – *Appraisal of the Ghana Highway Authority Road Design Guide*
- Naa Oboshie Yankey – *Estimation of Gap Acceptance Parameters for Roundabouts in Ghana*
- Bright Anokye- *Impact of Driver Distraction on road Safety in the Kumasi Metropolitan Area, Ghana*
- Darko, Kwasi Ayeh – *Traffic Management Challenges in Accra, Case study of the Abbosey okai area.*
- Mohammed Zambang Mushin Abdul – *Passenger Car Equivalent Values and Saturation flows at Signalised Intersection in mixed Flow Traffic conditions in the Tamale Metropolis.*
- Opoku-Boahen Richter - *Reducing Congestion on the Accra-Tema Motorway through improved Toll Collection Methods*
- Badu-Prah Ato Kwamina - *Assessing the performance of Tetteh Quarshie Interchange using computer simulation-VISSIM Micro simulation Tool*
- Phillip Agbati - *Socio Economic Impact of Bypasses on Small Communities: A case study of Apedwa- Bunso*

#### ***MSc Thesis 2004/2005***

- Emmanuel Yaw Osei - *Feasibility of Maintain, Operate and Transfer Contracts on Selected Trunk Roads in Ghana*
- Mark Okyere - *Factors Affecting the Attainment of the Medium-Term Maintenance Target for Trunk Roads in Ghana*
- Abena Agyeiwaa Nyarko - *Capacity and Saturation Flow at Signalized Intersection on Arterial Roads in Kumasi*

#### ***MSc Thesis 2006/2007***

- Emmanuel Nii Okaidza Afful - *Development of New Asset Management Software for Trunk Roads in Ghana*
- Sefiamor Dzefi - *Evaluation of the Impact of Adum CBD Paid Parking Management Scheme in Kumasi*
- Solomon Buenor Adi - *Development of a Road Maintenance Management System for Tamale Urban roads Network.*

#### ***MPhil Thesis 2003-2006***

- Emmanuel Baah-Frempong - *Determination of Input Parameter Values for the Highway Development and Management System (HDM-4), Vehicle Operating Cost (VOC) Sub Models for Ghana*
- Kwadwo Adinkra- Appiah - *The Cost of Road Traffic Accidents in Ghana*

#### **Local & International Conferences/Seminars/Workshops Given**

- **Adams C.A**, What Vision Zero Mean to Road Safety Professional in Africa, paper presented at the international road federation Regional conference, December 2020, Virtual edition.
- Dumedah, G, **Adams C.A**, & Arkoful-Andam, S.A, The Covid -19 Pandemic Lockdown In Accra And Kumasi, Ghana – A Preliminary Examination Of The Effects Of The Lockdown Policy On Urban Mobility And Transport, The Environment And Public Health, Ghana Infrastructure Conference (GIC 2020) Virtual edition, August 11-14, 2020.
- Adams C.A, Dumedah, G. Antwi Terah, Osei, K.K, The Covid-19 Pandemic Social Distancing In Public Transport And Its Impact Of Safety Security And Operational Sustainability, Ghana Infrastructure Conference (GIC 2020) Virtual edition, August 11-14, 2020.
- Adams C.A – Postgraduate Training and capacity Building for Research in Transportation in Africa- the TRECK Vision, Paper presented at the annual meeting of the Ghana Transportation Professional Forum of North America, January 2020, Transportation Research board, Washington D.C.
- **Adams C.A** Training of Engineers in Uganda for the Uganda Road fund Road Maintenance Monitoring System (RMMoS) in Kampala, Arua, Mbale, Gulu and Mbarara, September - November 2013
- **Adams C.A** Training of Engineers in Sierra Leone Road Maintenance Management System PMMP , NJALA Avenue, November 2012
- Adams C. A, Vehicle Management and road Safety in Ghana Annual Conference of the Ghana Institution of Engineers, 15-17<sup>th</sup> March 2010, Engineers centre, Accra
- **Adams C. A**, Okyere M. Stakeholder perception of the factors affecting road maintenance management in Ghana. *Presented at the 5<sup>th</sup> College of Engineering Research Retreat*, Eusbert Hotel, Sunyani, Ghana, July 2006

- **Adams C. A** and Okyere M. Factors affecting the attainment of the trunk roads medium term target in Ghana. *Presented at the 5<sup>th</sup> College of Engineering Research Retreat, Eusbert Hotel, Sunyani, Ghana, July 2006*
- **Adams C.A.** Parking characteristics at the Adum central business district in the Kumasi metropolis. *Presented at the 3<sup>rd</sup> School of Engineering Research retreat, Busua Beach resort, Busua from 5-8 August, 2003*
- **Adams C.A**, Mannchen H. And Gyamfi, J.(2002), Paved and Gravel road defects data collection for budget preparation, *presented at the Road Condition seminar/ training workshop for Road managers, Ghana Highway Authority, Tamale Regional Offices Conference Room, March 2002*
- **Adams C.A**, Mannchen H. The 1999 Road condition data collection, quality assurance Issues, *presented at the Annual Maintenance Managers Conference, Ghana Highway Authority, Chances Hotel, Ho, From August, 2000*
- **Adams C.A**, From road condition survey to road condition report-procedures and analysis. *Presented at the GHA/GTZ road maintenance project workshop on PMMP 2001, Ghana Institute of Management and public Administration (GIMPA), Accra 30-31 August 2001*
- Kettner, J. and Gyamfi, J and **Adams C.A**, PMMP budgeting case studies. *Presented at the GHA/GTZ road maintenance project workshop on PMMP 2001, Ghana Institute of Management and public Administration (GIMPA), Accra 30-31 August 2001.*
- **Adams C.A**, Road condition survey 2001 and the use of PMMP. *Presented at the GHA/GTZ road maintenance project workshop on PMMP 2001, Ghana Institute of Management and public Administration (GIMPA), Accra 30-31 August 2001*
- **Adams C.A**, Mannchen H. Operationalization of the PMMP software: Modifications and the way forward, *Presented at the Annual Maintenance Managers Conference, Ghana Highway Authority, Maple Leaf Hotel, Accra. From August, 1999.*

#### Selected Publications

- 1) Kwame Kwakwa Osei, **Charles Anum Adams** and Williams Ackaah, Yolanda Oliver-Commey, Signalization options to improve capacity and delay at roundabouts through microsimulation approach: A case study on arterial roadways in Ghana, *Journal of Traffic and Transportation Engineering (English Edition)*, In Press, Corrected Proof 2019. <https://www.sciencedirect.com/science/article/pii/S2095756418306093>
- 2) Eric Nyame-Baafi, **Charles Anum Adams** and Kwame Kwakwa Osei (2018), Volume warrants for major and minor roads left-turning traffic lanes at unsignalized T-intersections: A case study using VISSIM modelling, *Journal of Traffic and Transportation Engineering*, <https://doi.org/10.1016/j.jtte.2018.01.005>, <https://www.sciencedirect.com/science/article/pii/S2095756417302441>
- 3) **Charles A. Adams**, Yaw Adubofour Tuffour and Samuel Kwofie. Effects of Soil Properties and Geogrid Placement on CBR Enhancement of Lateritic Soil for Road Pavement Layers. *American Journal of Civil Engineering and Architecture*. 2016; 4(2):62-66. doi: 10.12691/ajcea-4-2-4, <http://www.sciepub.com/AJCEA/abstract/5701>
- 4) Nyantakyi E. K., **Adams C. A.**, Borkle J. K., and Pobee D. (2013), Synchronization of signalized Intersections: A case study of three major Intersections on the 24th February Road, Kumasi, Ghana. *International Journal of Engineering Research and Applications (IJERA)*, Vol. 13, Issue 4, July-Aug 2013, pp. 2566-2590, <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.377.9224>
- 5) Osei Kwame Kwakwa, **Charles Anum Adams**. Assessment of Turbo and Multilane Roundabout Alternatives to Improve Capacity and Delay at a Single Lane Roundabout Using Microsimulation Model Vissim: A Case Study in Ghana. *American Journal of Civil Engineering and Architecture*. 2016; 4(4):106-116. doi:10.12691/ajcea-4-4-1. <http://www.sciepub.com/reference/156108>.
- 6) Tuffour, Y. A., Banini, S. Y., and **Adams, C. A.** (2016). Investigation of Afram Shale for Road Construction. *American Journal of Civil Engineering and Architecture*, 4(3), 80-83.
- 7) **Adams, C. A.**, Zambang, M. A. M. and Opoku-Boahen, R. (2015). Effects of Motorcycles on Saturation Flow Rates of Mixed Traffic at Signalized Intersections in Ghana. *International Journal of Traffic and Transportation Engineering*, 4(3): 94-101.
- 8) **Adams, C. A.**, Apraku, E. and Opoku-Boahen, R. (2015). Effect of Triaxial Geogrid Reinforcement on CBR Strength of Natural Gravel Soil for Road Pavements. *Journal of Civil Engineering Research*, 5(2): 45-51

- 9) **Adams, C. A.**, Opoku–Boahen, R. and Zambang, M. A. M. (2014). Parking Management in Metropolitan Cities in West Africa: Case Study of the Kumasi Paid Parking Scheme, Ghana. International Refereed Journal of Engineering and Science (IRJES), volume 3, Issue 5 (May 2014), PP.41-49.
- 10) **Adams, C. A.**, Zambang, M. A. M., and Opoku–Boahen, R. (2014). Passenger Car Unit Values for Urban Mixed Traffic Flow at Signalised Intersections on Two Lane Dual Carriageways in the Tamale Metropolis, Ghana, International Refereed Journal of Engineering and Science (IRJES), Volume 3, Issue 6 (June 2014), PP.01-08.
- 11) **Adams, C. A.**, Amofa, N. Y., and Opoku–Boahen, R. (2014). Effect of Geogrid Reinforced Subgrade on Layer Thickness Design of Low Volume Bituminous Sealed Road Pavements. International Refereed Journal of Engineering and Science (IRJES), Volume 3 Issue 7 (July 2014) PP.59-67.
- 12) Nyantakyi, E. K., Adams, C. A., Borkloe, J. K., and Pobee, D. (2013). Synchronization of Signalised Intersections: A Case Study of Three Major Intersections on the 24th February Road, Kumasi, Ghana. International Journal of Engineering Research and Applications (IJERA). Volume 3, Issue 4, Jul-Aug 2013, pp.2566-2590
- 13) Adams C.A, Salifu M And Appiah- Adinkrah, J (2006) Cost of Road Traffic Accidents in Ghana for 2003, Journal of the Ghana Institution of Engineers, Volume4, Number 1.
- 14) Adams C.A (2005) Review of the Curriculum and Regulation of Driver Training Schools In Kumasi, Ghana, Journal of the Ghana Institution of Engineers, Volume 3, Number 1.
- 15) Adams C. A ,Obiri- Yeboah A and Amo Gottfried J , Evaluation of the Adum paid parking Scheme in Kumasi, proceedings of the International Conference on Best Practices to Relieve Congestion in Mixed Traffic in Developing Countries, Indian Institute of Technology, Madras, Chennai, India, 12-14 September 2008
- 16) Adams C. A and Obiri -Yeboah A, Saturation Flows and Passenger Car Equivalent Values at Signalized Intersections in Kumasi, proceedings of the International Conference on Best Practices to Relieve Congestion in Mixed Traffic in Developing Countries, Indian Institute of Technology, Madras, Chennai, India, 12-14 September 2008
- 17) Nyantakyi E. K., Adams C. A. , Borkle J. K. , and Pobee D. (2013), Synchronization of signalized Intersections: A case study of three major Intersections on the 24th February Road, Kumasi, Ghana. International Journal of Engineering Research and Applications (IJERA), Vol. 13, Issue 4, July-Aug 2013, pp. 2566-2590
- 18) Oduro-Kwarteng, S, Nyarko, K.B and Adams C.A (2004), A methodology for Assessing Condition of Water Assets I Small Towns in Ghana, Journal of the Ghana Institution of Engineers, Volume 2, Number 2,
- 19) Adams C. A ,Obiri- Yeboah A and Amo Gottfried J , Evaluation of the Adum paid parking Scheme in Kumasi, proceedings of the International Conference on Best Practices to Relieve Congestion in Mixed Traffic in Developing Countries, Indian Institute of Technology, Madras, Chennai, India, 12-14 September 2008
- 20) Adams C. A and Obiri -Yeboah A, Saturation Flows and Passenger Car Equivalent Values at Signalized Intersections in Kumasi, proceedings of the International Conference on Best Practices to Relieve Congestion in Mixed Traffic in Developing Countries, Indian Institute of Technology, Madras, Chennai, India, 12-14 September 2008
- 21) Eric Nyame -Baafi and Charles Anum Adams (2018) Analysis of pedestrian walking speeds on an urban walkway , Proceeding of the Ghana Infrastructure Conference, Holiday inn Accra, August 2018. <https://gtpfconference.com/sites/default/files/presentations/Session>

#### Language Skills:

Language	Reading	Speaking	Writing
English	Excellent	Excellent	Excellent
French	Fair	Poor	Poor

Twii	Excellent	Excellent	Good
Fante	Excellent	Excellent	Good

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