

2020 HBCU / MSI

Internship

Project Guide

1. North Carolina Division of Motor Vehicle, License and Theft Bureau

The interns will begin each day with a group meeting with Bureau management to discuss a professional development topic and share their experiences from the previous day. The first two to three weeks of the internship the interns will spend time in each Unit learning about the programs and services the Bureau provides to internal and external citizens, law enforcement agencies and businesses. Once the Interns complete their time in the Units, they will be assigned a project to work on and smaller assignments and projects throughout their internship. The projects will be based on the needs of the Bureau and the knowledge and skills of the intern.

As time and availability permits, the interns will be assigned to a field office to participate in ride a-longs and field activities with the law enforcement agents. The internship will focus on written and oral communication, time management, professionalism, software systems, state government benefits, law enforcement investigations, tactics, and culture.

Requirements: Criminal Justice, Law Enforcement experience/interest, computer analytics, forensics, and security. All college majors accepted, criminal justice, homeland security, computer science preferred. **Location:** Raleigh, NC

2. Transportation Planning Branch

Summer Interns will learn the basic principles of transportation long range planning, coordination at the MPO-RPO level, Traffic Survey Group

Traffic Forecasting **Requirements:** Majoring in Data Analysis or Engineering preferred. **Location:** Raleigh, NC

3. Safety and Risk Management – Project I

Summer Interns will conduct audits, work on inventories for Safety Data Sheets, work with Industrial Hygienist, and work on project based on skill inventor

cycle. **Requirements:** Majoring in either Communication, Business Administration, Occupational Safety, or Environmental Health. **Location:** Raleigh, NC

4. Albert J. Ellis Airport, Onslow County

Summer Interns will follow the guidelines set forth by the American Association of Airport Executives Southeast Chapter. This includes exposure to Airport Administration, Finance, Federal Aviation Administration Requirements, Engineering, Operations, Maintenance, Fire, Marketing and Promotions, and Capital Improvements. **Requirements:** Preferably pursuing an undergraduate degree in Aviation Sciences, Aviation Management, or Public Administration. Must have basic computer skills and knowledge of Microsoft Office. Willingness to be a team player and take on a variety of tasks. **Location:** Richlands, NC

5. Division of Highways - Fayetteville District Office

Summer Interns will learn the primary functions of the District Office - subdivision plan, driveway permit, and encroachment reviews. This will involve work in both the office and the field. The intern would attend project and plan review meetings with the District Engineer. The intern would gain skills in plan review and Department policies and procedures and would have an opportunity to become familiar with construction practices. The intern would gain "softer" skills in problem solving, interpersonal relations, and negotiation. **Requirements:** Civil Engineering major. **Location:** Fayetteville, NC

6. Office of Chief Deputy Secretary

Summer Interns will Participate on statewide projects, work groups, teams, and initiatives. Demonstrate ability to interpret research and documents. Assist with record keeping. Conduct analysis and research on Chief Deputy Secretary initiatives and projects. Responsible for seeking out awards and grants applicable to NCDOT Divisions. Participate with transportation projects on their outreach activities. Provide technical and policy research on transportation related issues and policies for Chief Deputy Secretary Howard. **Requirements:** Masters student preferred majoring in Business, Public Administration, Transportation, Logistics, Urban Planning, Geography, or

Studies (JD). Microsoft Office, Research, and Public Speaking skills. **Location:** Raleigh, NC

7. Department of Transportation Hydraulics Unit

The Hydraulics Unit develops hydraulic designs to alleviate drainage problems and flooding along the transportation network and develops environmental programs to protect NC's streams, lakes, and estuaries from stormwater runoff pollution. The Hydraulics Unit internship supports NCDOT's environmental programs to protect NC's streams, lakes, and estuaries from stormwater runoff pollution. The internship offers diverse opportunities in the areas of field investigations for potential environmental restoration projects, computer-aided design, design of stormwater

treatment practices, GPS data collection, app development, and environmental education. Specific internship projects will be tailored to the student's interest and skills. While travel is not required, day trips, and overnight, statewide travel is optional. Steel toe boots are required for field work. **Requirements:** Majoring in Civil, Biological, Chemical, Construction, Environmental, Structural, Transportation, or Information Technology. Basic computer, MicroStation, CADD skills. **Location:** Raleigh, NC

8. Technical Services/ Photogrammetry Unit

Develop an ArcGIS Database with the historic NCDOT Aerial Photography limits and NCDOT project mapping limits for the period 2013 through 2019. This process will include creating and tagging MicroStation design files that show boundary limits for the historic data using ImageStation Photogrammetric Manager (ISPM) project files and Bentley GeoPak software. These design files will then be organized by year of photography and group them into an ArcGIS geodatabase to be used as a Digital Index and Archive Library of NCDOT project holdings. The project also includes helping with development of the ArcGIS Feature classes and the future maintenance workflow for this data base. The attributes of the database will include but not limited to the photography mission number, date of photography, project TIP number, project description, county name, ground sample distance (GSD), type of mapping camera, mapping product type, delivery date and customer name. **Requirements:** Geomatics major or Graduate Student with ArcGIS experience. **Location:** Raleigh, NC

9. Division of Planning & Programming: Powell Bill Unit and Program Management Unit

Summer Interns will update annual Mayors list, update towns contact names, check 508 maps for updates, use GIS to continue working on ePABTS project, update excel graphs related to populations, mileage and allocations per town, county, and division to the Web. **Requirements:** Majoring in either Civil Engineering or Data Management. **Location:** Raleigh, NC.

10. Value Management Office - Project I

Summer interns will work with the CLEAR program specifically in creating and implementing marketing materials to encourage users to submit lessons learned and best management practices; assist in developing materials for innovation coordinators throughout the Department; conduct a short questionnaire/survey to Department personnel related to innovations. May require some travel with the supervisor across the state. **Requirements:** Marketing/Communication skills. Ability to work well with others and approach people you don't know. An interest in learning about the Transportation industry is helpful, prior experience not necessary. Some experience with conducting research is a bonus. **Location:** Raleigh, NC

11. Safety and Risk Management - Project II

Summer Interns will work with Monitor Workers' Compensation (WC) Service Account

and work with WC team members to ensure NCDOT injured employees receive the best care. **Requirements:** Data analysis skills. Majoring in Biology/Pre-Med or Business Administration. **Location:** Raleigh, NC

12. ITS & Signals Management Unit

Summer Interns responsibilities and proposed tasks are subject but not limited to completing construction revisions using CADD (MicroStation), participating in utility field investigations, checking plans for accuracy and aid in completing project submittals for items used on projects and other duties dealing with Intelligent Transportation Systems.

The intern will learn how a project is managed from initiation to completion, how important it is to pay attention to detail, use the Standard and Project Special provisions developed for a project, read and understand utility, cable routing and fiber optic splice plans. **Requirements:** Experience in CADD is preferred but not necessary.

Location: Raleigh, NC

13. Office of General Counsel

Summer Interns will assist counsel on all subject matter areas by providing input on legal and strategic advice on the interpretation of applicable federal and state laws, regulations, and case law. Responding to Public Record Law requests. Participate in contract negotiations and/or interpretation of internal policy and procedure. Advise the Secretary, Senior Staff, Human Resource Department, and employees on issues related to federal and state employment and labor laws.

Perform traditional case law research, draft legal memorandum, review agreements, survey state law and research legislative history. Intern may attend meetings, hearings, mediations, and depositions. Intern must have the ability to work collectively and independently. **Requirements:** Preferred skills: Ability to perform legal research and writing; ability to read, analyze and apply statutes and case law; critical thinking; strong oral and written interpersonal communication skills. Education Level: Currently enrolled Law Student. **Location:** Raleigh, NC

14. Roadway Design Unit

Summer Interns training will include an introduction to computer software, corridor modeling, MicroStation (engineering software), Geopak (engineering software), Open Roads Designer (ORD), engineering practices and procedures required for the preparation of Roadway Design plans. Individuals should be interested in transportation, mathematics and computer-aided drafting and design. The individual will learn basic computer drafting and design procedures, bill of materials and quantity calculations as well as gain a general understanding of the development of Roadway Design plans and specifications. They will learn basic skills in horizontal and vertical alignments, pavement cross slopes, roadway typical sections, roadway cross-sections, earthwork quantities and calculations, intersection design, project layout for bridge replacements, engineering estimates, project cost estimates and project scheduling.

Requirements: Bachelor of Science in Civil Engineering. Knowledge of some Computed Aided Drafting and Design software. Knowledge of Microsoft Office, Excel, and Access.
Location: Raleigh, NC

15. Transportation Planning Division

Summer Interns will work with the statewide initiatives group. The intern will be working with GIS to verify data to be submitted to FHWA, reviewing technical documents, and helping us to develop a roll out plan for NC Moves 2050 as we begin to wrap the project up. **Requirements:** Majoring in either Civil Engineering or Transportation Planning **Location:** Raleigh, NC

16. Office of Logistics + Freight (OLF)

Summer Interns will provide support to freight + logistics-related data analytics projects + research for OLF. Intern will draft summary executive memos and presentations based on analysis, research or projects completed with support for professional development in these areas from OLF staff. Interns will engage with other members of Office of Logistics + Freight, as well as internal stakeholders such as SPOT office, R+D, TPD, Aviation; external stakeholders such as NC Ports.

Requirements: Critical thinking, problem solving, and basic collegiate research skill set will be required. Advanced Excel skills, PowerPoint + MS Word proficiency. Education level undergraduate or graduate acceptable. Preferred business administration, supply chain management, data analytics majors. **Location:** Raleigh, NC.

17. Office of Inspector General

Summer Interns will assist with maintenance of tracking log of investigations, data analysis for investigations, shadowing during meetings, assist with email public records searches. Interns will develop the following skills sets communication, data analysis, investigation practices.

Requirements: Majoring in Accounting, Business, Criminal Justice. Must have Microsoft Word/Excel experience, analytical skills, communication, and be detail oriented. Prefer someone with an interest in pursuing investigations. **Location:** Raleigh, NC

18. Roadside Environmental Unit-Aesthetic Engineering Section - Summer interns will engage with the multiple architects in the section. Interns will work in Landscape Architecture Design, Aesthetic Engineering Design, Historic Mitigation, and Scenic Byways. **Requirements:** Majoring in Environmental Engineer I. Specific skills with CAD, Adobe Creative Products, Sketchup, Site Design & Grading, and Landscape Architectural Principles of Design. **Location:** Raleigh, NC

19. Enterprise Applications & Testing Services (ES)

Summer Interns will be prepared for entry into the Information Technology and Customer Relationship Business world by providing a thorough understanding of the

functions of custom off the shelf (COTS) software/application development, application integrations and functional testing, software implementation and software maintenance to include theory and benefit from the attained hands-on experience to grow their knowledge base. Each intern will be paired with professional mentors in the various disciplines to assist with day to day instructions on navigating in the workplace. Interns will learn and develop skills in information technology on Software and Hardware, Provide hands-on experience with an applications development/integration team, Provide hands-on experience with an application support team, Provide hands-on experience with an application testing team, Collaborations on developing functional test plans from requirements through design, executing test cases and preparing the necessary documentation, Execute test cases based on detailed instructions to ensure that validations are in place to catch any exceptions and analyze the data for defects or bugs, Receive, log and fully document requests for support from the service desk, other service delivery staff and/or users, Perform regression testing for all new software releases, Assist with quality assurance test efforts where appropriate and applicable, Assist with the creation of help guides and training manuals for the users, Maintain a complete inventory of all card devices and computers by each branch location, and other duties as assigned.

Requirements: Graduate degree IT, Computer Science, or Computer Engineering majors,) Majoring in Computer Science, Computer Information Systems, Computer Engineering, Information Technology, or any technology major other than those named. Specific skills using the Microsoft packages (Word, Excel, PowerPoint is a must) Self-motivated, Self-starter, Self-organized, Good documentation skills using Microsoft Office products (Word, Visio, Excel, PowerPoint, etc.), Disciplined approach / work independently to perform software development, Works effectively with team members, Recognizes importance of internal and external deadlines, Works effectively under pressure, and Strong logical and creative problem-solving skills, good oral and written communication skills and excellent analytical skills. **Location:** Raleigh, NC

20. Safety / Workers' Compensation Department of Motor Vehicles

Summer Interns will monitor workers' compensation service account for the Department of Motor Vehicles (DMV). Will also work with DMV employees returning to work from worker's compensation. **Requirements:** Majoring in Business Administration, Human Resources, Occupational Safety. **Location:** Raleigh, NC

21. Value Management Office - Project II

Summer Interns will conduct a data analysis on the recommendations received related to Value Engineering and Constructability; identify potential research projects or technology implementations that will benefit the Department; input recommendations into CLEAR. May require some travel with the supervisor across the state. Interns will engage with the Value Management Office, Research Group, Construction Unit, and Communications. The interns will also have a lot of opportunity to work with various

other units in the Department during interviews etc. including Project Management Unit, Division Engineers, and the Chief Engineer's Office in addition to the Secretary's Office. **Requirements:** Data analysis skills; ability to work independently; experience with conducting research is a bonus. **Location:** Raleigh, NC

22. NCDIT Transportation - STARS

Summer Interns will work on program development, SQL Query Development, and attend meetings with team members assigned to partner with interns. **Requirements:** Basic Programming techniques and languages, DB2, and SQL. **Location:** Raleigh, NC

23. Office of Civil Rights/ Equal Employment Opportunity

Summer Interns will work filling cases, researching state and Federal law, assisting with determination of cases, assisting with EEO Training, assisting with FHWA programs. **Requirements:** Analytical skills, sound judgement, technique skills, and interpersonal skills. **Location:** Raleigh, NC

24. Technical Services Executive Office

Summer Interns will work on developing metrics, reporting for key performance indicators and dashboard for all technical services units. Tracking Preliminary Engineering budgets and expenditures. Will work with IT to develop user requirements to architect system upgrades. Will assist developing a written summary of all technical services units. Work on conference planning, obtaining speakers and topics Policy and legislative review. Attend meetings with Director, assist prep materials. **Requirements:** Business, Public Administration or Engineering fields. Skills, Microsoft excel, PowerPoint, work, analytical and good communicator. This position is high level and will shadow all Technical Services units. Must be interested in learning from a top-level big picture perspective. Team player attitude. **Location:** Raleigh, NC

25. Division of Motor Vehicles; Office of Strategy, Research & Planning; Legislative and Operations Unit

Summer Interns will interact with legislation development from operational need to final governed signed session law. They typical intern has interacted with commissioner's, attorney's, director's and all their subordinates to attain full understanding of the statutory change(s) and its requirements. The legislative and operations unit is supported across the agency by 50-60 subject matter experts. **Requirements:** Basic understanding of Microsoft Office tools. **Location:** Raleigh, NC

26. Title VI Division of the Office of Civil Rights

The Title VI Division is surveying all 594 North Carolina municipalities regarding their procedures for Title VI compliance. The goal of our Division is to take the information from these surveys and develop a single, state-wide process for all NC municipalities. The intern's responsibility will be to review and record the data in a computer program of the intern's own design. The intern will be expected to monitor survey progress with

the municipalities to ensure a high response. Additionally, the intern will need to provide a weekly data report cataloging response and trends. The intern may be asked to attend Title VI compliance reviews of NCDOT internal and external stakeholders for note-taking purposes. **Requirements:** Computer skills, data gathering and analysis and attention to detail are a must. Interest in Title VI would be helpful. This intern may have to communicate with municipalities and other internal and external stakeholders on behalf of Title VI, therefore a professional demeanor and excellent communication skills are required. **Location:** Raleigh, NC

27. Location & Surveys

The Location & Surveys Unit is one of several units in the Technical Services Division of NCDOT. Location & Surveys provides many different survey related services used for mapping and design by NCDOT. These services include route location surveys, locating proposed right of ways, photogrammetric ground control, court-required property surveys and exhibits for NCDOT attorneys and assistance in construction surveying. Location also provides an advisory role in the negotiation of survey work by private firms. **Requirements:** Engineering major, experience in surveying and CADD preferred. **Location:** Statewide

28. Division of Motor Vehicles; Office of Strategy, Research & Planning; Vehicle (CRASH) Records & Driver Records Unit

Summer Interns will work with the records and data unit is gathering, reviewing, and aligning the Memorandums of Understanding's for all external data resources. **Requirements:** Proficient use of Microsoft Office basic products, MS Word, MS Outlook, and MS Excel **Location:** Raleigh, NC

29. Greater Asheville Regional Airport Authority

Summer Interns will work with the basic badging process knowledge, assist with Ground Transportation providers permit renewal and vehicle inspections, basic airside and landside operation duties, communication center duties. **Requirements:** Aviation major preferred. **Location:** Fletcher, NC

30. Safety and Risk Management - Project III

Summer Interns will conduct inventory assessments, work with surplus inventories and work with SAP. **Requirements:** Accounting major preferred. Microsoft Excel proficiency required. **Location:** Raleigh, NC

31. Department of Motor Vehicles - Driver Services

Summer Interns will work on a special assignment to set up an automated file system and provide administrative support as needed. **Requirements:** Intermediate Microsoft Office skills required. **Location:** Raleigh, NC

32. Communications Office

Summer Interns will gain a better understanding of how the N.C. Department of Transportation, state government and the media operate, as well as the daily responsibilities of communications professionals in the public sector. The intern will assist Communications Office staff with internal and external communications efforts to keep the media, public and department employees informed about NCDOT's projects and initiatives. Intern will draft news releases, speeches, feature articles, blog posts, video scripts and other written materials. Pitch story ideas to media outlets to attain coverage. Utilize social media tools such as Twitter, Facebook etc. to inform the public. Help plan and attend events and meetings on behalf of the office as needed. Assist with research and compiling daily news clips. **Requirements:** Majoring Communications, Public Relations and/or Journalism. **Location:** Raleigh, NC

33. Office of Civil Rights - Business Opportunity and Workforce Development

Summer interns will create BOWD marketing and collateral material to assist in the outreach and training of DBE firms. Projects will include, creating a BOWD brochure, development of BOWD course catalog and Access to Capital resource database. Updating BOWD collateral material and updating BOWD website, along with creation of PowerPoint/webinar training videos. **Requirements:** Marketing and communication, in-depth web and social media knowledge, content design skills and Microsoft Office capabilities. In addition, the intern should be creative and be a self-starter. Helpful skills include business development and a passion for civil rights work. **Location:** Raleigh, NC or Garner, NC

34. Office of Civil Rights (OCR) - Legal

Summer interns will work with OCR's Agency Legal Consultant, project consultants, OCR- BOWD, OCR advisory council, including policy modernization subcommittee, on a comprehensive contracts course development and implementation project and procurement policy and standard operating procedures. Interns will assist with disparity study release, policy development (Research and Drafting), and meeting facilitation (Diversity Spend and OCR Advisory Council). **Requirements:** Research, communication - verbal and written, strong technical writing, analytical thinking. Majors: Political Science, J.D. - Law, MPP, MPA, MBA. Interest in Business Law, Civil Rights, Transportation. **Location:** Raleigh, NC