



# MEETING AGENDA



District 1  
Matthew Wilson

District 2  
Raevan Howard  
*Alternate*

District 3  
Norman Crow

District 4  
Lee Busby

District 5  
Kip Tyner  
*Member*

District 6  
John Faile  
*Chairperson*

District 7  
Cassius Lanier  
*Vice Chairperson*

## Council Administration and Policy Committee Meeting Agenda

Tuesday, March 21, 2023 Daugherty Conference Room 4:00 p.m.

| TOPIC  | PRESENTER   | SUPPORTING MATERIAL |
|--|---|---------------------|
| <b>Approval of Minutes</b>                                       |   |                     |
| <b>NEW BUSINESS</b>  |   |                     |
| 1. SCADA Controls and Instrumentation Manager job classification | <b><i>Kimberly Michael<br/>LaShonda Herbert</i></b> | 2-5                 |
| 2. Water & Sewer Director of Capital Projects job classification | <b><i>Kimberly Michael<br/>LaShonda Herbert</i></b> | 6-10                |
| <b>ADJOURN</b>   |   |                     |

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## **SCADA CONTROLS AND INSTRUMENTATION MANAGER**

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### **SUMMARY**

The purpose of this classification is to perform managerial and administrative functions associated with the Supervisory Control and Data Acquisition (SCADA) and Distributed Control System (DCS), including Controls and Instrumentation (C&I), Programmable Logic Controllers (PLC), Human Machine Interface (HMI), using Remote Terminal Units (RTU) with variety of communication technology. Requires the skills and ability to manage a group of employees, manage project design, construction and implementation to deliver successful results, as well as providing hands-on testing, modification and maintenance to the SCADA system telemetry for water/wastewater treatment facilities, water tank/boosters and sewer lift stations.

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### **ESSENTIAL FUNCTIONS**

**The following duties are normal for this classification. The omission of specific duties does not exclude them from the classification if the work is similar, related, or a logical assignment for this classification. Other duties may be required and assigned. Specific duties listed may not be required for all positions within this classification, but are determined by the normal requirements for the particular position.**

Plans, assigns, supervises, coordinates and participates in the work for all SCADA Controls and Instrumentation System and acts as a project manager on capital improvement and other related projects.

Reviews SCADA system controls specifications, drawings, sketches, and other supporting documentation for proposed projects by consultants, engineers, and contractors for conformance with specifications and standards.

Provides support for engineering installation projects; assists in the inspection of contractor installations as necessary; provides technical support during project installation, including design changes, submittal review and request for information from contractors.

Operates a personal computer utilizing word processing, spreadsheet, database management, inventory, programming, plant operation, electrical troubleshooting and other software applications as may be necessary to perform essential job functions.

Updates and maintains technical specifications and documentation for the SCADA system controls and field instrumentation including electrical drawings, schematics, P&ID, manufacturer manuals, design documentation, test equipment, maintenance histories, calibration and test records.

Performs SCADA system controls network administration duties such as configure, install, program, test, backup to maintain networked control systems, connected peripherals and monitor system integrity.

Develops, performs, and maintains a thorough calibration/maintenance schedule of process/system instrumentation, and maintains calibration and maintenance records within computerized asset management system.

Consults with sales representatives; contacts outside repair services, solicits bids for equipment repair or replacement; submits purchase orders; prepares purchase requisitions; prepares budget recommendations for

SCADA system needs; maintains inventory and related files.

Formulates a work plan to accomplish assigned tasks efficiently and safely based on available personnel and equipment; assigns tasks to technicians; obtains equipment, tools and materials required for the project.

Incorporates continuous quality improvement principles in daily activities, generates Standard Operating Procedures (SOP) and Standard Work Plans (SWP).

Trains and assists in performing repair and maintenance work functions associated with assigned maintenance and repair project; inspects work upon completion to ensure standards are met.

Trains users on the appropriate use of new and existing applications and data-entry protocols where applicable.

Processes employee concerns and problems, counsels employees, recommends employee disciplinary actions, and completes performance appraisals.

Communicates effectively via telephone and/or two way radio, email and/or text, includes ability to speak and write clearly.

Maintains good interpersonal relationships with and supports all co-workers, managers, citizens and other staff to evaluate system needs and provide innovative solutions with a positive attitude.

Responds to requests for service, after-hour emergencies and call-outs.

Inspects all work sites and ensures proper safety precautions are implemented by staff including the use of proper procedures and use of any necessary safety equipment; observes condition of workers health and welfare.

Inspects all equipment to ensure safe and proper operating condition prior to use; inventories equipment, materials and supplies; ensures tools and equipment remain clean and in good working order.

Prepares routine and ad-hoc reports and queries of SCADA databases. Supports other business units and technology projects by serving as the expert in SCADA interface and SCADA data reporting.

Operates and maintains Computer Maintenance Management software, which includes writing work orders for repairs and preventative maintenance tasks, tracking work orders, managing parts inventories, tracking purchases, tracking equipment histories, tracking equipment costs, and tracking labor use; generates work orders, schedules, forms, records and inspection reports via computer.

Develops, performs, and maintains a condition monitoring and preventive maintenance (CMPM) schedule of process/system instrumentation.

Operates a variety of machinery, equipment and tools associated with department projects, which may include plant controls, booster station controls, pumps, electrical equipment, electronic equipment, gas monitors, flow meters, gauges, electrician tools, mechanic tools, calibration equipment and diagnostic instruments.

Operates a motor vehicle to conduct work activities.

Performs maintenance and troubleshoots SCADA hardware and software; resolves PLC programming problems; writes programs for new and enhanced SCADA functions, graphic user interfaces, and field instruments with extensive knowledge of blueprint and electrical drawing interpretation and development.

Additional tasks include: Installs, troubleshoots, repairs, calibrates, programs and maintains a variety of electrical

and electronic equipment, which may include motors (up to 4160 VAC), plant controls, well controls, booster station controls, plant and well flow metering, fiber optics, programmable logic controllers, gas monitors, test equipment, laboratory instruments, level measuring equipment, telecommunication equipment, variable frequency drives, radio telemetry equipment, heating and air conditioning equipment, and indoor/outdoor lighting.

Works collaboratively with IT staff to administer SCADA system security, maintenance of local area networks, and telemetry communications. Maintains the SCADA database and supports the integration of SCADA C&I with enterprise-wide GIS, CMMS, and other platforms.

Must be flexible, innovative, and engaged, quickly adapts to changing circumstances and priorities to identify and suggest creative resolutions to unique problems.

Must be driven to perpetually improve all facets of system performance.

Performs moderately complex algebraic and geometric operations; Reads charts, graphs, and schematics.

Must meet regular attendance requirements. May be required to work on various shifts, overtime, weekends, holidays, and/or during declared emergencies. Must accomplish the essential functions of the job, with or without reasonable accommodations, in a timely manner.

Performance of essential functions may require exposure to adverse environmental conditions, such as odors, wetness, fumes, temperature and noise extremes, machinery, electric currents, traffic hazards, toxic agents, disease or pathogenic substances.

### **MARGINAL FUNCTIONS**

Performs other related duties as required.

### **MINIMUM QUALIFICATIONS**

BS degree in Computer Science, Control and Instrumentation Engineering Technology (CIET) preferred. Associate's degree with course work emphasis in industrial electricity and/or electronics technology with ten (10) years' experience in Controls and Instrumentation system operations and maintenance or any equivalent combination of education, training and experience that provides the requisite knowledge, skills and abilities for this position. Must have at least three (3) years of experience at the supervisory or project management level with direct SCADA development and maintenance experience with proven capabilities to modify and update programing and hardware as needed, that includes experience with Rockwell RSLogix & Studio 5000, SCADA HMI Software VTScada, radio telemetry, electrical and electronic maintenance and SCADA computers operations and programming. Must possess and maintain a valid driver's license.

### **MINIMUM REQUIREMENTS TO PERFORM ESSENTIAL JOB FUNCTIONS**

**The following requirements are normal for this classification. Specific requirements may not apply to all positions within this classification, but are determined by the normal requirements for the particular position.**

**PHYSICAL REQUIREMENTS:** Must be able to operate a variety of automated office equipment including computer, calculator, copiers, fax machines, two-way radio, and telephone. Physical demand requirements are at levels of those for light work.

**DATA COMPREHENSION:** Requires the ability to compare and/or judge the readily observable functional, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people, or things which may include forms, reports, blueprints, electrical diagrams, procedural manuals, personnel manuals, and operational manuals.

**INTERPERSONAL COMMUNICATION:** Requires the ability to speak with and/or signal people to convey or exchange wastewater treatment, engineering, mechanical, electrical, personnel, financial, and legal information, including giving/receiving assignments and/or directions to/from co-workers, assistants, managers, or supervisors as well as communicating with government officials, the media, engineers, and the general public.

**LANGUAGE ABILITY:** Requires ability to read a variety of wastewater treatment, environmental engineering, personnel, financial, and legal documentation, directions, instructions, and methods and procedures. Requires the ability to write job related documentation and reports with proper format, punctuation, spelling and grammar, using all parts of speech. Requires the ability to speak with and before others with poise, voice control, and confidence using correct English and well-modulated voice such as in public speaking situations before the City Council and community groups.

**INTELLIGENCE:** Requires the ability to learn and understand relatively complex mechanical, electrical, personnel, legal, financial, and wastewater utility-related principles and techniques, to understand departmental policies and procedures, to make independent judgments in absence of supervision, and to acquire and be able to expound on knowledge of topics related to primary occupation.

**VERBAL APTITUDE:** Requires the ability to record and deliver information, to explain procedures, and to follow verbal and written instructions.

**NUMERICAL APTITUDE:** Requires the ability to add and subtract totals; multiply and divide totals; determine percentages; determine time and weight; interpret statistical data; utilize algebraic formulas, comprehend integral and differential calculus, and perform statistical calculations.

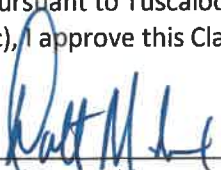
**FORM/SPATIAL APTITUDE:** Requires the ability to visually inspect items for proper length, width, and shape using job related equipment that may include scales, standard measuring devices, and test kits

**MOTOR COORDINATION:** Requires the ability to coordinate hands and eyes in using automated office equipment and to operate a motor vehicle.

**MANUAL DEXTERITY:** Requires the ability to handle a variety of items, automated office equipment, control knobs, switches, etc. Must have the ability to use one hand for twisting motion or turning motion while coordinating other hand with different activities. Must have minimal levels of eye/hand/foot coordination.

**COLOR DIFFERENTIATION:** May require the ability to discern color.

Pursuant to Tuscaloosa City Code, Chapter 19, Section 19-54 (b) (3) c. and Alabama Act 2006-233 Section 3 (c), I approve this Classification Specification.

  
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Walter Maddox, Mayor

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Date

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## **WATER AND SEWER DIRECTOR OF CAPITAL PROJECTS**

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### **SUMMARY**

The scope of this position is to provide leadership, direction and oversight as it relates to the activities for execution of Water & Sewer Capital Improvement Plan (CIP) and project delivery. The position will be responsible for leading the Water & Sewer Departments Capital Project efforts and developing a culture of on schedule and under budget project delivery. This includes oversight of all construction projects to ensure each project's budget, scope and schedule are effectively executed. The Water & Sewer Capital Improvement Program includes both linear and process assets. The position will be responsible for communication and reporting on project schedule, budget, scope, status, issues, and additional detail as needed for notification to internal and external parties. The position will serve as the primary point of contact for the Water & Sewer Capital Projects Program, immersing themselves in knowledge of the projects and creating vision to lead the Water & Sewer Capital Projects Program forward. Work is reviewed through performance evaluations, observations, project status reports, compliance to schedules, discussions, and conferences.

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### **ESSENTIAL FUNCTIONS**

**The following duties are normal for this classification. The omission of specific duties does not exclude them from the classification if the work is similar, related, or a logical assignment for this classification. Other duties may be required and assigned. Specific duties listed may not be required for all positions within this classification, but are determined by the normal requirements for the particular position.**

Maintains thorough knowledge of the occupational hazards and necessary safety precautions associated with Project Management. Ensures supervisors and staff are aware of and follow all City safety policies and procedures. Ensures supervisors and staff have the proper personal protective equipment necessary to mitigate job hazards. Consults with Safety Director to ensure proper safety training is provided to supervisors and staff.

Works closely with the Executive Director of Water & Sewer, provides strategic vision and leadership in the planning, operation, assessment, and communication of capital improvements for Water & Sewer.

Researches, develops, prepares, and evaluates bid specifications; reviews and authorizes for submittal all bid packages prepared by architects and engineers; attends bid openings; reviews bids; participates in approving bid awards; participates in value engineering for cost reductions.

Ensures efficient and effective bidding, procurement, management and assessment of the water & sewer capital improvements, including professional services consultant management procurement and assessment.

Manages, supervises, evaluates, and coordinates/directs the work of assigned professional, technical, and administrative staff; trains, processes employee concerns and problems, coaches and/or counsels, conducts performance evaluations, disciplines, and makes recommendations to hire and terminate personnel.

Prepares plans, specifications, and cost estimates for project construction; inspects construction projects.

Works with city leadership to develop, implement, and direct immediate and long-range plans for capital improvements and special project.

Attends meetings as required; meets with citizens and investigates complaints about water & sewer capital improvement projects.

Performs research functions; compiles/analyzes data; gathers, collates and maintains information, maps, and statistics for use in planning departmental projects and activities; prepares/distributes related reports; monitors status/progress of programs.

Reviews contract documents, architectural plans, engineering plans, etc.

Processes documentation related to departmental payroll and forwards as appropriate.

Consults with supervisors, regulatory agency personnel, the mayor, city council, engineers, contractors, utility companies, developers and other agency officials to review departmental operations, discuss problems, coordinate activities, develop long-term plans, provide technical expertise, and receive advice/direction.

Responds to questions and requests for information/assistance by telephone or in person from the general public, employees, the media, officials or other persons; takes and relays messages and/or directs calls to appropriate personnel.

Composes, prepares, receives, reviews, and/or approves forms, requests, charts, records, blueprints, reports, correspondence, and documents associated with daily responsibilities of this position; reviews, processes, responds, forwards, maintains, and/or takes other action.

Investigates and recommends response to legal claims for damages from the city regarding capital improvement and project issues.

Coordinates divisions, departments or citywide activities in times of emergency.

Maintains a comprehensive, current knowledge and awareness of applicable laws/regulations and new standards in technology; reads professional literature and maintains professional affiliations.

Responsible for supervising through subordinates multiple construction projects involving new construction and renovations; consults with users and citizen groups to evaluate desires against allotted budget; formalizes scope of each project; leads Project staff, professional engineers or architects.

Participates in design meetings with architects, engineers, end users, maintenance, utilities and citizen representatives; ensures that communications are established and project needs clearly communicated; establishes project design objectives.

Maintains thorough knowledge of computers and applicable software related to Project Management; operates a computer; utilizes project tracking software to track each projects progress; trains employees on computer capabilities; remains current with electronic record keeping methods to enhance project management record keeping including historical records; provides accurate data to the Legal Department when litigation is required.

Manages multiple contracts and projects at one time; visits job sites regularly; remains current on the status of all projects; conducts daily meetings; oversees and monitors work of contractors hired by the City; discusses and advises contractors on problem resolutions.

Reviews and manages project budgets; authorizes project payments to vendors, contractors, and professionals; check for accuracy; ensures prompt payment to contractors upon timely completion of projects.

Responsible for space allocations; leases real estate; oversees renovations; establishes schedules; coordinates moves.

Develops value-engineering alternatives.

Performs contract administration; negotiates internal and external contracts; ensures that all city requirements of bonding, licensing, and insurance have been met by potential contractors; develops contracts for City Council; responds to questions from elected officials; resolves conflicts; authorizes submission of change orders on contracts.

Operates a city vehicle, computer and related software, imaging equipment, and standard office equipment while performing essential functions.

Communicates with the Mayor, City Council Members, all City Departments, Department Heads, architects, consultants, regulatory agencies, vendors, contractors, engineers, users, agents, and the general public regarding new constructions, renovations, repairs, maintenance, and design of equipment and/ or facilities.

Delivers materials, resolutions, contracts, and specifications to City Hall.

Responds to inquiries from the public regarding future projects or city services.

Participates in city short-term teams to choose new equipment, software, or perform systems analysis.

Develops budgets for projects eligible for funding from non-city sources.

Performs budget administration; develops budget for general fund; assists with the development of the capital improvements budget; assists in the preparation of the departmental operational and capital budget expenditures.

Assignments are received verbally or in writing in terms of broad goals, practices, precedents, and policies. Additional guidance is provided through Federal, State, and local laws, ordinances, and guidelines such as ADA, EPA, OSHA, Health Department, Davis-Bacon Labor Laws, State of Alabama Competitive Bid Laws, City Procurement Ordinances, Ordinances regarding traffic, parking, zoning, variances, subdivisions, planning and building ordinances; plus City policies and procedures.

Maintains thorough knowledge of project management rules, regulations, laws, building codes and ordinances, inspection procedures and practices, and policies and procedures involving new construction, renovation, repair, maintenance, and acquisition of facilities.

Maintains thorough knowledge of personnel management laws, policies, procedures, and processes.

Maintains thorough knowledge of budget administration laws, ordinances, rules, regulations, policies, procedures, and processes.

Maintains thorough knowledge of contract administration.

Maintains thorough knowledge of procurement laws, rules, and regulations.

Works with diverse groups of people in a political environment.

Negotiates and re-negotiates leases for buildings and equipment.

Communicates effectively both orally and in writing.

Recommends policies and procedures that guide and support the provision of quality services by the department.

Incorporates continuous quality improvement principles in day-to-day activities.



Must accomplish the essential functions of the job, with or without reasonable accommodations, in a timely manner.

Must meet regular attendance requirements.

Must be able to maintain good interpersonal relationships with staff, co-workers, managers and citizens.

## **MARGINAL FUNCTIONS**

Performs other related duties as required.

## **MINIMUM QUALIFICATIONS**

Bachelor's degree in Business Administration, Public Administration, Civil Engineering, Applied Sciences, or related field required; Five years of progressively responsible supervisory or management experience in project management, civil engineering, water and wastewater treatment, water distribution, wastewater collection, or related field preferred; or any equivalent combination of education, experience, and/or training which provides the requisite knowledge, skills, and abilities for this job. Professional licensure and/or Project Management certification is preferred. Must possess and maintain a valid driver's license.

## **MINIMUM REQUIREMENTS TO PERFORM ESSENTIAL JOB FUNCTIONS**

**The following requirements are normal for this classification. Specific requirements may not apply to all positions within this classification, but are determined by the normal requirements for the particular position.**

**PHYSICAL REQUIREMENTS:** Must be able to operate a variety of equipment, tools, instruments, and automated office equipment including a computer, printer, handheld computer, scientific calculator, copy and facsimile machines, telephone, drafting instruments, engineers level, transit, surveyor distance measure, manhole hook, chipping hammer, bush ax, probing rod, measuring wheel, tape measure, and motor vehicle. Physical demand requirements are at levels of those for light to medium work.

**DATA COMPREHENSION:** Requires the ability to compare and/or judge the readily observable functional, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people, or things which may include maps, blueprints, directories, ordinances, engineering books, procedural manuals, and operational manuals.

**INTERPERSONAL COMMUNICATION:** Requires the ability to speak with and/or signal people to convey or exchange personnel, legal, financial, and technical information, including giving/receiving assignments and/or directions to/from co-workers, assistants, managers, or supervisors as well as communicating with the general public and state/federal regulatory officials.

**LANGUAGE ABILITY:** Requires ability to read a variety of legal, engineering, financial, and personnel documentation, directions, instructions, and methods and procedures. Requires the ability to write job related documentation and reports with proper format, punctuation, spelling and grammar, using all parts of speech. Requires the ability to speak with and before others with poise, voice control, and confidence using correct English and well-modulated voice such as in public speaking situations before the media, community groups, and the general public.

**INTELLIGENCE:** Requires the ability to learn and understand complex engineering, financial, and personnel-related information, and operational principles and techniques, to understand departmental policies and procedures, to make independent judgments in absence of supervision, and to acquire and be able to expound on knowledge of topics related to primary occupation.

**VERBAL APTITUDE:** Requires the ability to record and deliver information, to explain procedures, and to follow verbal and written instructions.

**NUMERICAL APTITUDE:** Requires the ability to add and subtract, multiply and divide, calculate decimals and percentages; determine time and weight, utilize advanced algebraic, geometric, and trigonometric formulas, generate descriptive statistics, and utilize differential calculus.

**FORM/SPATIAL APTITUDE:** Requires the ability to visually inspect items for proper length, width, and shape using job related equipment, which may include drafting instruments, measuring wheel, surveyor distance measure, tape measure and other standard measuring devices.

**MOTOR COORDINATION:** Requires the ability to coordinate hands and eyes in using drafting instruments, surveyor equipment, automated office equipment, manhole hook, chipping hammer, bush ax, probing rod, measuring wheel, tape measure, and other job-related equipment and to operate a motor vehicle.

**MANUAL DEXTERITY:** Requires the ability to handle a variety of items, drafting instruments, surveyor equipment, automated office equipment, motor vehicle, control knobs, switches, etc. Must have the ability to use one hand for twisting motion or turning motion while coordinating other hand with different activities. Must have average levels of eye/hand/foot coordination.

**COLOR DIFFERENTIATION:** May require the ability to discern color.

**INTERPERSONAL TEMPERAMENT:** Requires the ability to deal with and relate to people beyond giving and receiving instructions. Must be able to adapt to and perform under considerable stress when confronted with an emergency.

**PHYSICAL COMMUNICATION:** Requires the ability to talk, express, or exchange ideas by means of spoken words and/or hear and perceive nature of sounds by ear.

Pursuant to Tuscaloosa City Code, Chapter 19, Section 19-54 (b) (3) c. and Alabama Act 2006-233 Section 3 (c), I approve this Classification Specification.

  
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Walter Maddox, Mayor

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Date