



## REQUEST FOR BOARD ACTION

ITEM NO. 13

**DATE OF MEETING:** March 1, 2010

**REQUESTED BY:** Michael G. Mack, PCU, Director

**SHORT TITLE:** Resolution Approving Amendment # 5 to the Existing Professional Services Agreement and Authorizing a Change Order to McKim & Creed for the Rocky Point/Topsail Water & Sewer District Phase 5 Project to Include the Surf City Interconnection.

**BACKGROUND:** At the February 15, 2010 Board of Commissioner's Meeting, the Rocky Point/Topsail Water & Sewer District Board of Directors approved a Water Sales Agreement with Surf City to interconnect the two systems for the provision of water supply to the District. In order to comply with USDA-RD requirements, an Environmental Assessment (EA) Letter Amendment and Preliminary Engineering Report update for the original Phase 5 water system improvements must be completed and submitted for USDA-RD funding approval.

In order to complete the USDA-RD requirements, staff requested and received a proposal from McKim & Creed to add the following tasks to their existing professional services contract:

- 1) System hydraulic modeling and evaluation of the interconnection with Surf City
- 2) Letter Amendment to the EA
- 3) Design and Permitting of the interconnection
- 4) Easement Services for the meter vault location
- 5) Change Order processing for Herring-Rivenbark (Contractor for Phase 5)
- 6) Construction Administration

McKim & Creed has provided a Scope of Work and Contract Change Order No. 5 to complete these services for \$28,820. There is a balance of approximately \$9,000 for additional services that remains in the current agreement. Therefore, only an additional \$20,000 allocation is necessary to fully fund this additional scope of work. Funds for this are available in Phase 5 Capital Project Fund (# 69-407434 – Capital Outlay) and staff is recommending approval of this Amendment.

**SPECIFIC ACTION REQUESTED:** The Rocky Point/Topsail Water & Sewer District Board of Directors is requested to approve Amendment # 5 to the existing Phase 5 Professional Services Agreement and authorize a Change Order to McKim & Creed in the amount of \$20,000 for the Surf City Interconnection requirements.

**COUNTY MANAGER'S RECOMMENDATION**

Respectfully recommend approval.

  
\_\_\_\_\_  
Initial

**RESOLUTION**

**NOW, THEREFORE BE IT RESOLVED** by the Rocky Point/Topsail Water & Sewer District Board of Directors that:

Amendment # 5 to the existing Phase 5 Professional Services Agreement is approved and a Change Order to McKim & Creed in the amount of \$20,000 is authorized.

Account # 69-407434                      Capital Outlay                      \$20,000

The Chairman/County Manager is authorized to execute any document necessary to implement this resolution.

**AMENDMENTS:**

MOVED \_\_\_\_\_                      SECONDED \_\_\_\_\_

APPROVED \_\_\_\_\_                      DENIED \_\_\_\_\_                      UNANIMOUS

YEA VOTES: Tate \_\_\_ Blanchard \_\_\_ Brown \_\_\_ Rivenbark \_\_\_ Williams \_\_\_

\_\_\_\_\_  
Jimmy T. Tate, Chairman                      03/01/2010  
Date

\_\_\_\_\_  
ATTEST                      03/01/2010  
Date



ENGINEERS

SURVEYORS

PLANNERS

February 11, 2010

PW091255

Mr. Michael Mack, Director  
Pender County Utilities  
Post Office Box 995  
Burgaw, NC 28425

RE: Pender County / Rocky Point Topsail Water & Sewer District Phase 5  
Amendment # 5- Surf City Interconnect

Dear Mr. Mack:

We are pleased to present this proposal to provide professional services for the Pender County Rocky Point Topsail Water and Sewer District Phase 5 Amendment # 5 - Surf City Interconnect. This Agreement encompasses professional services for the preparation of an EA letter Amendment as well as design, permitting, contract negotiation / award, and construction services for an interconnection with the Town of Surf City's water system to provide supplemental water supply and pressure to the Lanier Area.

#### PROJECT UNDERSTANDING

Pender County / Rocky Point Topsail Water & Sewer District is in the process of constructing a "Phase 5" water system to provide a safe and dependable source of drinking water for residents of the Phase 5 area near Hampstead and Topsail Township in Pender County.

The current Phase 5 system design provides for a 6-inch water main along NC 210 and NC 50. This water main provides for a hydraulic "loop" in the system, connecting at the intersections of US 17 / NC 210 and US 17 / NC 50.

Additionally, this main is designed to provide service to a residential development referred to as the Lanier property, which is located along NC 210 between Watts Landing Road and NC 50. However, a portion of the water main along NC 210 will not be constructed as currently designed and thus a supplemental supply of water and pressure is necessary to serve the Lanier area.

The scope of this contract includes hydraulic modeling to potentially modify the system design, whereby a section of the water main on NC 210 would not be

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Pender County Utilities  
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constructed and the Lanier property would be served without the benefit of the noted hydraulic "loop" via interconnection to the Surf City water system.

An *Environmental Assessment* (EA) amendment and a PER update for the original Phase 5 water system improvements project was completed in July of 2004. This Agreement encompasses professional services for the preparation of an EA letter Amendment as well as design, permitting, award and construction services for an interconnection with Surf City via a metered connection to Surf City's existing 12-inch potable water main along NC 210, near Deer Run to serve the Lanier Area.

### PROJECT ASSUMPTIONS

It is noted that McKim & Creed has obtained the following information regarding this project:

- Phase 5 PER Update, dated 2004, by McKim & Creed, PA
- Phase 5 EA Update, dated 2004, by McKim & Creed, PA
- Plans Titled Surf City 2005 / 2006 Raw & Potable Water System Enhancements
  1. Raw & Potable Water Line From 2.6 MGD Water Treatment Plant Site to NC 50, dated 2006, by WK Dickson
  2. 16" Non Potable Water Main to Lowe's Property - NC 210, dated 2007, by WK Dickson
- Surf City Hydraulic Model, obtained in November 2009 from Cavanaugh & Associates, PA

McKim & Creed will incorporate this information, as applicable.

### SCOPE OF SERVICES

McKim & Creed will provide the following services for the referenced project:

#### TASK 1 - MODELING & EA LETTER AMENDMENT

Utilizing information from the existing Phase 5 model and the Surf City Model, create a hydraulic model for the proposed project and evaluate the interconnection. Following completion of the modeling, prepare a letter Amendment to the EA. This task includes the following:

- Revise the existing hydraulic model for Phase 5 to include potential connection to Surf City, as described in this proposal and to represent current conditions.
- Evaluate scenarios to determine required minimums by the NC Department of Environment & Natural Resources (NCDENR).
- Evaluate demands for average day, peak day, and fire flow demands.
- Determine resulting residual pressures and evaluate for regulatory compliance.
- Provide a summary description of major steps /obstacles that would need to be addressed to implement the interconnection.
- Provide a planning level cost opinion and implementation schedule for the interconnection.
- Evaluate permitting and regulatory requirements for the interconnection. It is anticipated that a new Public Water Supply Permit will be required for the interconnection and that DOT will need to review and approve the plans.
- Prepare necessary exhibits for depiction of the proposed project
- Prepare the brief (1-2 page) amendment in letter format. The EA Amendment will only address the aspects of the project that are different from the Phase 5 project, primarily including the water source.
- We will submit the Environmental Assessment Amendment letter to the USDA Rural Development for review and comments
- Address review comments that are received from USDA Rural Development and make necessary revisions
- Resubmit final Amendment letter narrative to USDA Rural Development.

## TASK 2 – DESIGN AND PERMITTING

Following completion of the modeling and narrative amendment, the design phase will begin. The following items are included:

- Perform field reconnaissance on proposed interconnection location. Coordinate location with Surf City. Make recommendations for location to Pender County staff to include permitting concerns, NCDOT, and physical constraints associated with existing utilities. Potential easements will be identified. It is anticipated that the interconnection will be made along Deer Run and that the meter vault will be located adjacent to Deer

Run, on private property. Therefore an easement will be required for the meter vault.

- Provide hydraulic calculations as necessary for permit submittal support to NCDENR Public Water Supply.
- Prepare a brief (2 page) Engineer's Report for the Public Water Supply Application.
- Prepare and submit 50% plans for review to the Owner. Construction Plans will be prepared at 1" = 50' scale on 24" x 36" media. Plan of the proposed interconnection to include routing of the water main connection, existing utility conflicts, limits of construction, easements and details of interconnections to the existing Surf City System. Water main diameter will be sized as determined by hydraulic investigations performed by McKim & Creed and sizing will be approved by the Owner. It is anticipated that a 12x6 tap will be made on the Surf City water main and that a 4" meter will be used. Plans will include cover sheet, general notes, water main interconnection plan sheet, and detail sheet.
- Conduct design review conference with Pender County staff based on the 50% submittal.
- Incorporate 50% design review comments in contract documents and specifications.
- Develop technical specifications. Surf City standards will be considered/incorporated for the interconnection and meter vault. Utilize existing Phase 5 specifications to extent possible.
- Prepare preliminary bid form.
- Finalize construction contract documents and submit 100% design to Owner for review.

McKim & Creed will make permit submittals and respond to comments for the following permits for this project:

1. NCDENR - Public Water Supply Permit- A new permit application is required as well as a copy of a water supply agreement between Pender County and Surf City.
2. NCDOT - Encroachment Agreement Modification, if applicable. It is anticipated that this will not require a formal Encroachment Agreement form, but that revised plans for the interconnect and a letter explaining changes will suffice for DOT approval.

Pender County will be responsible for all permitting fees.

### TASK 3 -EASEMENT SERVICES

It is anticipated that a minimum 10'x 10' easement from a private property owner will be required for the meter vault, adjacent to the right of way of Deer Run near the intersection of NC 210 and Deer Run. McKim & Creed will provide easement survey and mapping suitable for recordation based on the final meter vault location along Deer Run. Our scope of work for this item is as follows:

- All survey work will be performed to the standards of Practice for Land Surveying in North Carolina.
- Horizontal survey control will be referenced to NC Grid NAD 83.
- Map 1 water easement on 1 recordable plat.
  - 10'x10' easement (approximate) adjacent to the right of way for water meter box.
- Map will be drawn at an appropriate scale for 18x24 sheet
- Provide 1 original mylar drawing and 2 paper copies signed and sealed by a Professional Land Surveyor

### TASK 4 -AWARD SERVICES

After acceptance by Owner and USDA of the plans, assist Owner in obtaining a proposal for the Work from Herring-Rivenbark. McKim & Creed will provide a bid form to Herring-Rivenbark to cover the additional work. It is anticipated that pricing will be based on Phase 5 line item pricing unless a line item was not included in the original Phase 5 contract.

Provide information or assistance needed by Owner in the course of negotiations with Herring-Rivenbark and in preparation of a change order to add the work to Herring Rivenbark's Phase 5 contract.

### TASK 5 A - CONSTRUCTION ADMINISTRATION

- Schedule and conduct a pre-construction conference. Prepare and distribute minutes.
- Review and approve shop drawings from contractor.

- Endeavor to resolve problems in a timely manner as work proceeds and involve appropriate parties in resolving disputes and problems associated with the project.
- Pay request review and recommendation for payment to Owner.
- Change Order review and recommendation to Owner.
- Perform inspections of project at Substantial and Final Completion. Prepare punch-list and coordinate completion of punch-list items with contractor.
- As-built drawings and certification of project completion shall include submittal of as-built drawings (bond media) and on CD ROM format (AutoCAD Release 2005) and completion of close-out documentation for Surf City Interconnect project. Engineer's certification shall be as required by Public Water Supply.

It is noted that this proposal is specific to the Surf City Interconnect and does not include final closeout of the Phase 5 project.

#### TASK 5 B - CONSTRUCTION OBSERVATION

- Provide periodic field observation, to include substantial and final completion inspections, during construction for a total of 20 hours, which will be provided under the remaining fee from the Phase 5 Engineering Agreement.
- Field verify quantities of work completed for pay application processing.

#### OWNER RESPONSIBILITIES

Pender County will be responsible for the following:

- Provide access to County mapping and as-built documentation as needed. Data shall be provided in electronic form if available.
- Provide copies of all applicable reports, surveys, and delineations
- McKim & Creed will require the following information for use in this project. Owner will assist McKim & Creed in obtaining this information as necessary:
  1. Fire hydrant flow data from the Town of Surf City

### ADDITIONAL SERVICES

The Engineering Services stated above do not include the costs of:

- Submitting the EA Amendment to the Clearing House or revising the EA Amendment for Clearing House comments
- Closeout or scope changes to the Phase 5 project
- Biological surveys
- Threatened and endangered species surveys
- Detailed wetlands delineation, mapping, and Nationwide Permit submittals
- Environmental Impact Statements
- Geotechnical Investigations
- Hydrogeological Investigations
- Topographic surveys
- Legal advertisements
- Court appearances for litigation, or preparation for the same

### BASIS FOR COMPENSATION

McKim & Creed will provide the services outlined in this proposal for the fee types and prices in the table below:

Task	Fee	Fee Type
Task 1: Modeling & EA Amendment	\$5,650	Fixed Fee
Task 2: Design & Permitting	\$11,970	Fixed Fee
Task 3: Easement Services	\$2,615	Fixed Fee
Task 4: Contract Award Services	\$1,965	Fixed Fee
Task 5A: Construction Administration	\$6,620	Fixed Fee
Task 5B: Construction Observation	\$0*	Hourly
<b>Total Fee</b>	<b>\$28,820</b>	

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\*Construction observation will be provided under the remaining construction observation fee in the original Phase 5 engineering agreement. Mileage will be reimbursed at the federal rate.

### SCHEDULE

We are prepared to begin work immediately upon Authorization to Proceed and will submit the EA Amendment document to the County within 30 days of notice to proceed. We anticipate the following project schedule:

Task	Completion Date
Notice to Proceed	March 1, 2010
Complete Modeling & Provide EA Amendment to Pender Co.	March 15, 2010
Provide Initial Design & Preliminary Easement information to Pender Co	March 26, 2010
Receive Pender Co. Comments	April 1, 2010
Finalize Design & Apply for Permits	April 7, 2010
Receive Permits	June, 2010
Award Contract via Change Order	July, 2010
Construction Notice to Proceed	July, 2010
Complete Construction	September, 2010

We appreciate the opportunity to provide professional engineering services for this project and look forward to continuing our relationship with Pender County.

Sincerely,

MCKIM & CREED, PA



Tony Boahn, P.E.  
Vice-President

kh/bc

Enclosure: RPTWSD Phase 5 Change Order # 5