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COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REQUEST FORM

The Board of County Commissioners meets the 1st and 3rd Thursday of each month at 5:30 p.m. in the Columbia County School Board Administrative Complex Auditorium, 372 West Duval Street, Lake City, Florida 32055. All agenda items are due in the Board's office one week prior to the meeting date.

Today's Date: 08/22/2016

Meeting Date: September 6, 2016

Name: Lawrence Wilson

Department: Communications

Division Manager's Signature:

1. Nature and purpose of agenda item:

Budget amendment necessary to improve Deep Creek communication tower grounding in order to reduce future lightning damage. BA 16-80; total amendment is \$9,000.00.

Attach any correspondence information, documents and forms for action i.e., contract agreements, quotes, memorandums, etc.

2. Fiscal impact on current budget.

Is this a budgeted item?

☐

N/A

☐

Yes Account No. _____

☒

No Please list the proposed budget amendment to fund this request

Budget Amendment Number:

BA 16-80

Fund:

001-GENERAL FUND

FROM:

001-8400-584.90-98

RESERVES / CASH BALANCE FORWARD

TO:

001-2620-525.30-46

OPERATING EXPENDITURES / REPAIRS &
MAINTENANCE

AMOUNT:

\$9,000.00

For Use of County Manger Only:

☒

Consent Item

☐

Discussion Item

Columbia County Central Communications

Date: August 22, 2016

MEMO

TO: Scott Ward, Assistant County Manager

From: Lawrence Wilson, Central Communications Director

Ref: Deep Creek Tower Grounding

Scott Ward,

History:

Throughout the years, Deep Creek tower has succumb to recurring outages. Central Communications had a ground study performed in December 2015 (see attached), which identified major deficiencies in the tower's grounding system.

Each outage cripples the ability for dispatch to page units effectively. This Fiscal year alone, roughly \$29,000.00 has been spent in repairs to this tower to have it fully network operational. In reviewing previous FY's (Fiscal Year Budgets; going back to the integration of county wide simulcast paging), the repair budget for this tower alone is well in excess of \$50,000. On several occasions, Central Communications has replaced nearly all data equipment due to lightning strikes.

Lightning strikes are very troublesome and any structure with the most advance lightning suppression and or deterrence known to man will never stop a strike from happening. However, the strike does not have to cripple a communication tower to the point of being totally inoperable as was the case in the last outage on July 21st.

Justification:

Deep Creek tower houses the controller for all Fire and EMS paging. Dispatch has limited paging capabilities on the backup radio network. When paging on the backup network, it is not guaranteed the units are able to receive page alerts. Not receiving page alerts, in most cases, can be the difference between life and death.

Request:

Central Communications is requesting \$9,000.00 to have Tower Engineering Professionals install a homerun ground lead and to repair the existing ground ring.

~~Original Signed~~
Authorized Representative Name / Title
Lawrence Wilson, Director, Central Communications

August 22, 2016
Date

October 23, 2015

Mr. Lawrence Wilson
Central Communications
263 NW Lake City Ave
Lake City, FL 32055
(386) 623-3616
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Tampa, FL 33615
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(919) 661-6350 (fax)
cthompson@tepgroup.net

Subject: Grounding Inspection Report

Client Designation:	Columbia County Site Number:	N/A
	Columbia County Site Name:	Deep Creek
	FCC Number:	1255493
Engineering Firm Designation:	TEP Project Number:	59921-68232
Site Data:	11936 U.S.441 North Lake City, Columbia County, FL 32055 Latitude N 30° 21' 30.5", Longitude W -82° 37' 05.7" 200 Foot - Guyed Tower	

Dear Mr. Wilson,

Tower Engineering Professionals is pleased to submit this "**Grounding Inspection Report**" to Central Communications for the subject structure. The on-site Grounding Inspection was performed by Trevor Kamm of TEP during the October, 13, 2015 site visit. The purpose of this Inspection was to evaluate the resistivity of the grounding at all locations.

This report has been prepared in accordance with generally accepted engineering practice for specific application to this project. The report is based on the applicable standards of TEP's practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

We at Tower Engineering Professionals appreciate the opportunity of providing our continuing professional services to you and Central Communications. If you have any questions or need further assistance on this or any other projects please give us a call.

Report Prepared by: Trevor Kamm
Report Reviewed by: Christopher Thompson, P.E.

Respectfully submitted by:

Tower Engineering Professionals, Inc. (TEP)
Brad Little, P.E., C.W.I.

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1) PROJECT DESCRIPTION

An on-site visit was performed at the subject structure to complete the scope of services listed in Section 2. The purpose of this Inspection was to evaluate the grounding at the referenced telecommunications site.

2) SCOPE OF SERVICES


The inspection was to evaluate the grounding at the following locations, if applicable:

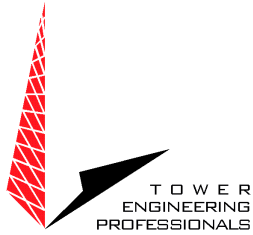
- Tower (Base only)
- Guy anchors and wires
- Shelters
- Generators
- Ice Bridges
- H-frames
- Power Meters
- Fences
- Ground test wells

3) PARTICIPATING PERSONNEL

Owner:	Lawrence Wilson Central Communications Columbia County Lake City, FL 32055
Consulting Engineer:	Brad Little, P.E., C.W.I. Tower Engineering Professionals, Inc. (TEP) 326 Tryon Road Raleigh, NC 27603

4) EXECUTIVE SUMMARY

Photographs	Observations and Recommendations
	<p>Item 1:</p> <p>Observation: Ground level resistivity (Ohms) was measured higher in certain areas of the site and are noted below.</p> <ul style="list-style-type: none">• Tower (Base) Grounding = 68.5-290• Guy Wire Grounding = 27.9-48.8 <p>Grounding was missing at certain areas, listed below.</p> <ul style="list-style-type: none">• Guy Anchor Heads• Guy Anchor Fences• Tower Compound Fence <p>Recommendation: Repair or replace grounds in order to bring within range of acceptable resistivity.</p>



Mr. Lawrence Wilson
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Subject: Deep Creek - Grounding Repair Proposal
TEP#: 59921

Mr. Wilson:

Attached is our proposal for the work on the above referenced project.

Item of Work	Fee (\$)	Notes
Grounding Repair	6,500	See Scope of Work detailed below.
Homerun Ground Lead Installation	2,500	
Total Fee	9,000	

SOW:

Install homerun ground lead from top of tower and tie into existing tower ground ring.
Repair faulty ground leads to the tower base and guy anchors as identified in the inspection report by TEP, Dated October 23, 2015. Including installation of missing grounding at guy anchors. Also includes verification of existing tower ground ring and all conductor connections.

Please feel free to call with any questions or concerns.

Tower Engineering Professionals, Inc.
Brad Little, P.E., C.W.I.
Vice-President