Macon-Bibb County, Georgia

INVITATION FOR BIDS

FOR

Town Creek Tower Site

330-13
330-10
936-84

BID NUMBER: 19-011-NT

ISSUED: November 20, 2018

BIDS DUE NO LATER THAN 12:00 NOON ON Thursday, January 3, 2019

Macon-Bibb County Procurement Department
Government Center
700 Poplar Street, Suite 308
Macon, Georgia 31201

GENERAL

A. Invitation

A. Notice is hereby given that the Macon-Bibb County will receive sealed bids in the Procurement Department, Suite 308, Macon-Bibb Government Center, 700 Poplar Street, Macon, Georgia 31201, until **12:00 o'clock NOON** at the time legally prevailing in Macon, Georgia on Thursday**, January 3, 2019** for **Town Creek Tower Site** for the Macon-Bibb County, Georgia**.**

B. **NO BIDS WILL BE ACCEPTED AFTER THIS DESIGNATED TIME.**

C. Bids will be publicly opened in the Macon-Bibb County Finance Department Conference Room on **Thursday, January 3, 2019 at 2:00 pm.**

D. Minority Women Owned and other Disadvantaged Business Enterprises are encouraged to participate in the solicitation process. Additionally, respondents are encouraged to use M/W/DBE subcontractors where possible.

B. Bid Documents

A. Bid documents may be examined and obtained at the Macon-Bibb County Procurement Department, Suite 308, Government Center, 700 Poplar Street, Macon, Georgia 31201, by calling (478) 803-0536, or may be viewed and downloaded from one of the links included below:

Georgia Procurement Registry website
http://ssl.doas.state.ga.us/PRSapp/PR_custom_index.jsp?agency=61100
Macon-Bibb County Procurement Page www.maconbibb.us/purchasing

D. Bid Bond

A. Bids, in order to be considered, shall be accompanied by a bid bond, payable to the Owner, in amount not less than five-percent (5%) of the total base bid.

a) This bid security shall become payable to the Owner only if the bidder, to whom award is made, should fail to execute a contract with the Owner and furnish bond and insurance in accordance with terms of the contract within ten (10) days after notification of award.

E. Sealed Bids

A. Envelopes shall be identified on the outside as

"Town Creek Tower Site"

and delivered by hand or mailed to:

Macon-Bibb County Procurement Department
Attn: Nan Tharpe
700 Poplar Street, Suite 308
Macon, Georgia 31201

Introduction/Background

An inspection at the Town Creek tower site, located at 3177 Upper River Road, Macon, Georgia 31211, showed multiple deficiencies for a proper public safety radio facility. The tower and shelter were built in 1998.

Objectives

The objective of this project is a turn-key solution for the installation of a radio equipment shelter and antenna system that will include the following items:

- Provide and install new radio equipment shelter include walls and flooring, electrical, dual HVAC, grounding, cable management and UPS system.
- Provide and install ice bridge and cable support.
- Provide and install antenna transmission line cable management system and cable entry ports.
- Provide and install stationary generator.
- Provide and install tower grounding system.
- Install all antennas, lines and hardware as specified.
- Install new LED tower light system.
- Clear vegetation and gravel compound and guy anchors.
- New fencing around guy anchors.
- Remove old antenna system, tower lighting, and hardware.

Terms and Definitions

- County - Macon-Bibb County, Georgia.
- Tower - 420 ft. Communications Tower in Jones County.
- Project Manager - Respondent's representative responsible for coordination with County personnel and other contractors and individuals as may be required by the County for properly fulfilling the contractual obligations of the successful Respondent.

Scope of Work

- The County is seeking a qualified firm for the installation of a 10’ x 20’ FibreBond, Cellxion, or similar communications shelter to meet all Harris listed specifications. Alternate shelter manufactures will be considered upon approval of the County Radio Systems manager. Provide six sets of engineered and stamped shop drawings for the shelter design by a Georgia licensed professional engineer prior to start of construction.
- Supply and Install Grounding for Tower and Site Grounding System:
  - The site will be considered to include the tower and guy wires, cable ice bridge, equipment shelter, exterior cable management, exterior cable entrance, interior cable entry/ termination point and interior cable management.

    - The grounding system will include the tower and guy wire grounding (Earthing), the grounding of all antenna cables at the antenna elevations (top), cable tower exit points (TGB, bottom), building cable entry location (EGB) and equipment
    - room interior cable entry point (IGB).
    - All grounding will be done in accordance with the current Harris Site Grounding And Lightning Protection (T4618RevE).
- Supply and Install Cable Ice Bridge and Cable Management System:
    - Cable ice bridge will be constructed of 24" wide galvanized steel Grip Span with cable supports spaced every 36" and stainless-steel snap-in cable hangers.
    - Supply and install all required cable entrance port boots for all openings with appropriately sized cable cushions.
- Coordinate with utility company for power to new shelter, contractor to be responsible for installation of underground lines and shelter termination.
- Coordinate with utility company for fiber to new shelter, contractor to be responsible for 'last mile' installation of aerial/underground lines and shelter termination.
- Remove existing Gen Set.
- Coordinate with Ferrell Gas to remove 500-gal LPG tank
- Remove existing fence and vegetation from compound and guy anchors.
- Supply and install 40KW gen set.
- Coordinate with Ferrell Gas to install 500-gal LPG tank
- Antenna Installation Matrix and Requirement:
    - All antennas, transmission lines, connectors, jumpers, hoisting grips and ground straps will be supplied and installed by the tower contractor.
        - Provide antenna sweep testing on all antenna systems and components upon completion of installation using MBITR Antenna Systems Sweep Testing Standard (MBIT-17002 Rev 1.1) or newer. Sweep testing will consist of, but not limited to, the following:
            - Antenna Return Loss,
            - Transmission Return Loss,
            - Transmission DTF into a Load,
            - Transmission Return Loss into a Short,
            - Transmission DTF into a Short,
            - Antenna system Return Loss with surge protectors inline,
            - Supply test results in printed and electronic (PDF and Anritsu data file) format as part of the tower documentation submission upon project completion.
- Supply and install digital LED tower lighting system.
- Geomembrane and gravel fill for compound and guy anchors.
- Remove old antenna system and hardware.
- Remove old tower lighting system.
- New fencing for compound and guy anchors.
- Site Design Package will be completed by Civil vendor.
    - Package should follow current industry standards template for preformed concrete shelters on outdoor sites. Including, but not limited to the following:
        - Foundation detail for concrete shelter and gen set.
        - Trenching for conduit.
        - Ice bridge.
        - Grounding.

        - Geomembrane and gravel fill for compound and guy anchors.
        - Fencing.

- Site Acquisition.
    - Lease Amendments or agreements (if any).
    - Regulatory Filings (NEMA, SHPO, etc).
    - GreenSheet.

Be sure to cover the following:

- Respondent will assume all risk and liability for any damages that may occur to surrounding structures during the relocation, demolition and removal process.
    - Respondent shall have liability coverage no less than two million dollars naming Macon-Bibb County certificate holder.
    - Force Majeure, without limitation:
        - Acts of nature;
        - Acts or failure to act on the part of any governmental authority other than the City or Contractor, including, but not limited to, enactment of laws, rules, regulations, codes or ordinances subsequent to the date of this Agreement.
- The Respondent is responsible for being familiar with all conditions, instructions, and documents governing this project and bid. Failure to make such investigation and preparations shall not excuse the Contractor from performance of the duties and obligations imposed under the terms of this contract.
- Contractor is responsible for the security, cleanliness and upkeep of the tower site always until accepted by MBITR.
- Assume Site Acquisition has full access to available compliance docs, leases, etc.
- Liquidated damages shall be imposed for exceeding the date of completion.

Specification

- If a crane is used, Respondent shall be responsible for, but not limited to the following:
    - Proper crane sizing;
    - All permits;
    - Ingress and egress of the crane to the site;
    - Public safety (securing the operating area around the tower).
- Equipment shelter specifications at least, but not limited to the following:
    - Floor Load: 200 psf. (Loading may be increased in areas noted by Project Manager.)
    - Building size: Outside: (Base) 12’-0" W x 20’-0” L x 10’-10” H (Nominal)
    - Shell:
        - Tie down: (4) Tie down Plates.
        - Bolts: Yellow zinc bolts to replace lifting lugs.
    - Exterior finish: Aggregate panel.
    - Interior finish:
        - Floor: Covered with 1/8" x 12" x 12" white commercial vinyl composite tile and a 4" base cove.

- Interior Walls: 5/8" APA Rated Plywood covered with a white, fiberglass reinforced plastic (FRP) or similar.
- Ceiling: 5/8" APA Rated Plywood covered with a white, fiberglass reinforced plastic (FRP) or similar.

- Door:
  - Size: 3'-0" x 7'-0" door.
  - Door Type: 18 ga. Insulated Door, painted to match exterior finish.
  - Frame Type: 16 ga. painted galvanized metal frame
  - Lockset: Best brand deadbolt with cylinder, Passage Lever set (Class 1)
  - Hinges: NRP - SS hinges
  - Weather Strip: Magnetic Weather Stripping
  - Threshold: Saddle type threshold, mill finish aluminum
  - Door Sweep: Neoprene style, mill finish aluminum
  - Anti-Pick Plate: Latch Guard / or equal.
  - Closer: Hydraulic Closer with lock open or latch open.
  - Door Canopy: Powder Coated Rain hood color matched to door.
- Fire protection:
  - Fire Extinguisher: (1) 10# Dry chemical wall mount fire extinguisher.
- Electrical:
  - Service: 120/240/200A 1 phase.
  - Main Service Disconnect: (1) 200A Enclosure with breaker.
  - Surge Suppressor Disc: (1) 120/240V breaker enclosure,
  - Surge Suppression: (1) Type 2 MOV.
  - Main Breaker Panel: (1) 200A 120/240V, 40 Space,
  - GFI Breaker: (external)
  - Convenience Receptacles: (6) 120V, 20A Duplex,
  - Exterior Receptacles: (1) 120V, 20A Duplex, Specification grade, on own GFI circuit.
- Lighting:
  - Interior: fluorescent, with wrap around lens.
  - Exterior: (1) LED mounted at exterior door, controlled by switch and motion detector.
  - Emergency/Exit: (1) Emergency/Exit light combo.
- Air conditioning/heating:
  - Quantity: (2) 3 Ton unit, integrated 5 kW heat strips, time delay anti-short cycle timer, high and low-pressure switch, low ambient control, and a one-year parts and labor guarantee.
  - Temp. Control: (1) Programmable Thermostat with lead/lag (lead to be switched on regular cycle)
- Alarm system:
  - Terminal Block: (3) Dry terminal, 66 Block and amphenol connector.
  - Cable: (3) 50ft. of 25 pair shielded cable with a 25 pin amphenol connector.
  - Door: (1) Door intrusion, magnetic.
  - Temperature: (1) High (from HVAC controller)
  - Temperature: (1) Low (from HVAC controller)
  - Power: (1) Commercial Power Fail alarm.
  - Surge Arrestor (1) Surge arrestor
  - Smoke: (1) Photoelectric detector

- Heat: (1) Heat Detector
- HVAC Fail: (1) HVAC Power Loss (from HVAC controller)

- Cable ladders:
  - 24" Wide: (30) LF of 24" wide cable ladder, gold chromate. Mount 8'-0" aff to the bottom of the cable ladder. Centered across main cable entry port.
  - 6" Wide: (10) LF of 6" wide cable ladder, gold chromate. Mount on Telco board.
- Cable entry:
  - Coax Entry: (1) Microflect 16, 4" Hole cable entry port.
  - Rigid Conduit: (2) 3" PVC sleeve cast in concrete for telco entry.
- Grounding:
  - Halo System: No. 2 AWG Bare, stranded copper wire around inside perimeter of building/rooms as shown on supplied Harris Grounding with each end lugged to master ground bar, Single point system
  - Bonding: No. 6 insulated copper wire from metallic equipment to Halo. No. 6 green insulated copper wire from metallic items as electrical boxes, and equipment to perimeter ground buss. #2 stranded green jacketed communication equipment ground buss secured to Newton #2106C brackets (or equivalent) mounted to the cable ladder.
  - Ground Bars: 4x30 Kit ground bars, insulators, connecting rods and exterior #2 tinned copper to earth ring. Interior/exterior.
  - Door: Door grounded with welding cable
  - HVAC: #2 tinned copper to earth ring.
  - Ground Rod: Exterior ground rod and copper wire provided by Contractor
- Note: All grounding to meet or exceed Harris Site Grounding And Lightning Protection (T4618RevE) Specifications.
- Miscellaneous:
  - Safety: (1) Eye wash station. (1) First aid kit.
  - Binder: Binder Holder for storage of Documentation
  - Telco Board: (1) 4'-0" x 4'-0" x ¾" x gray color FRP covered plywood Telco board.
  - Wall mounted folding desk and chair.
- Eltek power -48vDC at 600a with 8 hours battery backup time.
  - 12 Rectifier Bay Frame
  - DC-DC Converters (-48v to 24v and -48v to 12v)
  - Inverter On-line design with a sine wave output
  - N+1 parallel redundancy to provide a fault tolerant network of power protection for continuous systems availability.
    - Six (6) 2 kVA Power Modules
    - One (1) Redundant 2 kVA Power Module (Total 7 Power Modules)
  - All modules are hot-swappable to provide maximum system availability
  - LCD display module provides digital metering, event logging, user customize-able set points (low battery alarm, battery test, auto-restart delay, display language)
  - 4-hour battery recharge time to 90% capacity
  - Two-year parts and on-site labor warranty
  - Units are capable of rack mounting with optional rack mounting kit
  - One (1) Battery String (24 Modules)
    - Flame-retardant valve regulated batteries
  - System Accessories Include:
    - Wall Mount MBC: Maintenance Bypass
    - Five-Year Comprehensive On-Site Service

    - 24x7 On-site Start-up & Emergency Service (by Factory Trained Technician)
    - Emergency Service: 24x7 Response, 100% Parts, Labor & Travel
    - Preventive Maintenance: Two (2) visits per year
- List of Attachments
    - Antenna Installation Schedule
    - Antenna Sweep Specifications
    - Harris Grounding Specifications

Be sure to cover the following:

- Respondent must regularly perform land mobile radio (LMR) antenna and tower installation work as the main focus of their company business. Respondent must supply three references for projects similar in size and scope with the proposal.
- Respondent must provide resumes/employee profiles for key employees that will be assigned to this project
- Contractor's tower workers must possess a valid Comtrain or equivalent Basic Tower Safety and Rescue training certification. Contractor must provide proof of such training certification with the proposal.
- Antenna system sweep testing is required as part of this project. Contractor must provide with the proposal proof of employee training or certification in the use of the sweep testing equipment to be used for this project.
- All work performed by the awarded contractor or its sub-contractors must comply with the then current Harris Site Grounding And Lightning Protection (T4618RevE) and MBITR Antenna Systems Sweep Testing Standard (MBIT-17002 Rev 1.1) specifications. Work provided under this proposal will be subject to an T4618RevE inspection by the County's radio service provider and/or Harris directly and the awarded contractor will be required to correct any deficiencies at no additional cost to the County.
- Qualified contractors must attend a pre-bid conference and site walk.
- Any alternate items or proposals shall be noted as exceptions to the RFP requirements with a complete explanation as to the nature of the alternate proposal.

Pricing

- Mobilization, site safety and erosion control measures and secure building permits
- Provide radio equipment shelter, Price to include shipping.
- Provide tree removal excavation and site work necessary for the installation of pad to support new equipment shelter.
- Provide tower and shelter grounding system installation
- Installation including exterior ice bridge cable management systems.
- Decommissioning of existing antenna system and materials.
- Shelter installation and 200-amp electrical service electrical supply to shelter
- Site work and foundation construction management
- Crain service.
- Compound fencing, to include guy wire locations (6).
- Compound stone, site landscaping.
- Redline construction CD's and supply as built documentation, Antenna Height verification and project closeout documentation package.

- OPTIONAL PRICING: IRS Antenna System (complete replacement).
- OPTIONAL PRICING: IRS Antenna System (re-secure and dress existing).

Be sure to cover the following:

- Overview - The Respondent shall provide their best pricing. Any discounts, trade-ins, cost incentives or signing bonuses the Respondent intends to offer should be contained in the proposal.
- Submittal
  - The Respondent shall submit all pricing for its proposal(s) based on a pricing worksheet.
  - County reserves the right to choose one of the proposed systems.
- Change Orders
- Compliance
- Termination

Antenna Installation Schedule:

Antenna ID	Height	Ant Loc	Color Code	Freq MHz	Make	Cable Make/Size	Top Connector	Bottom Connector	Jumper Size/Length	Jumper Connectors
Alpha Tx	457	1A	RN	806-869	RFS BMR10A	RFS LCF158-50 1 5/8"	DIN Female	DIN Female	RFS LCF12-50 6'	DIN Male-DIN Male
Beta Tx	457	1B	BN	806-869	RFS BMR10A	RFS LCF158-50 1 5/8"	DIN Female	DIN Female	RFS LCF12-50 6'	DIN Male-DIN Male
Gamma Tx	457	1G	GN	806-869	RFS BMR10A	RFS LCF158-50 1 5/8"	DIN Female	DIN Female	RFS LCF12-50 6'	DIN Male-DIN Male
Alpha Rx	437	2A	RR	806-869	RFS BMR10A	RFS LCF78-50 7/8"	DIN Female	DIN Female	RFS LCF12-50 6'	DIN Male-DIN Male
Alpha TTA	437	2A	RW	806-869	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
Beta Rx	437	2B	BR	806-869	RFS BMR10A	RFS LCF78-50 7/8"	DIN Female	DIN Female	RFS LCF12-50 6'	DIN Male-DIN Male
Beta TTA	437	2B	BW	806-869	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
Gamma Rx	437	2G	GR	806-869	RFS BMR10A	RFS LCF78-50 7/8"	DIN Female	DIN Female	RFS LCF12-50 6'	DIN Male-DIN Male
Gamma TTA	437	2G	GW	806-869	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
IRS	402	3	WW	VHF (TBD)	TBD	TBD	TBD	TBD	TBD	TBD
H TC-KR	250	4	OSR	6GHz	RFS SB6-W60AMPT (E)	CAT6 OD Shielded	-	-	-	-
M TC-AI	245	5	OVB	6GHz	Andrew (E)	CAT6 OD Shielded	-	-	-	-
H TC-AI	219	6	OVR	6GHz	RFS SB6-W60AMPT (E)	CAT6 OD Shielded	-	-	-	-
GPS 1A	40	7A	YR	1575	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
GPS 1B	40	7B	YB	1575	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
GPS 2A	IB	8A	YYR	1575	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
GPS 2B	IB	8B	YYB	1575	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
GPS 3A	SH	9A	YYYR	1575	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-
GPS 3B	SH	9B	YYYB	1575	TBD	RFS LCF12-50 1/2"	N Male	N Female	-	-

Color Code: Black (K), Blue (B), Brown (N), Green(G), Orange(O), Red (R), Slate (S), Violet (V), White (W), Yellow (Y)

Bid Price Form

For

Town Creek Tower Site

Total Bid Price: $_____

I certify that my bid meets these minimum specifications. This bid shall be valid and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids.

Printed Name: _____
Signature: _____
Date: _____