



**COUNTY OF OSWEGO
PURCHASING DEPARTMENT**

County Office Building • 46 East Bridge Street • Oswego, NY 13126
315-349-8234 Fax 315-349-8308 www.oswegocounty.com
Fred M. Maxon, Purchasing Director

May 14, 2010

LEGAL NOTICE

Bids will be received by the Oswego County Purchasing Department, 46 East Bridge Street, Oswego, NY until **2:00 p.m., Thursday, June 10, 2010** for:

RADIO COMMUNICATION TOWER CONSTRUCTION

Specifications are available in the Purchasing Department at the above address Monday through Friday, 9:00 a.m. to 5:00 p.m. or online at www.oswegocounty.com/purchasing.

THE COUNTY RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS.

Fred Maxon
Purchasing Director

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PART 1 - INFORMATION FOR VENDORS

The County of Oswego is soliciting bids from qualified firms for RADIO COMMUNICATION TOWER CONSTRUCTION. The general scope includes providing and installing radio communications towers, including related site development, foundations, off-loading, assembly, erection, shelter & generator placement and electrical service.

DEADLINE, RECEIPT AND OPENING OF BIDS

Each Vendor shall submit a signed original bid and five (5) copies in a sealed opaque envelope indicating the company's name and bid title: **BID #23-10 – RADIO COMMUNICATION TOWER CONSTRUCTION Bids are due on or before 2:00 p.m., Thursday, June 10, 2010.** Either mail or deliver bids in person to:

Fred Maxon, Director
Oswego County Purchasing Office
46 East Bridge Street (3rd Floor)
Oswego, NY 13126

The County may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any or all bids. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered and will be returned unopened. Bids may not be withdrawn within sixty (60) days after the actual date of opening. Facsimile transmitted bids are not acceptable and will be rejected.

Bids delivered prior to the scheduled opening date will be deemed received upon the day of the actual opening, and will be retained in the interim only as a courtesy to the Vendor.

VENDOR'S RESPONSIBILITIES

It is the Vendor's responsibility to meet the entire intent of these specifications. Vendors shall carefully examine the terms of this document and shall judge for themselves all the circumstances and conditions affecting their bid. Failure on the part of any Vendor to make such examination and to investigate thoroughly shall not be grounds for any declaration that the Vendor did not understand the terms and conditions herein. The County of Oswego shall not be liable for any costs associated with the preparation, transmittal, or presentation of any response or materials submitted in response to the bid.

It is the responsibility of each Vendor to:

- Examine the BID documents thoroughly;
- Consider federal, state and local laws and regulations that may affect the bid;
- Study and carefully correlate Vendor's observations with the BID document;

Visit the site and examine schematics to become familiar with local conditions that may affect the bid.

BID SECURITY

Each bid must be accompanied by a bank cashier’s check, certified check, or a Bid Bond payable to the County of Oswego in the amount of five percent (5%) of the total bid as a guarantee that the bidder will enter into a contract with the county. If, upon acceptance of the bid, the bidder fails to enter into a contract with the County of Oswego, the bid security shall be forfeited to the County of Oswego.

COMMUNICATIONS

Communications with the County shall be solely through the officials indicated below. Vendors are specifically directed not to contact any other County officials or employees in any fashion regarding this bid, without prior approval from the County Purchasing Director. Unauthorized communications may result in the rejection of the bid. The County will not be responsible for any oral representations or instructions.

General questions regarding BID process:	Schematics/Specifications/Technical Questions and Site Visits:
Fred Maxon Purchasing Director 46 East Bridge Street Oswego, NY 13126 (315) 349-8307	Mike Allen E-911 Director 39 Churchill Road Oswego, NY 13126 (315) 349-8427

PRE-BID MEETING

A pre-bid meeting will be held on **Thursday May 27, at 1:00 p.m.** the County Office Building, 46 East Bridge Street, Oswego, 4th floor, conference room A/B. It is strongly recommended that all Vendors attend this meeting to familiarize themselves with the scope of the project.

QUESTIONS AND ADDENDUM PROCESS

Questions will be answered by written addendum only, and will be sent to all potential bidders, e-mail acceptable. No pleas of ignorance of conditions that exist or of the difficulties of any conditions will be accepted as an excuse for any failure or omission on the part of the bidder.

All questions must be submitted by **Wednesday June 2**. No further questions will be entertained after that date. All questions will be reviewed, and answers provided via addendum to all bidders. Addendum information will be available online through the Purchasing Department webpage.

SPECIFICATIONS DISCREPANCY

Should a Vendor find a discrepancy in, or omissions from the specifications, requirements for contract, or BID form, or be in doubt as to their meaning, the Vendor shall at once notify in writing the County Purchasing Director. Written instructions will be sent to all Vendors. All such addenda shall become a part of the contract and all Vendors shall be bound by such addenda, whether or not received by the Vendors. The County will not be responsible for any oral representations or instructions.

SCOPE PARAMETERS

If a Vendor identifies an additional element not included in this bid, which in its judgment would be essential to accomplish the intended objectives as articulated in this bid, the Vendor should identify this element in its bid and explain in detail why the County should consider including this

element within the scope of services. Conversely, if a Vendor identifies a task within the bid that it believes could be modified or deleted without impacting the objectives of the bid, the Vendor should provide an explanation as to why the task should be deleted or modified. The County reserves the right to accept or reject all additions, deletions or modifications recommended.

VENDOR'S QUALIFICATIONS & ELIGIBILITY

The County may make such investigation as it deems necessary to determine the qualifications and ability of a Vendor, and the Vendor shall promptly furnish the County all such information and data as the County may request for this purpose. The County reserves the right to reject any bid where an investigation of the available evidence or information does not satisfy the County that the Vendor is properly qualified or able to carry out the obligations of the contract and to provide the services contemplated herein.

AWARD

The award will be based in part on an analysis of the following criteria: technical and esthetic qualities of the bid, reliability, vendor's ability and facilities to provide the service called for, evaluation of the vendor's proper understanding of the County's needs, and price. The contract shall be awarded to the responsible firm who best meets the BID's criteria in the opinion of the County.

Additional selection factors may be included under the SPECIFICATIONS section of this bid.

The Vendor must provide unquestionable evidence of sustained capability of providing the services requested and proposed, such as can be demonstrated in existing or previous operations. The County may award a contract based upon the bids received, without discussion of such bids with Vendors. **Each bid should, therefore, be submitted in the most favorable terms the Vendor can make to the County.** The County of Oswego does, however, reserve the right to request additional data or an oral presentation in support of the written bid. Submission of a bid does not automatically qualify a Vendor for a presentation. The County reserves the right to negotiate with all qualified Vendors.

The County of Oswego, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 and New York State Executive Law affirmatively ensures that the contract will be awarded without discrimination on the grounds of race, creed, color, disability, marital status, age, sexual orientation or natural origin.

All bids over \$5,000 are subject to final review and acceptance by the Oswego County Legislature before any award of contract may be made. Receipt of bids by the County shall not be construed as authority to bind the County.

All bids shall be firm for a period of sixty (60) days after the opening date in order for the County to determine which bid best meets the public interest. The County reserves the right to extend said period.

At the discretion of the County, the successful Vendor must provide Letter of Commitment within thirty (30) days of acceptance.

TERM

The term of the resulting contract shall for one year from the date of award. The contract may be renewed upon written consent of both parties for an additional one-year period.

COMMENCEMENT OF WORK

Upon execution and delivery of the contract and delivery of any required performance bonds, including the required Certificates of Insurance and the approval thereof by the County Attorney, the successful Vendor will be notified to proceed with the work of the contract. Such notification will be in the form of a letter to proceed from the County’s Purchasing Office.

PROJECT MANAGEMENT

The County’s consulting **technical Project Manager will be notified in advance of each phase** of the construction process, ie., site preparation, material (tower) delivery, foundation layout, foundation excavation and reinforcing placement, concrete delivery/pour, back fill if any, and tower erecting. **Construction may commence only as directed after a pre-construction meeting.**

CANCELLATION

The County reserves the right to cancel the contract at will. If the Vendor fails to perform under the contract, fails to meet specifications, or fails to make satisfactory progress so as to endanger the overall contract performance, they may be determined to be in breach and the contract may be terminated by giving written notice to the Vendor of such termination and specify the effective date thereof, at least five days before the effective date of such termination. In such event, all finished or unfinished documents, data, and reports prepared by the Vendor under this contract shall, at the option of the County, become County property and the Vendor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

The Vendor shall not be relieved of liability to the County for damages sustained by the County by virtue of any breach of the contract by the Vendor, and the County may withhold any payments to the Vendor for the purpose of determining the exact amount of damages due the County. The Vendor understands that the contract may be terminated due to non-appropriation of funds.

PRICING

All prices are to be lump sum and quoted firm against increase for the duration of the contract. Travel and incidental expenses cannot be separately invoiced. The County shall not be responsible for any additional costs.

METHOD OF PAYMENT

Payment shall be made at the contract price for the services provided and verified by the Oswego County E-911 Department. Payment will be processed with approved invoice. Please include your schedule requirements, if any, in your bid. Oswego County does not pay in advance.

Suggested payment schedule terms **by site** shall be:

- 25% of the site total upon installation of the foundation(s)
- 25% upon the completed erection of the tower
- 40% upon completion of electrical utility provisioning, connection of all electrical to the building, generator system, ice-bridge, fencing and R-56 grounding
- 10% upon final inspection and acceptance of all work

Invoices shall be sent to the Oswego County E-911 Department, 39 Churchill Road, Oswego, NY 13126.

PART 2 - SPECIFICATIONS

It is the intent of these specifications to describe the minimum requirements to install galvanized self-supporting towers as described in Appendix #1. Manufacturer and model numbers as stated in this specification are for reference purposes only. Equipment bid shall be on an “OR EQUAL” basis evaluated by the County.

SCOPE

Furnish and install Radio Communications Self-Support Tower (SS) and related tower site, documentation, sealed (NYS) engineering documents, components and services. Work shall include but not limited to site preparation, foundations, assembly, erection, grounding, site compound preparation and fencing. Not all sites will require new towers. Refer to **Appendix #1** for the specific requirements of each site.

GENERAL

Towers shall be designed and installed in accordance with the (meet or exceed all) requirements of the latest version of TIA-222-G structural standards. Towers must comply with the most current revisions for steel antenna towers and antenna supporting structures specifications. All OSHA specifications will be attained. Finally, towers must meet the attached specifications. Special attention shall be paid to TIA-222-G, Section 13.3 Tolerances as they apply to self-supporting towers.

TIA-222-G specifications used will be for Oswego County, NY (County). The towers will be constructed by these specifications if superior to the County guidelines as addressed in these specifications.

The bidder will be responsible for providing all material to construct a self-support communications tower system, as well as the following:

- all site preparation (leveling to grade)
- tower foundation
- generator foundation
- shelter foundation
- fencing
- halo grounding per Motorola R-56

Bidder must meet standards for communications sites, including connection to the fencing, shelter and generator. The bidder will also install PVC Sch-40 / 80 conduit as required between the communications equipment shelter and the onsite National Grid / NYSE&G utility pole.

The bidder shall install fabric, and a minimum of four (4) inches of washed #1 and #2 sized stone inside the fenced compound. Conduit (1 ea. 2”, 3 ea. 1”) is to also be installed between the communications shelter and stub-up port of the generator pad.

COMMUNICATION TOWER FOUNDATION SPECIFICATIONS

The Vendor will be responsible for an engineered foundation design based upon the soil analysis provided by the County. The successful bidder shall provide the County with copies of the foundation design sealed by a registered Structural Engineer for the State of New York and subject to review by an independent Engineer.

Concrete samples shall be taken from each concrete delivery and test results shall be provided based upon 7 and 28-day break test. The two samples shall be taken at the beginning of the pour and near the delivery's end. Each sample will be marked with the project name, delivery ticket number, date and time.

Concrete, reinforcing rod, construction methods and concrete installation will meet the applicable standards of the American Concrete Institute (ACI), and American Society for Testing and Materials (ASTM) for structural foundation designs, and as required by the communication tower manufacturer's sealed engineering document(s) to meet all load requirements.

Note: For sites where there have been no geotechnical analysis provided, the vendor will assume an initial design for a pier-mat foundation based on presumptive soil parameters. The presumed conditions are as follows:

- sandy loam soil conditions
- an ultimate bearing pressure of 3000 PSF
- ultimate compaction of 95%

A geotechnical analysis will be available prior to construction for the final design. Should conditions exist requiring an alternative design, the vendor will then provide the revised NYS P.E. stamped foundation design with any associated cost adjustments, if applicable.

Excavated soil: Foundation backfilling will be accomplished using dry excavated soils. The sole exception is where their compaction prevents their being placed at maximum 12-in lifts and machine compacted to 95% or 3500 PSF. Depending on the amount of foundation excess soil, soils may be graded on site, compacting to 3500 PSF, or removed from the site. Because each site is different, the bidder must plan in advance as to how excess soils will be disposed. The field Project Manager will assist should off-site disposal be required. Prior to all site completion, a drainage and weed barrier fabric will be installed throughout the compound area of ~50' x 50' and then covered with not less than six (6) inches of #1 & #2 washed stone.

The County's Project Manager must be onsite prior to the installation of concrete. Steel reinforcing rods (rebar) will be tied; no welds will be permitted. Lift chairs will be used when and where necessary to prevent reinforcing steel from protruding through the concrete encasement. If sleeves/caissons are used, the sleeves or caissons will be removed when the concrete is poured. No sleeves or forms of any kind will be left on/in the foundation.

All foundation, tower, shelter and generator concrete will be 4000 psi and must be prepared and delivered by a company using NYS DOT certified sand and gravel. For shelter and generator foundations, at least one test cylinder sample will be taken from the mid-point of each delivered load; the cylinder will be marked with the project name, delivery ticket number, date and time. The cylinder(s) will be left on site for pickup by others.

COMMUNICATIONS TOWER DESCRIPTION AND DESIGN REQUIREMENTS

The new tower shall be designed according to the recent editions of TIA-222-G including:

1. Location: Oswego County, NY
2. Minimum/Maximum Basic Wind Speed = 90 MPH
3. Minimum/Maximum Basic Wind Speed w/Ice = 40 MPH

4. Minimum/Maximum Design Ice Thickness = 0.75"/1.0"
5. Structure Class = III
6. Exposure Category = C
7. Topographic Category = 3

The tower total height above the designed foundation will be according to the information supplied for each site. The maximum elevation above grade of the foundation shall be not more than six (6) inches. The maximum ground level structure width (center leg to center leg) will not exceed twenty-two (22) feet. The maximum top tower section width (center leg to center leg) shall not exceed six (6) feet.

Towers shall be a Rohn, Nudd, or Sabre design and construction. Approved equals will be considered but must meet the design, steel quality, fabrication, and galvanization standards of the aforementioned companies. Manufacturers not meeting these standards will be rejected. Bidder must provide sufficient information including steel mill reports.

The tower members shall include:

- anchor bolts
- all nuts and bolts
- Pal-nuts® (ASTM A325 or A490)
- Legs
- diagonal bracing (which shall be of the most recent standards of the American Institute of Steel Construction (AISC))

All welding shall be per the most recent AISC or AISI specifications. Tower leg material shall be of 50 KSI or better solid or pipe round steel materials. Diagonal and horizontal material will be minimally a grade of 36 KSI steel.

Prior to delivery to the site, all tower members shall be hot dipped galvanized per ASTM A123. All hardware will be hot dip galvanized per ASTM B695 Class 50 specifications.

Note: Any material delivered found to have a thin coating, excessive discoloration or excessive slag will not be accepted. Ultra-sonic tests will be randomly conducted to verify both steel and galvanize thickness. The vendor or the manufacturer supplying the tower must certify that the tower product delivered meets the latest standards as noted above. For each tower order, the bidder shall furnish tower manufacturer mill reports for all steel, including foundation embedment and hardware used for the erection of the tower.

TOWER ANTENNA DESIGN LOAD

At a minimum, the tower will be designed to accommodate the antenna system loads indicated in Appendix #1. The top twenty (20) feet of the self-supporting tower will be straight with no taper for antenna mounting requirements.

The tower design will also include the following appurtenances:

- necessary anchor bolts w/plates and template
- step-bolts installed at a point ten feet above the foundation
- a safety-climb DBI/SALA (or equal) shall be provided
- climbing ladder installed with its base ten feet above the ground

Installation of ladders (in addition to the step bolts) will be determined on-site by the Project Manager.

WAVEGUIDE LADDER

The tower is to be designed to accommodate two (2) separate waveguide ladders with horizontal braces spaced no more than three feet (3') apart. These ladders shall accept a minimum of fifteen (15) runs of coax/waveguide each. The support shall be punched to accept 3/4" snap-in clips. **One waveguide ladder shall be provided with the tower and installed on the tower.** These ladders will be mounted next to the designated climbing leg. (closest to the equipment shelter). Ladders will extend from the bottom to the ultimate height of the tower and parallel to the angle of the leg. The tower shall be designed to accommodate the second waveguide ladder in the same manner.

WAVEGUIDE BRIDGE

A bridge shall be provided of adequate length to reach the customer-furnished equipment shelter of approximately ten (10) feet. The bridge:

- shall be of Grip Strut® construction and utilize four 4-inch support poles
- shall utilize two (2) levels of trapeze type hangers to support a minimum of fifteen (15) coax/waveguide each
- materials will meet ASTM-123galvanized specifications
- Grip Strut® shall be 24-in wide by 2.5-in 12-gauge steel
- Each support post will be grounded and made part of the halo ground system

All bonding to the support poles and ground rods and any integrated splices will be by exothermic bonding only.

FAA OBSTRUCTION LIGHTING

When and where FAA Obstruction lighting is required the contractor shall assume top Dual Red / Strobe lighting with mid-level red code obstruction lights. Medium Intensity Dual Lighting System FAA lighting shall be by Unimar, Model DSLi-007, or an approved designed and manufactured equal.

COMMUNICATION TOWER SITE GROUNDING

- All grounding shall meet current Motorola R-56 Standards (Rev. 9/05).
- Once installed, the tower shall be grounded from each of the tower's three legs to a halo ground ring. Ground wire attachment will be via a steel tab welded and made a part of the base flange of each tower leg. All bonding to the tower tab and ground rods and any integrated splices will be by exothermic bonding only. No bonding directly to the tower leg is permitted.
- A halo ground will also be installed around the communications shelter foundation and generator foundation and bonded to the tower halo. Only tinned copper ground wires per Motorola R-56 will be provided for final connection to the shelter buss bar and generator grounding point, as directed by the Network Communications Infrastructure Administrator for final attachment by the Vendor at the installation of both the shelter and generator. All four chain link fence corner posts and gate posts shall be bonded to the halo ground.

- Grounding system will adhere to Motorola R-56 standards for fixed network equipment – tower sites or equal. The ground system shall connect to the equipment shelters single point ground system according to the most recent R-56 standards. After this system is installed, the bidder shall perform and record ground system testing using one of three methods:
 - a. Three-Point/Fall-of-Potential Testing
 - b. Clamp-on Ohmmeter
 - c. Combined Soil Resistivity Testing with Clamp-on Ohmmeter Testing
- A grounding buss bar shall be provided at the point on the tower where the coax transitions to attach to the waveguide-bridge. Buss bar will be attached to the tower grounding ring by tinned 2/0 solid copper.

COMMUNICATION TOWER SITE UTILITY REQUIREMENTS

The Vendor shall be responsible for all coordination and installation work for each site being developed. The County will assist the Vendor when dealing with the electrical utility company. The County will make the initial application to the utility company.

Note: the vendor must reference the foundation requirements noted below under, Communications Shelter and Generator Set Foundations. Utility conduit(s) will be flush to the end of the shelter foundations via a stub-up opening in the generator foundation.

For all shelter locations except the location adjacent to the Public Safety Building, the Vendor will provide for the trenching and placement of three 1-inch, and two 3-inch Sch-40 PVC conduits from the shelter demarcation point to:

- A single 3-inch conduit that will terminate at the Vendor-provided electrical meter hub and,
- to the utility company's demarcation point.

The remaining conduits will terminate at the generator foundation stub-up demarcation point. All PVC conduits will conform to NEC and applicable codes. Conduit above 24" depth grade shall be Schedule 80.

Only sweeps will be used where ninety (90) degree angles are made. Each conduit will be provisioned with two pull lines capable of pulling electrical and communications wire between the end points. Reference may be made to the attached typical site plan. At the generator pad, stub-ups will be ten (10) inches above top of pad surface.

Vendor shall have the following installed by a qualified electrician according to all NEC, UL, and local codes:

- 120/240, 200 amp service between the electrical utility meter hub
- 200 amp transtector transfer panel located inside the County-provided communications shelter

At a point of ~3 feet inside the compound fence the vendor will install a four (4) meter hub cabinet using two ea. 3-inch Sch-40 galvanized pipe risers. These risers will be set in minimum 2500 psi concrete to a depth of three (3) feet, with a minimum 12-inch diameter foundations. These meter(s) shall be visual from outside the fence. Three of the meter sockets will be covered for future use.

The Vendor’s electrician will be responsible for the complete installation including trenching of buried service per the electrical utility company serving the site location. The sites will require trenching as indicated in Appendix #1.

When all shelter penetrations are in place, conduit will terminate in a pre-installed pull box mounted on the shelter. A 200 amp disconnect will be provided and installed at the electrical utility demarcation/meter location. The Vendor will also have installed between the 50kW generator and the shelter a 200 amp service terminated to the transtector transfer panel (ATS) emergency power buss. Vendor shall install a 120 VAC, 20 amp service between the transtector service panel and the generator to service the jacket water heater and battery charging unit.

The three 3 inch conduit installed between the generator and the shelter shall be used to provision the generator backup electrical service to the shelter ATS. The first 1-inch conduit shall be used to provision the 20 amp 120 VAC circuit for the generators charger/heater, the second 1-inch conduit shall be used to provision the generators control wiring, the third 1-inch conduit shall be used to provision the generator alarm wiring, and shall be installed between the generator local control panel, to the alarm annunciation panel inside the shelter. The Vendor will provide the alarm cabling; Raychem Wire & Cable, CHEMINAX remote annunciator cable Pt. No. 2019D0309-0 (or approved equal).

The Vendor will provide all end to end connectivity between the shelter and the provided utility electrical demark, and all connectivity between the shelter and the 50-kW generator. The generator will be provided and set by others. Once the generator is in place the Vendor shall (using ¾”, Pt. No. Lagshield750Long; USS flat washer, GR 2, HDG ¾” WUSSGR2012-000HDG, and Hex lag screw, GR 2, Zinc ¾” X 3”, Pt No. HLAGGR2012C056ZN) secure the generator to the concrete pad using three lag screws end–middle–end along each side of the generator fuel tank rail.

COMMUNICATIONS SHELTER AND GENERATOR SET FOUNDATIONS

Vendor shall provide **concrete foundation** for County prefabricated communications shelter. The successful Vendor will assure that concrete as coming from a NYS DOT approved company for use with these foundations. Material used will be as specified. Concrete will be a minimum of 4000 psi at 28-days cure. For both the shelter and generator set systems, slab on grade foundations are the preferred design.

The following typical specifications will be used for their construction:

- 1.) Shelter Foundation - Excavate to a depth of twenty-four (24) inches below grade. Slab on grade area size 12 feet x 20 feet
- 2.) Compact to grade, using 6” lifts at 95% compaction run-of-crush stone
- 3.) Both Foundations - Prepare forms to achieve a concrete slab eight (8) inches for shelter foundation and ten (10) inches thick for generator foundation as described in the attached drawing(s). No control joints are called for or will be accepted. Attain a final slab elevation four (4) inches above grade. The finished sides of each foundation must be within 1/8” deviation (no bowing will be permitted) of specified finished length and width over the entire perimeter of the foundation slab.

- 4.) The shelter will be attached to and made a part of the pad will be a 5 ft x 4.5 ft. stoop to be used for entry to the shelter. Both will be poured at the same time and be connected as one. Upon completion of the shelter delivery, a single Grip Strut® (or equal) “step” of 12 gauge steel, 24 inches wide, 2.5 inches deep and five (5) feet long shall be placed on the stoop in front of the shelter door to act as a non-skid step.
- 5.) Generator foundation to be 126 inches L. x 64 inches W and 10.0 inches D.
- 6.) Both Foundations - Using chairs (house brick acceptable) install welded wire fabric, 4 x 4 - W2.9 x W2.9 welded wire fabric; maintain three (3) inches from sides.
- 7.) For Both Foundations - Provide 4000 psi concrete, using #1 & #2 stone, sand (as specified above), air entrained and 1.5-lbs of Fibermesh 300 fiber per yard.
- 8.) For Both Foundations - Pour and finish concrete to a flat and level surface with not more than 1/8” deviation over the slabs’ entire surface.
- 9.) Concrete shall not be poured during rain periods. Concrete after pouring and finishing, the concrete will (when or if in direct sunlight) be covered to protect from high temperatures. Stress cracks, for any reason noted prior to the shelter being installed, will require the removal of the pad and a replacement provided by the bidder at their cost.

Refer to attached drawings for further detailed information on shelter and generator foundations.

Note: Once foundations are completed and the tower erected, both the shelter and generator set will be delivered by others. The bidder will off load and place these on their respective foundations.

COMMUNICATION TOWER SITE SECURITY FENCE

The Vendor will provide a security fence around the tower compound area. Fence will include 12-foot wide double swing gate. The tower compound including gate will be ~50 feet x 50 feet, unless otherwise specified. The top rail will be not less than 6 feet above grade with barbed-wire 1 foot above the top elevation. Fence fabric will be flush to grade.

Not all sites will require a new security fence. Some sites will require expansion of the existing fence. Refer to Appendix #1 for details.

All material and workmanship shall be in accordance with the ASTM requirements for industrial fence systems, and include:

- Metallic coated carbon steel barbed wire
- Galvanized before weaving steel fence fabric
- Metal-coated steel wire for chain-link fence fabric and tension wire
- Ready mixed concrete (3K-psi)
- Installation of chain link fence
- Fence fittings
- Industrial swing gates
- Strength and protective coatings on metal industrial chain-link framework, pipe, pipe caps
- Steel and hot-dipped (2. oz) galvanized weld for fence structures
- All pipes will be Sch-40. The four corner posts and two gate posts will be bonded to the halo ground

Other minimum requirements include:

- Fence mesh wire not lighter than 9 gauge
- Mesh size 2 inches, top rail not smaller than 1-5/8-inches
- Line post not smaller than 2.5 inches
- Terminal post not less than 3-3/4-inches
- All terminal posts will be placed in an excavated pier 10 inches in diameter and to a depth of not less than 42"
- Line posts will be placed in an excavated pier 8 inches in diameter, and to a depth of not less than 36 inches
- There will be not less than an additional 6 inches of #2 stone placed at the bottom of each excavated pier
- Gate framework will be not less than 3-3/4-inches O.D Sch-40 galvanized pipe top. The bottom will be not less than 2.5 inches O.D. (Sch-40). Horizontal up rights will be not less than 2.25-inches O.D.. Diagonal members will be galvanized tubing not less than 2 inches. Gate fabric and barbed wire will be the same as the fence.

CLEAN UP OF AREA

The Vendor is responsible for the complete clean up of the site, including excess spoils removal, grading, and reseeded of the sites. Soil must be free of debris and capable of grass seed germination.

****ALTERNATE****

Oswego County requests an **alternate bid** to provided services and material as follows:

- Replace the County's current Redfield (RED)* tower using the proposed Little John (LJN) tower. Dismantle RED, move to LJN site, refurbish/add section(s) as required to existing RED tower. Antenna loads remain the same for the LJN site as published under Appendix #1.
- Construct the specified LJN 180-foot tower designated in these bid specifications at the RED site, located in the Town of Redfield, NY. Upon completion at RED, disassemble and move tower to the LJN site located ~9-miles to the north on Little John Road. The Oswego County Highway Department will provide suitable transportation for the move. The Vendor will supply an appropriate lifting system to load and off load the tower sections.
- The current RED tower is described as a Fred A. Nudd Corporation Model # S9BPA, constructed 1989-9. Tower appurtenances include wave guide ladder, safety-climb and lightning rod, designed to resist 100 mph wind speed with 1/2-in radial ice per EIA/TIA-222-F. This tower is 165 feet in height using a 20-ft X braced straight section at the 140 – 160 foot elevations ,and a single 5-foot section makes up the 165 feet.
- Omitting the existing top 20 and 5-foot section(s) as a minimum, perform a tower structural analysis per current TIA-222-G Rev. to include the antenna loading as noted for the LJN site, and an ultimate tower base to top elevation of 180 feet. The vendor will provide for the following with regard to the S9BPA tower: Have designed, fabricated and hot-dipped galvanized additional 20-foot base section(s), provide complete with foundation design embedment, and all ASTM approved hardware.

- Provide all other related RED & LJV site work including but not necessarily limited to shelter, generator foundations, R-56 grounding, compound finishing, and fencing - all per specifications as noted herein.

NOTE -

- This work will require same to be accomplished in stages as antenna systems may require removal from the existing RED tower and temporally moved to the newly constructed 180-foot tower. The existing antennas consist of the following: One 800-MHz collinear antenna mounted on 6-foot side arm w/tie-back at the 165-00ft elevation. One 153-MHz collinear antenna mounted on 6-foot side arm w/tie-back at the 165-foot elevation. One 4-foot grid 2-GHz antenna pipe/leg mounted, no tie-back, at the ~155-foot elevation.
- This site is located adjacent to the public highway at a County-owned stone quarry. It is **highly recommended** that a pre-bid site walk be made to view and understand the construction considerations that must be considered.

- END OF PART 2 -

PART 3 - BID FORMAT

All bids must be in accordance with the format specified below. Please submit one signed original and five (5) copies of your bid in a sealed envelope marked **BID #23-10 – RADIO COMMUNICATION TOWER CONSTRUCTION**.

- A. Vendor Reply Cover Sheet (attached) (Itemized projected costs)
- B. Vendor Information Sheet (attached)
- C. Non-Collusion Certification (attached)
- D. Resolution for Corporations (attached)
- E. Bid Body. Please include the following:
 - 1. Describe how you will fulfill the scope of work as identified in this bid. Include a tentative Project Schedule.
 - 2. Identify the staff that would be assigned to work on this project. Define the capacity in which each person would be working, and describe the qualifications, education, training, expertise, and experience that qualifies these individuals to work on this project.
 - 3. Drawing(s) and written description including but not limited to: all related tower design, foundation design, utility installation, fencing and grounding. Four (4) sets of foundation, and tower assembly drawings shall be provided, each sealed by a registered New York State Professional Engineer.
 - 4. Provide Vendor's company on-site/delivery safety regulations.
 - 5. Provide three (3) each complete set of manufacturer descriptive specifications for the make and model of any item being supplied. Upon award a separate foundation design sealed by a NYS PE will be provided for each site based on the sites soils report.
 - 6. The company name and principal of each sub-contractor projected to be used on this project will be included. The sub-contractor will provide all information and identification as is necessary meeting the County of Oswego requirements.
 - 7. The proposed tower manufacturer mill reports for all steel, including foundation embedment and hardware used for the erection of each tower. Three (3) sets of each shall be provided.
 - 8. Provide evidence of previous experience in providing service for this project or similar projects, and specifically for like sized and provisioned communications towers. The Vendor must provide a minimum of three (3) references for which like towers and sites have been provisioned, delivered and erected.
 - 9. The Vendor understands that only the best industry design, material, construction, assembly, and delivery practices shall be used. No plea of ignorance by the bidder will be accepted by the County; whether an item is delineated or not in these specifications. The bidder must provide written proof including at least three like installations as specified, including points of contact for those projects with their submittal.

- END OF PART 3 -

PART - 4 GENERAL PROVISIONS

In submitting a bid, a Vendor agrees to be bound by the requirements set forth in the following General Provisions and the above Information for Vendors and Specifications. Whenever reference is made to the term “Contractor” or “Vendor” this shall include the party with whom the County may enter into an agreement, as well as any subcontractors whom the Vendor has engaged to complete portions of the scope of services. Whenever reference is made to the term “County” this shall include the County of Oswego.

The County’s consulting technical Project Manager will be notified in advance of each phase of the construction process, i.e. site preparation, material (tower) delivery, foundation layout, foundation excavation and reinforcing placement, concrete delivery/pour, back fill if any, and tower erecting. Construction may commence only after a pre-construction meeting.

HOLD HARMLESS

The Contractor shall agree to defend, at its sole expense, any and all claims, demands or causes of action directly or indirectly arising out of the performance of the agreement and to bear other costs and expenses related thereto; to indemnify and hold-harmless the County of Oswego, its officers, employees and agents from any and all liability damage claims, demands, costs, judgments, fees, attorney’s fees or losses arising directly or indirectly out of the performance or failure to perform hereunder by the Contractor, or by third parties under the control and direction of the Contractor.

PROFESSIONAL SERVICES AGREEMENT

The successful Vendor will be required to execute a professional services agreement with Oswego County. The final contract will be provided by Oswego County. for this project will involve, at a minimum, the terms and conditions set forth in this RFP (including the Information for Vendors, Specification and General Provisions) and may include those reflected in the specific bid submitted. The contract documents shall be the exclusive source of the Vendor’s rights and remedies, and shall supersede any and all prior writings, negotiations or agreements of any kind.

INDEMNIFICATION

The relationship of the contractor to the County shall be that of an independent contractor. That the said contractor in accordance with its status as an independent contractor, covenants and agrees that it will conduct itself in accordance with such status, that it will neither hold itself out as nor claim to be an officer or employee of the County by reason thereof, and that it will not by reason thereof, make any claim, demand, or application to or for any rights, or privilege applicable to an officer or employee of the County, including but not limited to Workers’ Compensation coverage, Unemployment Insurance Benefits, Social Security coverage, or retirement membership or credits.

NON-DISCRIMINATION

The Contractor agrees to comply with the nondiscrimination in employment policies as required by applicable State and Federal laws and regulations regarding employment discrimination. The Contractor assures the County that, in accordance with applicable law, it does not, and agrees that it will not discriminate in any manner on the basis of age, color, creed, national origin, race, religious belief, sexual preference, or handicap.

LAWS, CODES & REGULATIONS

The Contractor shall, without additional expense to the County, be responsible for complying with any and all applicable laws, codes, and regulations in connection with the services described in the bid.

ASSIGNMENT & SUBLETTING

The Contractor shall not assign or transfer any interest or claim under this contract except as authorized in writing by the County and, except as set forth in the Contractor's bid, no contract shall be made by the Contractor with any other parties for furnishing any of the work or services under this contract without the approval of the County.

The contractor shall not assign, transfer, sub-lease, surrender, or otherwise encumber or dispose of this contract or any estate created by this contract or any interest in any portion of the same, or permit any other person or persons, company or corporation to perform, without the written consent of the County first being obtained.

Sub-contractors will only be permitted for such work as site preparation, electrical, shelter/generator foundations, and fencing. The prime contractor shall be one and the same in providing the tower, foundation, tower assembly and erection of the tower, and project manager of all sub-contractors as above approved.

CONTRACT MODIFICATION

Either party may at any time during the term of this contract request amendments or modifications. Requests for amendment or modification of this contract shall be in writing, specifying the changes sought and the reasons. The County will have final approval.

DISPUTES

The exclusive means of disposing of any dispute arising under this contract which is not disposed of by agreement shall be decided in a New York State court of competent jurisdiction, located within Oswego County, New York. There shall be no right to binding arbitration. Pending final resolution of a dispute, the Contractor must proceed diligently with contract performance. The Contractor waives any dispute or claim not made in writing and received by the County within thirty (30) days of the occurrence giving rise to the dispute or claim. A claim must be in writing, for a sum certain and any money requested must be fully supported by all cost and pricing information.

DISCLOSURE

The County, or its duly authorized agent, shall have access to and copies of the Contractor's records, including any books, computer tapes, disks or programs, or material pertaining to work performed under the contract, at no cost to the County, to determine and verify the compliance with all contractual conditions. The County shall be granted access to such records without prior notice, at all reasonable times during the contract period and for three (3) years thereafter.

The Vendor will retain all records pertinent to this agreement, for a period of seven (7) years from either the date of final payment of this agreement or until all audits are complete and findings on all claims have been finally resolved, whichever is longer.

When a fiscal or special audit determines that the Vendor has expended funds which are questioned under the criteria set forth, herein, the Vendor shall be notified and given the opportunity to justify questioned expenditures prior to the County's final determination of the disallowed costs, in accordance with the procedures established under contracted funding regulations.

NON-WAIVER

Any waiver of any breach of covenants herein contained to be kept and performed by the contractor shall not be deemed or considered as a continuing waiver and shall not operate to bar or prevent the County from declaring a forfeiture for any succeeding breach either of the same conditions or covenant or otherwise.

EXECUTORY CLAUSE

It shall be understood by and between the parties that the contract shall be deemed executory to the extent of the monies available to the County for said purpose, and no liability on account thereof shall be incurred by the County beyond monies available for said purposes.

PERTAINING TO GENERAL MUNICIPAL LAW

The contractor shall agree that Section 103A and 103B of the General Municipal Law relative to installation of contract by municipal corporation to testify and disqualification to contract with municipal corporation are made part as though fully set forth herein.

IDENTIFICATION

The correct and full legal business name of the entity involved must be used on contracts issued as a result of this solicitation. A trade name, (i.e., a shortened or different name under which the firm does business), should not be used when the full legal name is different; corporations must have names that comply with state law which requires a suffix indicating the corporate status of that business (e.g., Inc., Incorporated, etc). The signature on the contract must conform to the following:

- Where the contractor is a corporation, the signature must contain the corporation seal or an attestation by a separate corporate officer (usually the secretary) of the authority of the signing corporate officer to bind the corporation;
- Where the contractor is a partnership, at least one general partner must sign;
- Where the contractor is a sole proprietor, the owner of the company must sign;
- All signatures on bids, amendments and related correspondence must be persons who are authorized to contractually bind the proposing entities.

UNCONTEMPLATED PURCHASES

Oswego County reserves the right to request separate bids or bids should quantities or conditions change such that contractual services may be best procured via separate public bid offering, and to otherwise act in furthering its own interests.

VALIDITY OF PROVISIONS

The parties hereto understand and agree that each and every provision of law or clause required by law to be inserted in this contract shall be deemed to have been inserted herein, and if through mistake or inadvertence, such provision is not inserted, said clause shall be deemed to have been inserted and shall have full force and effect of law.

This specification as well as any contract, plans, drawings, exhibits or schedules to which it is attached and made a part of constitutes the entire agreement and understanding between the parties hereto, and shall be binding upon each party and their successors. Any additions, changes or deviations to or from said specifications, contracts, plans, drawings, exhibits, or schedules will invalidate the agreement between the parties in its entirety unless in every case such changes shall be previously agreed upon by the parties hereto in consideration of all applicable legislation.

NON-COLLUSION

Pursuant to Section 103D of the General Municipal Law, each Vendor must submit an affidavit of non-collusion signed by an officer of the company.

LICENSE AND PERMITS

It shall be the responsibility of the Vendor to secure any permits or licenses necessary for the Vendor to hold hereunder at its sole cost and expense.

REJECTION OR ACCEPTANCE OF BID

The right is reserved by the County to waive any irregularities or informalities in any bid, to reject any or all bids, to re-advertise for bids if desired, and to accept the bid which, in the judgment of the County, is deemed the most advantageous for the public and the County. Any bid that is incomplete, conditional, obscure, or which contains additions not called for, or irregularities of any kind, including unbalanced bids, may be cause for rejection. An unbalanced bid is defined as one in which the amount proposed for one or more separate items is substantially out of line with current market prices for the services rendered. In the event of default of the successful Vendor, or Vendor's refusal to enter into an agreement with the County, the County reserves the right to accept the bid of any other applicant without necessity to re-advertise.

TAXES

The County is exempt from payment of taxes imposed by the federal government and/or the state of New York. The successful Vendor is responsible for all applicable state, local and federal taxes.

NO EXTENSIONS OF CREDIT BY COUNTY

Pursuant to the applicable provisions of the New York State Constitution, the County of Oswego is prohibited from extending credit to individuals or entities to finance the operation of this program.

REQUIREMENTS FOR CONTRACT

The contract, as well as the statements and specifications that accompany the bids, and which are accepted by the County, shall be in such form and contain such terms and conditions as approved by the County Attorney.

SAFETY

The Vendor shall insure that their employee s/ agents comply with all applicable health and safety laws, rules and regulations without limitation, including but not limited to New York State Department of Labor, Occupational Safety and Health Act of 1970 (OSHA), Federal and New York State Departments of Transportation and the Vendor's company safety regulations as issued and included with this bid.

NOTE: This bid demands that all current OSHA fall protection rules are followed, including but not limited to, full body harness and 100% TIE OFF. Bidder’s employees found not following all OSHA rules and directives will be ordered from the job site by the County.

SECURITY

The Vendor shall obtain and maintain general and/or professional liability insurance to include comprehensive form and other coverage mutually acceptable to the County with sufficient limits for bodily injury, accidental death and property damage, and insurance related to training, as required by law.

The Vendor ensures that those employees in positions allowing for access and or control of program funds are properly bonded. The Vendor also agrees to reimburse Oswego County for any loss incurred in relation to this clause. The bond should be in effect from the date of entry into the contract through one year following the expiration date of this contract.

BOND

Upon delivery of the expected contract, the successful Contractor shall furnish a surety bond in the amount of at least equal to fifty percent (50%) of the accepted bid as security for faithful performance of this contract, for the payment of all persons performing labor on the project under this contract, and furnishing materials in connection with this contract. The surety on each bond shall be a duly authorized surety company satisfactory to the County, and shall remain in force for a period of one year following final acceptance of the work by the County. The cost of the bonds is to be paid by the Contractor. An Attorney-In-Fact that signs performance or labor and materials payment bonds shall file a certified copy of his power of attorney to sign such bonds with each bond.

EMPLOYMENT

Vendor must document that it is an Affirmative Action / Equal Opportunity Employer.

LABOR RATES

This is an Article 8 construction project. PRC #2010003963 has been assigned, and all NYS wage rates apply

PURCHASES BY OTHER GOVERNMENTAL OR AUTHORIZED ENTITIES

Purchases at prices quoted that result in a contract or purchase order contract with Oswego County may be made by the Cities of Fulton, Oswego, each town and village, each school, fire and solid and water conservation district eligible to purchase from this contract for the term of the contract. In addition, the County allows all municipal entities authorized under the General Municipal Laws of the State of New York to purchase goods and/or services under this contract from anywhere in the state at the discretion of the vendor.

FREEDOM OF INFORMATION LAW

Vendors are advised that Oswego County is subject to the Freedom of Information Law (FOIL). The County will make every reasonable legal effort to maintain the confidentiality of bids and negotiations. Vendors are advised to clearly identify and mark any proprietary information in their bids as “Proprietary Information.”

PART 5 - INSURANCE REQUIREMENTS

- I. Notwithstanding any terms, conditions or provisions, in any other writing between the parties, the Vendor hereby agrees to effectuate the naming of the County of Oswego as an unrestricted, additional insured on the contractor's insurance policy(ies), with the exception of workers' compensation. If the contractor is self-insured, evidence of its status as a self-insured entity shall be provided to the Oswego County Purchasing Department. If requested, the contractor must describe its financial condition and the self-insured funding mechanism(s).

- II. The policy naming the County of Oswego as an additional insured shall, without exception:
 - Be an insurance policy from an A.M. Best rated "secured" New York State licensed insurer.
 - Contain a 30-day notice of cancellation.
 - State that the insurer's coverage shall be primary coverage for the County of Oswego, its officers, and employees.
 - The County of Oswego shall be listed as an additional insured by using endorsement CG 2010 10 85 or broader. The certificate must state that this endorsement is being used. If another endorsement is used, a copy shall be included with the certificate of insurance.

- III. The contractor agrees to indemnify the County of Oswego for any applicable deductibles.

- IV. Required Insurance **MINIMUMS**:
 - **Commercial General Liability Insurance**
\$2,000,000 per occurrence / \$4,000,000 aggregate. General Aggregate to apply on a per project basis.
 - **Automobile Liability**
\$1,000,000 CSL for owned, hired and borrowed and non-owned motor vehicles.
 - **Excess/Umbrella Insurance**
1,000,000; \$3,000,000; \$5,000,000 each Occurrence and Aggregate (depending on the type and size of the project).
 - **Workers' Compensation and NYS Disability**
Statutory Workers' Compensation, Employers' Liability and N.Y.S. Disability Benefits Insurance for all employees.
 - **Owners/Contractors Protective Insurance**
(Required for large construction projects.)
\$1,000,000 per occurrence/\$2,000,000 aggregate; the County of Oswego as the named insured.
 - **Bid, Performance and Labor & Material Bonds**
If required in the specifications, these bonds shall be provided by a New York State admitted surety company, in good standing.
 - **Professional Liability/Malpractice** \$1,000,000 aggregate (If commercially available for your profession) \$1,000,00 per claim

- V. Vendor acknowledges that failure to obtain such insurance on behalf of the County of Oswego constitutes a material breach of this bid/contract. The Vendor is to provide the County of Oswego with a certificate of insurance, evidencing the above requirements have been met, prior to the commencement of work or use of facilities. The failure of the County of Oswego to object to the contents of the certificate or the absence of same shall not be deemed a waiver of any and all rights held by the County of Oswego.

Vendor shall attach to this Agreement, a certificate of insurance evidencing Vendor's compliance with these requirements.

Each policy of insurance shall contain clauses to the effect that (i) such insurance shall be primary without right of contribution of any other insurance carried by or on behalf of the County with respect to its interests, (ii) it shall not be cancelled, including, without limitation, for non-payment of premium, or materially amended, without thirty (30) days prior written notice to the County, directed to the County Attorney and the Department Head and the County shall have the option to pay any necessary premiums to keep such insurance in effect and charge the cost back to Vendor.

To the extent it is commercially available, each policy of insurance shall be provided on an "occurrence" basis. If any insurance is not so commercially available on an "occurrence" basis it shall be provided on a "claims made" basis, and all such "claims made" policies shall provide that:

- A. Policy retroactive dates coincide with or precede Vendor's start of the performance of the Services (including subsequent policies purchased as renewals or replacements);
- B. Vendor will maintain similar insurance for at least six (6) years following final acceptance of the Services;
- C. If the insurance is terminated for any reason, Vendor agrees to purchase an unlimited extended reporting provision to report claims arising from the Services performed for the County of Oswego; and
- D. Immediate notice shall be given to the County through the Department Head and the County Attorney of circumstances or incidents that might give rise to future claims with respect to the Services performed under this Agreement.

- END OF PART 5 -

PART 6 – BID FORMS

VENDOR REPLY COVER SHEET

Sealed bids are due by **2:00 p.m., Thursday, June 10 , 2010** at the Oswego County Purchasing Office; 46 East Bridge Street (3rd Floor); Oswego, NY 13126.

THE COUNTY RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS

The undersigned hereby certifies that he/she has examined and fully comprehends the requirements and intent of the Notice, Information, Specifications and Bid for **BID # 23-10- - RADIO COMMUNICATION TOWER CONSTRUCTION**, and offers to fulfill the activities as shown on the attached bid for the cost listed below.

COST SUBMISSION FORM

1. SITE – BUNKER HILL (BKR)

Each Site Includes the Following Material and Services:	
Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards (Compound 50 x 50-ft)	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 100-ft.	\$ _____
Total This Site	\$ _____

2. SITE – SCRIBA (SCR)

Each Site Includes the Following Material and Services:	
Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit Meter hub, Shelter and Generator	\$ _____
Electrical Connections Meter hub, Shelter and Generator	\$ _____
R-56 Grounding Standards (Compound 50 x 50-ft)	\$ _____
Fence Compound, Paper, Stone Finishing: (Compound 50 x 50-ft)	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____

Site Electrical Utility buried service between utility company
 Demark and site meter-hub board, cost per 100-ft. \$ _____

Total This Site \$ _____

2a. SITE – SCRIBA (SCR) OPTIONAL 350-ft SS Tower

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1 \$ _____

Tower Foundation \$ _____

Tower Off Load, Assembly and Erection \$ _____

Shelter Foundation: Oswego Co. \$ _____

Generator Foundation: Oswego \$ _____

Shelter Foundation: Proposed Others \$ _____

Generator Foundation: Proposed Others \$ _____

Electrical Conduit between Shelter and Generator: Oswego \$ _____

Electrical Connections between Shelter and Generator: Oswego \$ _____

Electrical Conduit between Shelter & Generator: Proposed Others \$ _____

Electrical Connections between Shelter & Generator: Proposed
 Others. \$ _____

R-56 Grounding Standards: (Compound 60 x 80-ft) \$ _____

Fence Compound, Paper, Stone Finishing: (Compound 60 x 80-ft) \$ _____

Off Load Shelter and Place on its Foundation: Oswego \$ _____

Off Load Generator and Place on its Foundation: Oswego \$ _____

Off Load Shelter & Place on its Foundation: Proposed Others \$ _____

Off Load Generator & Place on its Foundation: Proposed Others \$ _____

Telco Utility, Conduit between utility demark and utility board.
 Site Electrical Utility Installation \$ _____

Site Electrical Utility buried service between utility company
 demark and site meter-hub board, cost per 100-ft. \$ _____

Scriba (SCR) OPTION TOWER Total This Site \$ _____

3. SITE – PULASKI / RICHLAND (RCH)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1 \$ _____

Tower Foundation \$ _____

Tower Off Load, Assembly and Erection \$ _____

Shelter Foundation \$ _____

Generator Foundation \$ _____

Electrical Conduit between Shelter and Generator \$ _____

Electrical Connections between Shelter and Generator \$ _____

R-56 Grounding Standards (Compound 50 x 50-ft) \$ _____

Fence and Compound, Paper, Stone Finishing \$ _____

Off Load Shelter and Place on its Foundation \$ _____

Off Load Generator and Place on its Foundation \$ _____

Site Electrical Utility Installation \$ _____

Site Electrical Utility buried service between utility company
 Demark and site meter-hub board, cost per 100-ft. \$ _____

Total This Site \$ _____

4. SITE – ORWELL V3 (ORW)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards (Compound 50 x 50-ft)	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 100-ft.	\$ _____
Total This Site	\$ _____

5. SITE – LITTLE JOHN (LJN)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 100-ft.	\$ _____
Total This Site	\$ _____

6. SITE – V3 (GAY)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____

Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 100-ft.	\$ _____

Total This Site \$ _____

7. SITE – V1 (BRD)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 100-ft.	\$ _____

Total This Site \$ _____

8. SITE – PARISH (PAR)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 100-ft.	\$ _____

Total This Site \$ _____

9. SITE – FULTON WATER TANK (FWT)

Each Site Includes the Following Material and Services:

Self-Supporting Tower Steel - Height per Appendix #1	\$ _____
Tower Foundation	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards	\$ _____
Fence and Compound, Paper, Stone Finishing	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility buried service between utility company	
Demark and site meter-hub board, cost per 50-ft.	\$ _____
Total This Site	\$ _____
TOTAL ALL 9 SITES	\$ _____

ALTERNET SITE – REDFIELD (RED) RELOCATE TO LITTLE JON (LJN)

Provide the Following Material and Services:

RED: Construct LJN tower at RED	\$ _____
Tower Foundation* (Assume Mat on grade design)	\$ _____
Tower Off Load, Assembly and Erection	\$ _____
Shelter Foundation	\$ _____
Generator Foundation	\$ _____
Electrical Conduit between Shelter and Generator*	\$ _____
Electrical Connections between Shelter and Generator	\$ _____
R-56 Grounding Standards*	\$ _____
Fence and Compound, Paper, Stone Finishing*	\$ _____
Off Load Shelter and Place on its Foundation	\$ _____
Off Load Generator and Place on its Foundation	\$ _____
Site Electrical Utility Installation	\$ _____
Site Electrical Utility*	\$ _____
Demark and site meter-hub board, cost per 50-ft.	\$ _____
Decommission antenna systems on existing tower move to newly adjacent constructed tower.	\$ _____
Existing RED tower, provide engineering, analysis and structural steel (section(s) To attain an elevation of 180-ft meeting TIA-222-G for Oswego County, NY.	\$ _____
Decommission existing RED tower, move to LJN site.	\$ _____
Provide, install foundation at LJN for redesigned RED tower.	\$ _____
All other construction and civil work will be awarded per the Little John (LJN) Site 5. bid.	

Total Alternate RED / LJN Cost \$ _____

*Note: This site is located adjacent to the public highway at a County owned stone quarry. It is highly recommended that a pre-bid site walk be made to view and understand the construction considerations that must be considered.

Federal ID Number: _____

Type or Print Name

Company

Title

Address

Authorized Signature

Date

() / ()
Telephone Number / Fax

Please attach additional bid information to this sheet.

VENDOR INFORMATION SHEET

Proposing Organization: _____

Address: _____

Phone: (_____) _____

Fax: (_____) _____

Invoices Will Be From:

Address: _____

Person To Contact In Reference To Contract:

Name: _____

Title: _____

Address: _____

Phone: (_____) _____

Fax: (_____) _____

E-mail: _____

Signatory Authority: _____

“In consideration of the limitations of this BID, I hereby certify that the information in this bid is correct to the best of my knowledge, and that I am an official of the above organization authorized to sign and submit this bid.”

Name/Title

Signature

Date

NON-COLLUSION CERTIFICATION

General Municipal Law § 103-d

- (a) By submission of this bid, each Vendor and each person signing on behalf of any Vendor certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
 - (1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Vendor or with any competitor;
 - (2) Unless otherwise required by Law, the prices which have been quoted in this bid have not been knowingly disclosed by the Vendor and will not knowingly be disclosed by the Vendor prior to opening, directly or indirectly, to any other Vendor or to any competitor;
 - (3) No attempt has been made or will be made by the Vendor to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

- (b) A bid shall not be considered for award nor shall any award be made where (a)-(1), (2) and (3) have not been complied with; provided however, that if in any case the Vendor cannot make the foregoing certification, the Vendor shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where (a)-(1), (2) and (3) have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a Vendor (a) has published price lists, rates or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same time prices being proposed, does not constitute, without more, a disclosure within the meaning of paragraph (a) of this certification.

By submission of this bid, the undersigned hereby affirms the truth of the foregoing certification under the penalties of perjury.

Company

Type or Print Name

Date

Title

Authorized Signature

RESOLUTION FOR CORPORATIONS ONLY

Resolved that _____(individual) is authorized to sign and submit the bid or bid of this corporation for the following project:

**BID #23-10
RADIO COMMUNICATION TOWER CONSTRUCTION**

and to include in such bid or bid the certificate as to non-collusion required by Section 103-D of the General Municipal Law as the act and deed of such corporation and for any inaccuracies or misstatements in such certificate this corporate bidder shall be liable under the penalties of perjury, and to enter into the contract if awarded to this corporation:

The foregoing is a true and correct copy of the resolution adopted by _____
_____ Corporation at a meeting of its Board of Directors held on the _____ day of _____, _____, and is still in force on this _____ day of _____, 2010.

Secretary

(Seal of Corporation)

NON-BIDDER RESPONSE

The Oswego County Purchasing Department is interested in the reasons why prospective Vendors fail to submit bids. Failure to submit a bid without explanation may result in removal of your firm from our Vendors’ list. If you are NOT submitting a bid, please indicate the reason(s) by checking off one or more of the items below and return this form to the Oswego County Purchasing Office; 46 East Bridge Street; Oswego, NY 13126.

- _____ 1. Unable to make a bid at this time, but would like to receive future BIDs.
- _____ 2. Items or material not _____ manufactured, _____ distributed, _____ stocked, _____ furnished.
- _____ 3. Services, materials or items we have to offer do not fully meet all the requirements of standards specified.
- _____ 4. Specifications not clearly understood or applicable as follows: (ex.: too vague, too rigid, etc.)
- _____ 5. We cannot meet the time of delivery of items or materials specified.
- _____ 6. Insufficient time allowed for preparation and submission of bid.
- _____ 7. Other reasons: _____

You may remove our name from the bid list for:

_____ This Commodity Group _____ This Item or Material _____ All Bids

Type or Print Name

Company

Title

Address

Authorized Signature

()

Date

Telephone Number

- END OF PART 6 -

APPENDIX #1

SITE REQUIREMENTS

SITE #1 – BUNKER HILL (BKR)

Detailed site information will be provided separately.

Site requires a new 185’ self-supporting tower (FAA Ht = 199’) with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 185’
Antenna Type: Sinclair SD310HF3P4

Leg/Azimuth: 120 deg Side Arm: 6’
Antenna Cable: 1-1/4” LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 185’
Antenna Type: Sinclair SD310HF3P4

Leg/Azimuth: 240 deg Side Arm: 6’
Antenna Cable: 1-1/4” LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 180’
Antenna Type: Sinclair SD310HF3P4

Leg/Azimuth: 120 deg Side Arm: 6’
Antenna Cable: 1-1/4” LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 185’
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6’
Antenna Cable: 1-1/4” LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 155’
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6’
Antenna Cable: 1-1/4” LDF

Antenna for Microwave #1 MUCK

Antenna Mounting Centerline: 50’
Antenna Type: PAR6-59
Ice Shield

Azimuth: 157.3 deg
Antenna Cable: EWP52

Antenna for Microwave #2 HUB

Antenna Mounting Centerline: 50’
Antenna Type: VHLP-800-11
Ice Shield

Azimuth: 69.4 deg
Antenna Cable: EWP90

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 155’
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 155'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 100'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 100'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 100'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

140' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

Future Cellular

125' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

SITE #2 – SCRIBA (SCR)

Detailed site information will be provided separately.

Site requires a new 200' self-supporting tower (FAA Ht = 215') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 200'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 180 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 200'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 180 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 195'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 180 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 200'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 170'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 OSW

Antenna Mounting Centerline: 126'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 244.4 deg
Antenna Cable: EWP52

Antenna for Microwave #2A RCH

Antenna Mounting Centerline: 85'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 57.4 deg
Antenna Cable: EWP52

Antenna for Microwave #2B RCH

Antenna Mounting Centerline: 55'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 57.4 deg
Antenna Cable: EWP52

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Land Mobile

Antenna Base Mounting Level: 100'
Antenna Type: Sinclair SD312HF2P4

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 7/8" LDF

Future Land Mobile

Antenna Base Mounting Level: 100’
Antenna Type: Sinclair SD312HF2P4

Leg/Azimuth: 120 deg Side Arm: 6’
Antenna Cable: 7/8” LDF

Future Land Mobile

Antenna Base Mounting Level: 100’
Antenna Type: Sinclair SD312HF2P4

Leg/Azimuth: 240 deg Side Arm: 6’
Antenna Cable: 7/8” LDF

Future Antenna for Microwave

Antenna Mounting Centerline: 170’
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 170’
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

155’ C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8” Heliac® feed line.

Future Cellular

140’ C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8” Heliac® feed line.

SITE #2 – SCRIBA (SCR) OPTIONAL 350-FT SELF-SUPPORT TOWER

Detailed site information will be provided separately.

Site requires a new 350’ self-supporting tower (FAA Ht = 363’) with the following loads:
This tower installation requires two (2) top mounted flash heads to assure 360-deg visibility.
Flash heads to be side-mount installed on tower section at the ~348-ft elevation of the tower.

Antenna for Direction Finder

Antenna Base Mount level ~344’
Antenna Type Rohde & Schwarz
Antenna model: ADD 090.
Pylon mount 6” X 140-in, Sch. 80 pipe
Antenna Network Cabinet R&S GX090

Antenna cable: 2ea. 7/8” LDF
71-in inside Twr. 69-in above Twr
Mounted 247-ft level

Antenna for UHF

Antenna Base Mounting Level 325’
Antenna Type: Sinclair SC-381

6-ft Side Arm
Antenna cable: 1ea. 1-1/4” LDF

Antenna for VHF-RX

Antenna Base Mounting Level 325’
Antenna Type: Sinclair SD-214

6-ft Side Arm
Antenna cable: 1ea. 1-1/4” LDF

Antenna for VHF TX

Antenna Base Mounting Level 290'
Antenna Type: Sinclair SD-214

6-ft Side Arm
Antenna cable: 1ea. 1-1/4" LDF

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 200'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 180 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 200'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 180 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 195'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 180 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 200'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 170'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 OSW

Antenna Mounting Centerline: 126'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 244.4 deg
Antenna Cable: EWP52

Antenna for Microwave #2A RCH

Antenna Mounting Centerline: 85'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 57.4 deg
Antenna Cable: EWP52

Antenna for Microwave #2B RCH

Antenna Mounting Centerline: 55'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 57.4 deg
Antenna Cable: EWP52

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Land Mobile

Antenna Base Mounting Level: 100'
Antenna Type: Sinclair SD312HF2P4

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 7/8" LDF

Future Land Mobile

Antenna Base Mounting Level: 100'
Antenna Type: Sinclair SD312HF2P4

Leg/Azimuth: 120 deg Side Arm: 6'
Antenna Cable: 7/8" LDF

Future Land Mobile

Antenna Base Mounting Level: 100'
Antenna Type: Sinclair SD312HF2P4

Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Cable: 7/8" LDF

Future Antenna for Microwave

Antenna Mounting Centerline: 170'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 170'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

220' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliac® feed line.

Future Cellular

155' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliac® feed line.

Future Cellular

140' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliac® feed line.

SITE #3 – PULASKI/RICHLAND (RCH)

Detailed site information will be provided separately.

Site requires a new 290' self-supporting tower (FAA Ht = 305') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 290'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 70 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 290'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 70 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 285'
Antenna Type: RFI FSA 10-67

Leg/Azimuth: 70 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 290'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 260'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 V3

Antenna Mounting Centerline: 126'
Antenna Type: PAR8-59
Ice Shield

Azimuth: 101.3 deg
Antenna Cable: EWP52

Antenna for Microwave #2A SCR

Antenna Mounting Centerline: 80'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 237.6 deg
Antenna Cable: EWP52

Antenna for Microwave #2B SCR

Antenna Mounting Centerline: 50'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 237.6 deg
Antenna Cable: EWP52

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

230' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

Future Cellular

215' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

Future Cellular

200' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

SITE #4 – ORWELL (V3)

Detailed site information will be provided separately.

Site requires a new 200' self-supporting tower (FAA Ht = 215') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 200'
Antenna Type: Sinclair SC329HT1LDF
(D06-G6)

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 200'
Antenna Type: Sinclair SC329HT1LDF
(D06-G6)

Leg/Azimuth: 120 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 200'
Antenna Type: Sinclair SC329HT1LDF
(D06-G6)

Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 200'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 90 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 175'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 90 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 BOY

Antenna Mounting Centerline: 126'
Antenna Type: VHLP800-11
Ice Shield

Azimuth: 12.8 deg
Antenna Cable: EWP90

Antenna for Microwave #2 RCH

Antenna Mounting Centerline: 71'
Antenna Type: PAR8-59
Ice Shield

Azimuth: 281.4 deg
Antenna Cable: EWP52

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

165' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliac® feed line.

Future Cellular

150' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliac® feed line.

Future Cellular

135' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliac® feed line.

SITE #5 – LITTLE JOHN (LJN)

Detailed site information will be provided separately.

Site requires a new 180' self-supporting tower (FAA Ht = 199') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 175' Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Type: Sinclair SP304VSWBP120 Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 175' Leg/Azimuth: 120 deg Side Arm: 6'
Antenna Type: Sinclair SP304VSWBP120 Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 165' Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Type: Sinclair SP304VSWBP120 Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 180' Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Type: TXRX-101-68-10-0-03N Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 140' Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Type: TXRX-101-68-10-0-03N Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 BOY

Antenna Mounting Centerline: 71' Azimuth: 254.9 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Antenna for Microwave #2 RED

Antenna Mounting Centerline: 158' Azimuth: 172 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 165' Azimuth: 240 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Future Antenna for Microwave

Antenna Mounting Centerline: 125' Azimuth: 0 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Future Cellular

130' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

SITE #6 – GAY (V2)

Detailed site information will be provided separately.

Site requires a new 250' self-supporting tower (FAA Ht = 260') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 250'
Antenna Type: RFI EA40-67DIN

Leg/Azimuth: 150 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 250'
Antenna Type: RFI EA40-67DIN

Leg/Azimuth: 150 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 245'
Antenna Type: RFI EA40-67DIN

Leg/Azimuth: 150 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 245'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 220'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 RED

Antenna Mounting Centerline: 250'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 50.4 deg
Antenna Cable: EWP52

Antenna for Microwave #2 BRD (V1)

Antenna Mounting Centerline: 66'
Antenna Type: VHLP800-11
Ice Shield

Azimuth: 349.9 deg
Antenna Cable: EWP90

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 225'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 225'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 160'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 160'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 160'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

210' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Helix® feed line.

Future Cellular

195' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Helix® feed line.

Future Cellular

180' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Helix® feed line.

SITE #7 – BRD (V1)

Detailed site information will be provided separately.

Site requires a new 200' self-supporting tower (FAA Ht = 215') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 200'
Antenna Type: Sinclair SC323HF2LDF

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 200'
Antenna Type: Sinclair SC323HF2LDF

Leg/Azimuth: 120 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 200'
Antenna Type: Sinclair SC323HF2LDF

Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 200'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 90 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 175'
Antenna Type: TXRX-101-68-10-0-03N

Leg/Azimuth: 90 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1 GAY (V2)

Antenna Mounting Centerline: 141'
Antenna Type: VHLP800-11
Ice Shield

Azimuth: 169.9 deg
Antenna Cable: EWP90

Antenna for Microwave #2 PAR

Antenna Mounting Centerline: 107'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 222.2 deg
Antenna Cable: EWP52

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 125'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 125'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 125'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

165' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Helix® feed line.

Future Cellular

150' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Helix® feed line.

SITE #8 – PARISH (PAR)

Detailed site information will be provided separately.

Site requires a new 200' self-supporting tower (FAA Ht = 210') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 200' Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Type: RFI EA80-67DIN Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 200' Leg/Azimuth: 120 deg Side Arm: 6'
Antenna Type: RFI EA80-67DIN Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 185' Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Type: RFI EA80-67DIN Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 195' Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Type: TXRX-101-68-10-0-03N Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 160' Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Type: TXRX-101-68-10-0-03N Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1A Constantia (CON)

Antenna Mounting Centerline: 200' Azimuth: 147.7 deg
Antenna Type: PAR8-59 Antenna Cable: EWP90
Ice Shield

Antenna for Microwave #1B Constantia (CON)

Antenna Mounting Centerline: 180' Azimuth: 147.7 deg
Antenna Type: PAR6-59 Antenna Cable: EWP90
Ice Shield

Antenna for Microwave #2 BRD (V1)

Antenna Mounting Centerline: 135' Azimuth: 42.1 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 180' Azimuth: 0 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Future Antenna for Microwave

Antenna Mounting Centerline: 180'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 160'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 160'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 120'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 120'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 120'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Cellular

150' C/L. Three (3) each, twelve (12) foot gate-booms at three azimuths. Each gate-boom to support four (4) each multi-band cellular / PCS antennas. For loading consider Andrew model DBXLH-6565C-VTM (or equal). Each antenna to be served by 1-5/8" Heliax® feed line.

SITE #9 – FULTON WATER TANK (FWT)

Detailed site information will be provided separately.

Site requires a new 200' self-supporting tower (FAA Ht = 206') with the following loads:

Antenna for UHF TLMR Transmit #1

Antenna Base Mounting Level: 195'
Antenna Type: RFI OA20-67-DIN

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #2

Antenna Base Mounting Level: 195'
Antenna Type: RFI OA20-67-DIN

Leg/Azimuth: 120 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF TLMR Transmit #3

Antenna Base Mounting Level: 185'
Antenna Type: RFI OA20-67-DIN

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Paging Transmit #4

Antenna Base Mounting Level: 190'
Antenna Type: TXRX-101-68-10-3-03N

Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for UHF Receive

Antenna Base Mounting Level: 160'
Antenna Type: TXRX-101-68-10-3-03N

Leg/Azimuth: 0 deg Side Arm: 6'
Antenna Cable: 1-1/4" LDF

Antenna for Microwave #1A HAS

Antenna Mounting Centerline: 130'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 85.9 deg
Antenna Cable: EWP52

Antenna for Microwave #1B HAS

Antenna Mounting Centerline: 100'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 85.9 deg
Antenna Cable: EWP52

Antenna for Microwave #2 MUK

Antenna Mounting Centerline: 50'
Antenna Type: PAR6-59
Ice Shield

Azimuth: 270.8 deg
Antenna Cable: EWP52

Antenna for Microwave #3 EOC

Antenna Mounting Centerline: 50'
Antenna Type: VHLP-800-11
Ice Shield

Azimuth: 308.6 deg
Antenna Cable: EWP90

Antenna for 8TAC

Antenna Base Mounting Level: 190'
Antenna Type: AO841M54T3

Leg/Azimuth: 240 deg Side Arm: 6'
Antenna Cable: 7/8" LDF

Antenna for UTAC

Antenna Base Mounting Level: 175’ Leg/Azimuth: 240 deg Side Arm: 6’
Antenna Type: 1151-4D Antenna Cable: 7/8” LDF

Antenna for VTAC

Antenna Base Mounting Level: 175’ Leg/Azimuth: 120 deg Side Arm: 6’
Antenna Type: SC229SFXLDF Antenna Cable: 7/8” LDF

Antenna for SIREN Yagi

Antenna Base Mounting Level: 173’ Leg/Azimuth: 240 deg
Antenna Type: ANT930Y12-WR Antenna Cable: 7/8” LDF

Antenna for 453.650 Yagi

Antenna Base Mounting Level: 170’ Leg/Azimuth: 0 deg
Antenna Type: DB436 Antenna Cable: 7/8” LDF

Antenna for 453.450 Yagi

Antenna Base Mounting Level: 170’ Leg/Azimuth: 120 deg
Antenna Type: DB436 Antenna Cable: 7/8” LDF

Antenna for NYSP 155.505

Antenna Base Mounting Level: 150’ Leg/Azimuth: 240 deg Side Arm: 6’
Antenna Type: ASPA685 Antenna Cable: 7/8” LDF

Antenna for NYS EMO 45.24/45.28

Antenna Base Mounting Level: 155’ Leg/Azimuth: 240 deg
Antenna Type: DB201 Antenna Cable: 7/8” LDF

Antenna for RACES Yagi

Antenna Base Mounting Level: 140’ Leg/Azimuth: 120 deg
Antenna Type: DB436 Antenna Cable: 7/8” LDF

Antenna for Spare

Antenna Base Mounting Level: 140’ Leg/Azimuth: 240 deg
Antenna Type: DB201 Antenna Cable: 7/8” LDF

Note: All FUTURE cables, mounts and antennas are not to be provided with this bid. Information is provided for tower loading purposes only.

Future Antenna for Microwave

Antenna Mounting Centerline: 130’ Azimuth: 0 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Future Antenna for Microwave

Antenna Mounting Centerline: 130’ Azimuth: 240 deg
Antenna Type: PAR6-59 Antenna Cable: EWP52
Ice Shield

Future Antenna for Microwave

Antenna Mounting Centerline: 120'
Antenna Type:PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 120'
Antenna Type:PAR6-59
Ice Shield

Azimuth: 120 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 120'
Antenna Type:PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 100'
Antenna Type:PAR6-59
Ice Shield

Azimuth: 0 deg
Antenna Cable: EWP52

Future Antenna for Microwave

Antenna Mounting Centerline: 100'
Antenna Type:PAR6-59
Ice Shield

Azimuth: 240 deg
Antenna Cable: EWP52