

Request for Bids **Aboveground Truck Scale System**

PURPOSE

Chatham County Solid Waste & Recycling Division (the County) is requesting proposals from qualified firms to furnish and install a fully electric, low profile, modular type concrete deck truck scale system, designed to be optionally mounted on an aboveground foundation. Scale shall be a 3-module 4-section system that is suitable for installation on a pier type foundation with concrete wash-out.

BACKGROUND

The County is constructing a new office facility for the Solid Waste & Recycling Division. As part of the project, the County has requested an aboveground truck scale system adjacent to the facility. The construction of the building is underway and is scheduled for completion by June 30, 2015. All work for scale installation shall be coordinated with the general contractor to ensure completion by project end.

Licenses and Permits

A general contractor's license is required for this project, as well as a Chatham County Building Inspection permit. The inspection information can be located on the County website at: <http://www.chathamnc.org/Index.aspx?page=519>

Pre-Bid Opportunity

The County will hold a pre-bid meeting at the construction site on Thursday, March 19, 2015, 10:00 AM. The location is 28 County Services Road, Pittsboro, NC. This is the same location the Waste Management Division has always been, just an address name change. Please notify the Purchasing Agent, Robin James, if you plan to participate in this opportunity.

SCOPE OF WORK

1. Truck Scale

The scale will be a Fully Electronic, Low Profile, Concrete Deck Design Truck Scale. The scale platforms, load cells, and digital indicators will be 100% designed, manufactured and assembled by one manufacturer located in the United States of America. The scale shall be a Rice Lake Weighing Systems Model 7011-SC-100-OTR or equal that will meet the following minimum standards.

- 1.1** The scale shall have a nominal capacity of 135 Tons (270,000#) with a displayed resolution of 200,000# x 20# in accordance with NIST, Class III-L devices.
- 1.2** Scale shall be a full electronic design. Mechanical lever systems are not acceptable. Scale weigh-bridge will consist of factory welded modules having a total longitudinal span of 70'0" and platform width of 11' 0". No field assembly or welding will be allowed.
- 1.3** Each scale module shall be designed with a CLC (Concentrated Load Capacity) of 50 Tons (100,000#), as defined by NIST. When the designed CLC is applied at midspan on a module, according to NIST regulations, the maximum bending stress in the steel shall not exceed 16,000 PSI. The deflection at this loading condition shall not cause the scale to exceed the allowable accuracy tolerance as specified by NIST in Handbook 44.
- 1.4** The scale provided will have an unobstructed weighing surface of eleven feet wide by seventy feet in length and a 18"-1/2" minimum profile. A minimum clearance of 6-1/2" shall be provided between the concrete floor and the bottom of the weighbridge.
- 1.5** The scale modules will be designed as such to eliminate use of grout plates requiring setting and leveling prior to arrival of the scale at job site.
- 1.6** The scale system shall be a full electronic design, with internal self-checking weigh-bridge. Scale bridges using bumper bolts, externally fixed check rods, or embedded bumper plates in the end walls will not be permitted.
- 1.7** Scales shall use a free-floating connection. Modules using a bolted connection between modules shall not be permitted.
- 1.8** The minimum weighbridge thickness will be 12" including steel support structure. Scale modules shall be a welded design with an open bottom design-bolted designs not acceptable. A minimum of 6-1/2" clearance (or sufficient to meet compliance with State and Local Weights and Measures officials) will be provided between the bottom of the weighbridge and the washout slab.
- 1.9** The entire length and breadth of the concrete deck will be supported by an intricate steel support structure. Only structural wide flange beams construction shall be allowed. Weighbridge designs utilizing junior beams and/or bent plate shall not be permitted.
- 1.10** Concrete deck will be field poured at job site and have a minimum cured strength of 4000 psi at 28 days. Concrete deck shall have a maximum thickness 6" with one mat of #4 reinforcing rod on 16" centers. Concrete decks utilizing fiber mesh additives to

concrete shall not be allowed. Pre-poured, pre-cast or pre-stressed concrete decks or decks requiring shoring shall not be permitted.

- 1.11** Internal steel support structure for concrete shall consist of a minimum (2) 12"WF14# main beams and (7) 6WF9# beams and a 3/16" lower plate.
- 1.12** Scale weighbridge shall be designed to accommodate up to 250 trucks per day for a period of 25 years without weighbridge fatigue.
- 1.13** Shear cut galvanized strips shall be attached to the support beams and serve as a forming pan for the concrete deck. Plates shall be installed in a manner to minimize penetration of concrete below the support pan.
- 1.14** All non visible steel surfaces of the modules and all internal steel surfaces below the neutral axis of the structure shall be evenly spray coated with a Asphalt Emulsified (BASF Degacoat 310) coating to protect the steel surfaces from moisture due to high humidity, excessive rain, or standing water.
- 1.15** A minimum of (154) 3/4" x 4-3/16" Nelson shear studs shall be provided per 23'4" module both vertical and laterally to insure a composite adhesion of the concrete and steel elements.
- 1.16** Concrete elements in the weighbridge shall be utilized in a compression application above the neutral axis of the structure. Steel components may be used in both tension and compression. Deck designs allowing the concrete to extend below the neutral axis subjecting the concrete deck to tension or bending forces will not be permitted.
- 1.17** All steel elements shall be sandblasted to SSPC-A-SP6 standards. All steel surfaces will be cleaned with special cleaning compounds to remove oil and contaminants. The lower plate and all internal steel surfaces shall be coated with Asphalt Degacoat Emulsion Coating to protect the steel from rusting.
- 1.18** The entire bridge assembly shall be cleaned prior to addition of any coatings or paint application to the weighbridge modules. County reserves the right to inspect the steel surfaces prior to application of any coatings to the prepared steel surfaces. All steel surfaces shall be free of all welding gas residue, oil, mill scale, and rust.
- 1.19** All steel surfaces will be coated with high solids PPG Urethane Primer to a 1.0-1.8 mil dry film thickness using a commercially approved electrostatic spray process. A final coat of a high solids PPG AUE-360 Acrylic Urethane top coat shall be applied to a dry film thickness of 1.5-2.5 mil thickness.

- 1.20** Scale modules using flat welded or bolted end boxes shall not be allowed. Module end plates shall be a minimum 3/4" thick, and shall be reinforced on each side with longitudinal I-beams. Load cell pockets shall be constructed of 3/4" steel plate and shall be tied to the end plates using tabs and laser cutouts to reinforce strength of assembly.
- 1.21** End plates shall be designed of minimum 3/4" plate material.
- 1.22** Structural steel elements will have a combined minimum weight of 23,600#.
- 1.23** The scale will be NTEP certified and shall meet the requirements set forth by the NIST Handbook 44 for Class III-L devices. The bidder shall submit a current copy of COC (Certificate of Conformance) with bid.
- 1.24** Access covers to the load cells shall be from the top of the scale and shall be boltless in design. Cover plates will be reinforced to adequately handle axle traffic over the covers. Cover plates utilizing bolts of any type shall not be permitted.
- 1.25** Scale shall be equipped with gusseted bolt-on safety guide rails on each side of the scale with a minimum of 4" diameter pipe. Welded side rails shall not be permitted. A minimum of 3 bolts will be used at each gusset to attach side rail.
- 1.26** The scale provided shall be a Rice Lake Weighing Systems Survivor Series Model 7011-SC-100-OTR or equivalent. Sufficient specification information must be included with the bid document for a complete evaluation.

2. Load Cells and Junction Boxes

Load Cells are rigidly mounted utilizing a single link suspension to provide equal and consistent and evenly distributed force to the load cell. Load Cells are totally self-contained, and come complete with mounting stands, single-link suspension, and 60' of cable to junction box. Compression or rocker style load cells shall not be permitted. Please review the following standard load cell requirements:

General Provisions

Rice Lake Load Cells are totally self-contained and come complete with mounting stands, single-link suspension and 60' signal cable to junction box.

- 2.1** Load Cells shall be rigidly mounted in fabricated steel stands parallel to traffic flow. Suspension system will be E4340 material forged single link suspension hardened to Rockwell "C" 40-45 to allow self-centering and free floating platform.

- 2.2** Load Cells will be of the analog type and have a minimum capacity of 75,000# each with an overload safety factor of 150%. Scales utilizing a lower capacity load cell than 75,000# will not be permitted.
- 2.3** Scales utilizing adjustable bumper bolts or embedded plates in the wall to minimize movement of the bridge shall not be allowed.
- 2.4** Systems utilizing internal circuitry to convert analog to digital conversion of the load cell signal within the load cell shall not be permitted.
- 2.5** All access to load cells will be from the top of the scale through formed boltless steel access panels. Covers should be form fitted and should be accessible without use of tools.
- 2.6** All conduit runs within the scale weighbridge will be through dedicated steel conduit. All cables must be protected in steel conduit.
- 2.7** A flexible screw type conduit fitting shall be provided at each load cell, for protection of the cable from rats or other rodents. Load cell cable shall be totally enclosed within permanent conduit provided within the weighbridge. Load cells using connectors of any type will not be permitted.
- 2.8** Load Cells shall be of 4340 alloy steel nickel plated and shall be scientifically sealed with a minimum IP67 rating.
- 2.9** Replacement load cells shall be available from a multitude of vendors nationally, and shall not be single sourced or of a proprietary design.
- 2.10** Manufacturers using proprietary load cell technology available from a single source will not be permitted.
- 2.11** Fiberglass Reinforced Polyester (FRP) Junction box with formed contoured edges and gasket top access. Junction box to have a "Gore™" Single directional breather with PreVent hydrophobic membrane for pressure equalization. Steel junction boxes shall not be permitted.
- 2.12** Load Cell stands will be flush mounted to concrete piers and anchored using Red Head wedge locks or similar bolts. A maximum of (2) ¾" x 7" anchor bolts will be required per stand and will be included in cost of scale. Grout plates or embedded items in the foundation concrete will not be allowed.
- 2.13** A 1" braided copper transient by-pass cables shall be provided at each load cell from the weighbridge to the base stand.

- 2.14** UPS Sola 2000 Duplex Voltage regulating transformer, or equivalent.
- 2.15** UJB-3T6 DC Transient circuitry protection or equivalent.
- 2.16** Load cells shall be warranted for 5-years against failure of all types including lightning or surge voltage
- 2.17** A single-point grounding system will be provided. Systems utilizing a multiple point ground will not be permitted.
- 2.18** Electrical connection to scale house will be performed by others.

3. Warranty

- 3.1** The Weighbridge shall have a limited five-year parts warranty including lightning protection.
- 3.2** The Digital Weight Indicator and Remote Digital Displays shall have a limited one-year parts warranty.

4. Digital Instrumentation Specifications

- 4.1** The scale instrument shall be capable of interfacing with the County's Waste Works software via RS-232 serial interface
- 4.2** The scale instrument shall be an NTEP approved model and meet or exceed all specifications set forth by NIST, Handbook 44 for Class II, III, and III-L devices. The manufacturer on request shall provide a Certificate of Conformance to these standards.
- 4.3** The scale instrument shall have the capability of powering up to Eight 350-ohm weight sensors.
- 4.4** The instrument shall have a minimum of (4) Serial I/O Ports
- 4.5** The scale instrument shall be designed to provide noise protection for RFI, EMI and ESD.
- 4.6** The instrument shall have an automatic zero tracking feature that will be programmable and in compliance with NIST and OIML regulations.
- 4.7** The instrument shall be able to be setup through the front panel of the instrument.

- 4.8 The instrument shall include as standard surge voltage protection as recommended by the manufacturer.
- 4.9 The digital instrument shall be warranted by the manufacturer for one (1) full year from date of installation.
- 4.10 The instrument shall have an adjustable digital filtering system for environmental noise or vibration.
- 4.11 A selectable and configurable Unit of Measure feature will allow displayed indication in up to 2 different units of measure.
- 4.12 Operating temperature for the instrument shall be 14°F to 104°F (-10°C to +40°C)

5. Remote Digital Displays

- 5.1 Two (2) Outdoor Remote Digital Displays with 5" dual-row LED digits, 5" high, red and green Stop/Go light, built-in rain hood and automatic light sensor.
- 5.2 Poles and hardware for mounting remote displays
- 5.3 Traffic Light Controller. A single controller with a push button switch for the traffic light on each remote shall be provided. Both lights will normally be RED. When either button is pressed the corresponding light will turn GREEN and remain so for a designated period of time and then automatically switch back to RED.
- 5.4 Voice intercom transmitter/receiver shall be installed at each display for communication to the scale house.

6. Foundation & Installation

- 6.1 Scale foundation including piers, washout and two (2) 10' x 11' concrete approaches shall be constructed per manufacturer's specifications.
- 6.2 Scales modules shall be installed, wired, tested and calibrated with proper documentation being submitted to the North Carolina Department of Agriculture.
- 6.3 Any excess dirt may be disposed of on site.
- 6.4 25 foot ramps on each end of the scale are to be constructed by others in coordination with selected scale vendor.
- 6.5 Material storage and site preparation activities shall be coordinated with the construction site general contractor (Muter Construction.)

SUBMITTAL INSTRUCTIONS

Bids and required attachments, including vendor form and bid form must be turned in to the Chatham County Purchasing Agent, Robin James, no later than **March 31, 2015, 2:00 PM EST.** Bids should be delivered in a sealed envelope plainly marked "Aboveground Truck Scale System for Chatham County."

No bids will be accepted by fax, email or phone, and **No Bids will be accepted after the stated deadline above.** The contact information is as follows:

Chatham County Finance Office
Attn: Robin James
PO Box 608
12 East Street
Pittsboro, NC 27312
Phone: (919) 545-8364
Fax: (919) 545-2417
Email: robin.james@chathamnc.org

All qualifying bids are due by 2:00 PM on Tuesday, March 31, 2015 to the above location.

The bids will be opened and read sharply at 2:00 PM EST in the West Wing Conference Room of the Courthouse Annex Building at 12 East Street in Pittsboro, NC.

All questions arising from this bid document should be submitted in writing to robin.james@chathamnc.org or faxed to 919-545-2417 to Ms. James attention. All questions must be submitted by 4:00 PM on Tuesday, March 24, 2015. An addendum will be issued as needed to provide additional information or clarification. If an addendum is needed, it will be issued by Thursday, March 26, 2015 and posted on the County Bids Opportunities Website. Details of this bid opportunity and others can be found at: <http://www.chathamnc.org/index.aspx?page=1772>

AWARD

The award will be made to the lowest, responsible, responsive bid with all requirements taken into consideration.

SCHEDULE

- A pre-bid conference will be held **Thursday, March 19, 2015 at 10:00 AM.** The meeting location is on site location at 28 County Services Road, Pittsboro, NC 27312.
- The deadline for submitting questions in writing (mail, email or fax) is **Tuesday, March 24, 2015 by 4:00 p.m. EST.**
- The deadline for receipt of bids by the county is **Tuesday, March 31, 2015 by 2:00 p.m. EST.**

- The Review Committee will review bids and make a selection by April 10, 2015.

INSURANCE REQUIREMENTS

Chatham County requires selected contractors and any subcontractors to obtain and maintain at their own expense all insurance required by state and federal law. If requested, the selected organization agrees to provide Chatham County with evidence of required policies, certificates and/or endorsements upon the award of the contract. As a minimum, contractors and subcontractors are required to have the following coverages related to any contract work for Chatham County:

- Workers compensation as required by the State of North Carolina
- Professional liability, including errors and omissions, malpractice (if applicable) and negligent performance—at least \$1 million for all damages
- Comprehensive general liability, including personal injury, broad form property damage blanket contractual and fire legal liability--\$1 million combined limit for bodily injury and property damage

The County shall be named as an additional insured on both the professional liability and comprehensive general liability coverage. Contractor shall furnish copies of all such policies and all renewals, terminations and alterations to the County on a current basis.

CONDITIONS

- All proposing firms or individuals shall comply with all conditions, requirements, and specifications contained herein, with any departure constituting sufficient cause for rejection of the proposal. However, Chatham County reserves the right to change the conditions, requirements and specifications as it deems necessary.
- The proposal must be signed by a duly authorized official of the proposing organization or individual submitting the proposal.
- The firm must return the completed Attachment 1: Bid Form and Attachment 2: Vendor Information and Signature Form
- No bid will be accepted from any person or organization that is in arrears for any obligation to Chatham County, or that otherwise may be deemed irresponsible or unresponsive by county staff, the Chatham County Board of Commissioners, or the Chatham County Economic Development Corporation.
- Chatham County is not obligated to enter into any contract as a result of the RFB.
- All prices quoted must be firm for a period of 90 (ninety) days following the proposal deadline.
- Chatham County reserves the right to reject any and all bids or any part thereof and to select the most responsive proposal that is deemed in the best interest of Chatham County.
- Only one proposal can be awarded as the result of the RFB.

- Chatham County may approve or disapprove the use of specific proposed subcontractors in any bid.
- Chatham County reserves the right to enter into an agreement with another proposing vendor in the event that the originally selected vendor fails to execute a contract with the County or defaults on their contract.
- All bids shall be prepared in a comprehensive manner as to content, but we do not require specific types of binders or promotional material for submissions. Promotional material will not be considered part of the bid and will not affect the evaluation of bids.
- Chatham County reserves the right to negotiate with any, none or all of the proposing vendors.
- All costs, including travel and expenses, incurred in the preparation of this proposal will be borne solely by the proposing company.
- The County will not return bid materials to those submitting bids.
- No agreements with any selected vendor shall be binding until a contract is approved, signed and executed by the County Manager and authorized representatives of the vendor.

The County of Chatham is an Equal Opportunity Employer and does not discriminate on the basis of sex, marital status, race, color, creed, national origin, age or disability.

Chatham County Solid Waste & Recycling

Aboveground Truck Scale System

Bid Form

Vendor Name: _____ **Signature:** _____

Description:

Cost for scales and installation \$ _____

Freight \$ _____

(If bidding an equivalent, sufficient specification information must be included with the bid document for a complete evaluation)

Comments:

Total Cost: \$ _____

Vendor Information & Signature Form

Name of Vendor:	
Trade License # (if applicable)	
Contact Person(s)	
Street Address with City, State & Zip Code	
Mailing Address (if different than above)	
Phone #	
Fax #	
Email	
Proposer will do the work as:	<input type="checkbox"/> Individual <input type="checkbox"/> Joint Venture <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation
Date & state of incorporation	Date State
Name of partnership or joint venture	

By signing below, the submission of qualifications shall be deemed a representation and certification by the Proposing Consultant that it has investigated all aspects of the RFB, and it has read and understands the RFB.

Bidder Signature:	
Date Signed:	
Title of Signatory:	