

April 20, 2015

**INVITATION TO BID #15-35**

Sealed bids for Multi-energy, single view X-ray screening system for the City of Birmingham will be received by the Purchasing Agent, P-100 First Floor City Hall, Birmingham, Alabama until 2:00 p.m., May 20, 2015 at which time they will be publicly opened and read.

Bidder's wishing to bid can download the complete solicitation including the specifications and bid form via the internet at [www.birminghamal.gov](http://www.birminghamal.gov) (Go to the link titled **Bidding Opportunities**), or by visiting the Purchasing Office at the address shown above, or by calling (205) 254-2265, fax (205) 254-2484 and requesting a copy be mailed to you. Any addenda will be available on the internet. Bidder is responsible for checking the website for addenda until bid opening date. Addenda will be mailed to only those vendors who were provided a copy in person or by mail.

Bids are to be submitted on the bid form provided and all quotations are to be f.o.b. Birmingham, Alabama delivered.

It is required for any contract exceeding \$10,000.00 that the bidder submits with his bid either a certified check, a cashier's check, or a bid bond payable to the City of Birmingham. In order for any bid award to be considered that exceeds \$10,000.00, it must be accompanied by an acceptable bid bond or check in the amount of \$500.00. Bid bond checks will be returned to all unsuccessful bidders after the formal award is made and to the successful bidder after acceptance of award. Should the successful bidder fail to accept the award, the bid bond or check shall be forfeited.

The City follows a policy of nondiscrimination. No contractor with the City should discriminate on the basis of race, sex, religion or national origin. Failure by the Vendor to carry out these requirements is a material breach of its obligations, which may result in its termination or such other remedy as the City deems appropriate.

No bid may be withdrawn for a period of sixty (60) days after the date of the bid opening.

The City reserves the right to reject any or all bids submitted in whole or in part, and to waive any informalities.

Bids must be submitted in a sealed envelope marked, "**SEALED BID –X-RAY SCREENING SYSTEM -2:00 p.m., 05/20/15**". Bids may be hand delivered to P-100 First Floor City Hall, Birmingham, Alabama or mailed to City of Birmingham, P.O. Box 11295, Birmingham, Alabama. 35202-1295. **(DO NOT MAIL BIDS TO ROOM P-100 FIRST FLOOR CITY HALL)**. However, bids sent by any express carrier (Federal Express, Airborne, UPS, etc) must be mailed to 710 North 20th Street, Birmingham, AL 35203 and specify delivery to Room P-100 First Floor City Hall.

It is the bidder's responsibility to make sure that his bid is in the possession of the Purchasing Agent on or before 2:00 p.m. May 20, 2015. Bids received after this time will not be considered.

---

W.E. Caffee, Assistant Purchasing Agent

## SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM

### GENERAL:

The City of Birmingham plans to purchase an X-ray screening system as specified later in this document. Award will be based on the lowest priced, responsive, responsible bid submitted.

The City reserves the right to purchase additional quantities of the items bid at the bid price at a later date if mutually agreeable to both parties.

Municipalities are not liable for sales tax: reference Code of Alabama Section 40-23-4. Costs normally considered pass through costs (property tax, use tax, delivery charge, etc.) to the customer by the provider must be included in any fee proposed (Code of Alabama Section 40-12-222). For the purchase of personal property, the City's policy is to apply a local preference option, as allowed by State of Alabama Code, Section 41-16-50, in determining the low bidder.

**Bidders are required to provide two (2) copies of their original bid with their package.**

The City will issue purchase order(s) to the successful bidder for the goods and/or services (bid items) that are the subject of the bid. Unless otherwise agreed in a writing that is signed by both parties, the entire agreement between the City and the successful bidder concerning the bid items is comprised of the terms, conditions, specifications and requirements stated in (a) the contemplated purchase order(s), (b) this Invitation to Bid and Specifications and (c) your bid (collectively, the "Contract Requirements"). These writings supersede all former proposals, offers, negotiations, representations or agreements, either written or oral, concerning the provision of vendor's goods and/or services. By acceptance of the City's purchase order(s), the successful vendor agrees to abide by and perform its responsibilities related to the bid items in compliance with the Contract Requirements.

**No bid may be withdrawn for a period of sixty (60) days after the date of the bid opening.**

**All bids submitted are to be f.o.b. City of Birmingham, AL delivered to the David Vann Building, 801 17<sup>th</sup> Street North, Birmingham AL 35206. NOTE: Unload at street level with side walk ramp to 1<sup>st</sup> Floor level. Bidder is responsible for verifying site conditions prior to delivery.**

Failure to adhere to any or all terms, conditions and specifications as set forth in the contract may result in the immediate termination of the contract. Should termination occur, the holder of the contract may be declared a "non-responsible vendor". This declaration may result in the rejection of any future bids submitted by the vendor for a period of time to be determined by the City.

**Each bidder is to extend prices and provide a total for the bid being submitted. In order for any bid award to be considered that exceeds \$10,000.00 your bid must have been accompanied by an acceptable bid bond, certified check or cashier's check in the amount of \$500.00. Bid bond checks will be returned to all unsuccessful bidders after the formal award is made and to the successful bidder after acceptance of award. Should the successful bidder fail to accept the award, the bid bond check shall be forfeited.**

Contract award to purchase the materials covered in this bid document shall be construed under and governed by the laws of the State of Alabama and each party hereto irrevocably agrees to be subject to the jurisdictions of the courts of the State of Alabama.

The City's standard payment term is Net-30 Days from acceptance. Exception may be allowed for discounted early payment, such as 2%-10, Net 30 Days. The reference date for all such discounted early payment terms will be the date the invoice is received or the date the goods are received, whichever is later. In the event of a dispute the City's record shall prevail. **The City will not consider any bids requiring payment in advance of delivery or C.O.D. payments.**

## SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM

Successful bidder shall not assign this contract to any other party without prior written approval of the City of Birmingham. Contract shall not be assigned to an unsuccessful bidder who was rejected because he was not a responsive or responsible bidder.

Vendor (and its employees, agents and any subcontractors) shall not discriminate on the basis of race, color, national origin, or sex in the performance of the services contemplated hereunder. Failure by the Vendor to carry out these requirements is a material breach of its obligations, which may result in its termination or such other remedy as the City deems appropriate. Vendor acknowledges and agrees that, consistent with federal law and City's public policy, it will encourage disadvantaged business enterprise (DBE) participation to the extent permitted by law. A "disadvantaged business enterprise" is a for-profit small business concern (i) at least 51% owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51% of the stock is owned by one or more such individuals; and (ii) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it. In accordance with federal law, a "socially and economically disadvantaged individual" includes African-Americans, Hispanic Americans, Native Americans, Asian-Americans, women, and any additional groups designated as socially and economically disadvantaged by the Federal Small Business Administration.

**Successful bidder acknowledges and agrees that the City has the right to deduct from total amount of consideration to be paid, if any, to the successful bidder under this agreement all unpaid, delinquent, or overdue license fees, taxes, fines, penalties and other amounts due the City from the successful bidder.**

**The City of Birmingham must have a copy of the successful bidder's current City of Birmingham business license prior to formal award of contract. Each bidder may submit a copy of his/her license along with his/her bid. However, bidder must provide a copy of his/her current business license no later than seven (7) working days of receipt of notice of intent to award. Failure to submit the requested information will result in the notice of intent to award being revoked.**

**Any successful bidder who is not currently set up as a vendor in the City of Birmingham vendor file will be required to submit a completed W-9 tax form prior to any award. The W-9 tax form may be submitted with your bid or no later than seven (7) working days of receipt of notice of intent to award.**

**Successful Vendor (located in the State of Alabama or located outside of the State of Alabama, but employs one or more employees within the State of Alabama) represents and warrants that it does not knowingly employ, hire for employment, or continue to employ an "unauthorized alien", as defined by the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No. 2011-535 (H.B.56) of the Alabama Legislature, as amended from time to time (the "Act") and that, during the performance of this contract, Vendor shall participate in the E-Verify program as required under the term of the Act. Vendor agrees to comply with all applicable provisions of the Act. As a condition for the award of any contract, Vendor shall provide documentation establishing that the Vendor is enrolled in the E-Verify program, or a signed, written statement that the Vendor does not have a presence (one or more employees) in the State of Alabama. Vendor may submit applicable documentation with his/her bid or no later than seven (7) working days of receipt of notice of intent to award.**

Any questions concerning these specifications should be addressed to the Purchasing Division, at (205) 254-2265 or Fax: (205) 254-2484, between the hours of 8:00 a.m. & 4:00 p.m. Monday thru Friday.

Bidder shall check (√) each and every item in the appropriate column provided on the right hand edge of the page as to compliance or non-compliance with specifications. Exceptions will be allowed to items that are not listed as (No Exception), if they are equal to or superior to that specified and provided they are listed and fully explained on the exceptions area of the bid form or by attachment titled "Exceptions". **Bids taking total exception to the specifications will not be considered.** The equipment will be inspected upon delivery for compliance with specifications. Deviations will not be tolerated and will be cause for rejection of the equipment unless they were originally listed in the bidder's proposal and deemed acceptable.

**SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM**

**Bidder Complies**  
**YES NO**

**I. PURPOSE**

The X-ray screening system specified herein is designed to prohibit the introduction of contraband including weapons and explosives.

\_\_\_\_\_

**II. DESCRIPTION**

The System covered by this specification will allow security personnel to examine baggage, packages and freight to ensure that no contraband is being transported into a secure facility or area.

\_\_\_\_\_

**III. SPECIFICATION**

**GENERAL**

1. The supplied system will be new, not a used or a demonstration unit, and is from the manufacturer's standard product line.

\_\_\_\_\_

**PHYSICAL SPECIFICATIONS**

1. The system width shall be a maximum 845 mm (33.3 inches).
2. The system length shall not be less than 2080 mm (81.2 inches).
3. The system height shall be between 1350 to 1450 mm (53.2-57.1 inches)
4. The system tunnel aperture shall not exceed 620 mm (24.4 inches) wide by 420 mm (16.5 inches) high.
5. The system conveyor height shall be no less than 800 mm (31.5 inches).
6. The system shall be mounted on heavy-duty castors for ease of movement. It shall be fixed in place by means of adjustable jacking feet.
7. The system chassis shall be all steel welded.
8. The system shall have folding conveyor end sections to facilitate movement in areas of restricted access and to enable elevator use.
9. The system weight shall not exceed 600Kgs (1323 pounds)
10. The system shall have a visual alarm search indicator at both ends of the tunnel
11. The system shall include an operator foot mat kit.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**X-RAY GENERATOR**

1. The X-ray generator shall be cooled using sealed oil bath with forced air.
2. The X-ray generator Shall provide automatic protection Over Voltage, Over Current and Over Temperature
3. The X-ray beam divergence projected from the generator shall be 60 degrees at maximum.
4. The X-ray generator shall not require periodic routine replacement.
5. The system X-ray generator operating Anode Voltage shall be 140kV.
6. The system X-ray generator operating Tube Current shall be 0.7 mA.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM**

**Bidder Complies**  
**YES NO**

**DETECTION SYSTEM**

- |  |       |       |
|--|-------|-------|
| 1. The system detection shall be Multi Energy with 2 detector arrays.                            | _____ | _____ |
| 2. One array for detecting high energy X-ray and the second array for detecting low energy X-ray | _____ | _____ |
| 3. The detector array shall be L – shaped.   | _____ | _____ |
| 4. The minimum number of detectors shall be 1280.  | _____ | _____ |

**IMAGE PERFORMANCE**

- |   |       |       |
|---|-------|-------|
| 1. Adaptive Contrast Adjustment: The system shall be capable of performing adaptive contrast adjustment on scrolling image.     | _____ | _____ |
| 2. The system shall be capable of discriminating between Organic and Inorganic materials  | _____ | _____ |
| 3. The system shall be capable of zooming on scrolling image without conveyor stop up to 2X                                     | _____ | _____ |
| 4. The system shall be capable of zoom in static mode up to 64X in exponential mode.  | _____ | _____ |
| 5. The system shall be capable of dynamic zoom and pan in static mode up to 64X with 0.1 times resolution in incremental steps. | _____ | _____ |
| 6. Any selected function Shall reset automatically when the next object is being screened                                       | _____ | _____ |

**WIRE RESOLUTION**

- |  |       |       |
|--|-------|-------|
| 1. Standard X-Ray Generator: The system shall be capable of imaging 38 American Wire Gauge (AWG) un-insulated solid copper wire. | _____ | _____ |
|--|-------|-------|

**STEEL PENETRATION**

- |  |       |       |
|--|-------|-------|
| 1. Standard X-Ray Generator: The system shall be capable of imaging 28 mm steel penetration. | _____ | _____ |
|--|-------|-------|

**IMAGE PROCESSING**

- |  |       |       |
|--|-------|-------|
| 1. The system shall be able to combine multiple image processing functions (i.e. Black and White, Variable Gamma, Inorganic, Organic) with the image optimization feature. | _____ | _____ |
| 2. The system shall have a minimum 14 independent image processing functions   | _____ | _____ |
| 3. This functionality shall allow the operator to display the optimum contrast and highest detail resolution for all materials and densities.                              | _____ | _____ |
| 4. This functionality shall be available without having to re-program keys.  | _____ | _____ |
| 5. The system shall be capable of one button access to image processing.   | _____ | _____ |
| 6. The system shall support programmable hot keys for image processing.  | _____ | _____ |
| 7. The system shall be capable of 12 bit data acquisition  | _____ | _____ |
| 8. The system shall be capable of 24 bit color (16 million colors)   | _____ | _____ |
| 9. The system shall be capable of displaying 4096 levels of grey   | _____ | _____ |

**SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM**

	<b>Bidder Complies</b>	
	<b>YES</b>	<b>NO</b>
10. The system shall be capable of imaging a compact disk (CD) through 0.3 mm steel via inorganic stripping.	_____	_____
11. The system shall be capable of imaging a compact disk (CD) through 50 mm of organic material via adaptive contrast adjustment.	_____	_____

**IMAGE ARCHIVING**

1. The system shall include Manual Image Archiving in proprietary, non-commercial format for increased security.	_____	_____
2. The system shall include Automatic Image Archiving in proprietary, non-commercial format for increased security.	_____	_____
3. The system shall be capable of viewing images archived in proprietary format.	_____	_____
4. System shall be capable of saving archived images in commercial format (e.g. BMP, PNG).	_____	_____
5. The system shall be capable of Manual Image Archiving in commercial format (e.g. BMP, PNG).	_____	_____
6. The system shall be capable of archiving to an external USB 2.0 hard disk with a capacity up to 2 Terabytes	_____	_____
7. System shall have the capability to automatically archive images over a network to a file repository.	_____	_____

**AUTOMATIC THREAT DETECTION**

1. The system shall be able to automatically alert high density material by highlighting the dense areas using a configurable blinking visual aid.	_____	_____
2. The density alert threshold shall be configurable.	_____	_____
3. Any automatic detection algorithm shall not require periodic calibration.	_____	_____

**CONVEYOR SYSTEM**

1. The conveyor speed shall be 0.20 m/s (40 ft. /min) in either direction plus or minus 10%.	_____	_____
2. The conveyor load shall be 165 kg (365 lbs.) at minimum.	_____	_____
3. The conveyor motor shall be in a sealed drum, maintenance free for life.	_____	_____
4. The conveyor belt shall be either welded or zipped.	_____	_____
5. The entry conveyor belt shall include an attachable 0.5M roller bed w/ backstop.	_____	_____
6. The exit conveyor belt shall include an attachable 1.0M roller bed w/ backstop.	_____	_____

**COMPUTER**

The system shall be a true P.C. based system with a **minimum** specification as follows:

1. Monitor: Single 19" LCD Flat Panel.	_____	_____
2. Windows based operating system. No open source operating system	_____	_____
3. Processor: Core i5-2400, 3.10GHZ, 4-CORES	_____	_____
4. RAM: 2 GB minimum	_____	_____

5. Hard Disk: 250 GB minimum

**SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM**

**Bidder Complies**  
**YES NO**

6. Graphics Card Video Memory: 1GB minimum

7. Uninterrupted Power Supply (UPS) fitted as standard for safe PC shutdown

8. Minimum 4 USB ports

9. Include integrated operator console on the machine body

• All image generation for display on the operator monitor shall be done via Commercial Off the Shelf (COTS) Video Graphics Card.

• All software updates shall be capable of being implemented via USB memory stick.

• The system shall be supplied as Network Ready as standard.

• The system hard disk shall be partitioned into 2 logical drives for operating system and data.

• The system functionality shall be secured via the use of an encrypted dongle key

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DIAGNOSTICS**

The system shall have a comprehensive built in test facility that includes the following:

1. Photodiode signal outputs with and without X-ray.

2. User setup parameters such as date time adjust and scroll direction change.

3. X-ray generator kV and mA monitor.

4. Ramp up and ramp down time for X-ray generator.

5. PEC status indication.

6. Keyboard test.

7. Photodiode manual and automatic map out.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**POWER REQUIREMENTS**

1. The system shall be dual voltage capable.

a. 115 VAC ± 10%; 50 or 60 Hz OR

b. 230 VAC ± 10%; 50 or 60 Hz.

\_\_\_\_\_  
\_\_\_\_\_

**ENVIRONMENTAL REQUIREMENTS**

1. The system storage temperature range shall be from -20 Celsius to +50 Celsius.

2. The system operating temperature range shall be from 0 Celsius to +40 Celsius.

3. The system shall be able to operate in relative humidity of 5 to 95% non-condensing.

4. The systems noise in operation shall not exceed 65db(A).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**HEALTH AND SAFETY**

1. The system shall comply with all applicable international health and safety regulations including USA FDA X-ray systems (Federal Standard 2.1-CFR 1020.40) and Health and

Safety at Work Act 1974-Section 6, amended by the Consumer Protection Act 1987.

Maximum leakage radiation less than 0.1mR/hr (1µSv/hr) in contact with outer panels. \_\_\_\_\_

**SPECIFICATIONS FOR MULTI-ENERGY, SINGLE VIEW X-RAY SCREENING SYSTEM**

	<b>Bidder Complies</b>	
	<b>YES</b>	<b>NO</b>
2. The system shall be provided with a minimum of 3 emergency stop buttons.	_____	_____
3. The system shall be provided with System Energized and X-Ray on indicators at both ends of the X-Ray tunnel and on the operator workstation.	_____	_____
4. The system shall include a safety interlock system to prevent X-Ray generation in the event of a critical panel being removed.	_____	_____
5. The system shall be CE marked.	_____	_____
6. The system shall be FCC and IEC compliant.	_____	_____
7. The system shall be UL compliant.	_____	_____
8. The system shall be manufactured in an ISO 9001:2008, ISO 14001:2004 + Cor. 1:2009 certified facility.	_____	_____

**REGULATORY**

1. The system shall be designated as Qualified Anti-Terrorism Technology certified as per requirement of United States Department of Homeland Security SAFTEY Act of 2002. \_\_\_\_\_
2. The system shall be approved and listed on United States Transportation Security Administration (TSA) Air Cargo Screening Qualified Technology list (ACSTL). \_\_\_\_\_

**WARRANTY / SERVICE**

1. A two-year parts, labor and travel warranty shall be included with the unit.  
Copy of warranty document to be submitted with bid. \_\_\_\_\_
2. 24/7 technical support via call center shall be provided. \_\_\_\_\_

**OTHER REQUIRED SOFTWARE**

1. System shall include built-in operator training program.

**SPECIAL TOOLS AND TEST EQUIPMENT**

1. The system shall **not** require the use of any special tools or test equipment either for installation, routine maintenance or defect rectification other than a digital volt meter and Radiation Detection Monitor.

**BID FORM**

W. E. Caffee  
 Assistant Purchasing Agent  
 Birmingham, AL

Submitted below is my firm bid for Multi-energy, single view X-ray screening system for the City of Birmingham in accordance with your invitation to bid and specifications dated April 20, 2015. Prices quoted are f.o.b. Birmingham, AL and I am bidding in exact accordance with the specifications except as listed below.

APPROX QTY	DESCRIPTION	MAKE/MODEL	UNIT PRICE	EXTENDED TOTAL
1	Multi-energy, single view X-ray screening system			

I hereby certify that we do not discriminate in employment of our personnel against any persons on account of race, creed, color, sex, or national origin, and acknowledge and agree, that the City encourages minority and women owned business participation to the maximum extent possible. This policy includes Historically Underutilized Business Enterprises such as architectural firms, engineering firms, investment banking firms, other professional service providers, and construction contractors as part of the City’s business, economic and community revitalization programs.

**EXCEPTIONS TO SPECIFICATIONS:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Email Address  
 \_\_\_\_\_  
 Tax ID Number  
 \_\_\_\_\_  
 Name (Print or Type)  
 \_\_\_\_\_  
 Signature  
 \_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date of Bid  
 \_\_\_\_\_  
 Company  
 \_\_\_\_\_  
 Street Address  
 \_\_\_\_\_  
 Post Office Box (Zip if different from street address)  
 \_\_\_\_\_  
 City      State      Zip  
 \_\_\_\_\_  
 Terms of Payment  
 \_\_\_\_\_  
 Delivery Date  
 \_\_\_\_\_  
 Telephone Number  
 \_\_\_\_\_  
 Fax Number

Bidder acknowledges receipt of \_\_\_\_\_ addenda to the bid.  
 (addenda number)

**IF AVAILABLE PLEASE SUBMIT COPY OF CURRENT CITY OF BIRMINGHAM BUSINESS LICENSE WITH THIS BID.**

**INDICATE THE FOLLOWING ADDRESSES IF DIFFERENT FROM ABOVE:**

1. **BID AWARD NOTICE ADDRESS**
2. **PURCHASE ORDER ADDRESS**
3. **REMITTANCE ADDRESS (and NAME if different than above)**