



RESOLUTION

APPROVING A SIX-YEAR AGREEMENT WITH PICTOMETRY INTERNATIONAL
CORP. FOR IMAGING, SOFTWARE AND DATA PRODUCTS

CITY OF NASHUA

In the Year Two Thousand and Ten

RESOLVED by the Board of Aldermen of the City of Nashua that the attached Six-Year Agreement by and between Pictometry International Corp. and the City of Nashua for imaging, software and data products is hereby approved.

The funding source for FY2011 (\$30,312.65) is Account 523-53032-9605 (GIS - Flyover and Color Ortho).

LEGISLATIVE YEAR 2010

RESOLUTION: R-10- 58

PURPOSE: Approving a six-year Agreement with Pictometry International Corp. imaging, software and data products

SPONSOR(S): Mayor Donnalee Lozeau

**COMMITTEE
ASSIGNMENT:**

FISCAL NOTE: The estimated cost to the city for this contract is \$133,621.66.

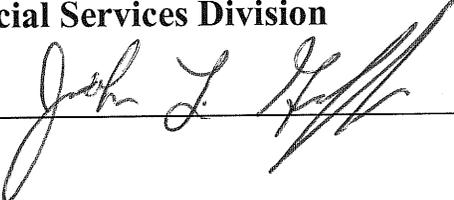
ANALYSIS

This resolution would approve a six-year agreement for imaging, software and data products from Pictometry International Corp. A multi-year agreement gives the city beneficial pricing and discounts.

NRO § 5-74, B states that a contract that extends from the current fiscal year into succeeding fiscal year(s) in which no funds have been appropriated nor otherwise designated for this purpose shall be approved by the full Board of Aldermen before the contract shall become binding on the City.

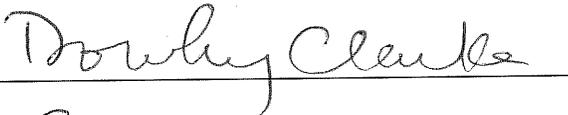
**Approved as to account
structure, numbers and
amount:**

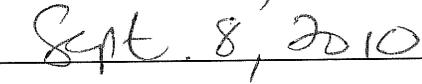
Financial Services Division

By: 

Approved as to form:

Office of Corporation Counsel

By: 

Date: 

(6/18/2010)

Mr. Michael Neary
Executive VP Administration
Pictometry International Corp.
100 Town Centre Drive, Suite A
Rochester, NY 14623

Dear Mr. Neary

The City of Nashua, NH requests to renew and extend the terms and conditions of our License Agreement with Pictometry International Corp., dated 03/27/2009, for an additional six year period. Total cost of this six (6) year renewal is \$133,890.28 (which includes any setup fees, media delivery fees, etc., as described in Schedule A attached).

This renewal (check appropriate condition):

 includes an exact duplication of our original Schedule A and Sector Map, which are attached and initialed.

XX includes a new Schedule A, Schedule B and Sector Map, which are attached and initialed.

All other terms and conditions remain the same.

Sincerely,

_____ (Customer Company)

By: _____ (Authorized Customer Signature) _____ (Date)

_____ (Customer Printed Name)

_____ (Customer Title)

_____ (Customer Address)

_____ (Customer Phone) _____ (Customer Email)

PICTOMETRY

By: _____
Michael Neary
Executive Vice President, Administration

Date: _____

SIX YEAR AGREEMENT - SCHEDULE "A"
Six Year Agreement with *Long Term Incentive ("LTI") applied

1) The following products shall be delivered to **Nashua City, NH** ("Licensee") by Pictometry International Corp.:

A. Licensed Images procured with a 16 megapixel camera (as listed below and also portrayed on the attached Schedule D – Sectorized Map):

1) **PREMIER Two Way Community Package (C3)** covering **49** sectors of the Licensee as indicated on the attached map. Premier Community Images are nominal 12" GSD.

Each sector will have approximately:

a. 8 Ortho-rectified images and your choice for the following (please check if mosaic is desired)

one 1-meter standard mosaic sector tile for each ortho sector

one 1-meter standard area-wide mosaic(s) (area-wide mosaic in ECW format – MRSID available for an additional charge – see section B below)

b. 4 Oblique images and 4 additional Oblique images taken from the opposite direction.

PREMIER Community Images (C3) to be taken when there is less than 30% leaf cover.

PREMIER COMMUNITY Image Price	\$ 37.50 per sector per year
Less 40% EAP Discount	<u>\$ 15.00</u>
	\$ 22.50
Less 10% first capture LTI*	<u>\$ 2.25</u>
	\$ 20.25 @ 49 Sectors = \$ 992.25 per year – 1st Image Capture

PREMIER COMMUNITY Image Price	\$ 37.50 per sector per year
Less 40% EAP Discount	<u>\$ 15.00</u>
	\$ 22.50
Less 5% second capture LTI*	<u>\$ 1.13</u>
	\$ 21.37 @ 49 Sectors = \$ 1,047.13 per year – 2nd Image Capture

PREMIER COMMUNITY Image Price	\$ 37.50 per sector per year
Less 40% EAP Discount	<u>\$ 15.00</u>
	\$ 22.50
	\$ 22.50 @ 49 Sectors = \$ 1,102.50 per year – 3rd Image Capture

2) **ELITE Four Way Neighborhood Images (N5)** covering **49** sectors of the Licensee as indicated on the attached map. Premier Neighborhood Images are nominal 4" GSD.

Each sector will have approximately:

a. 52 Ortho-rectified images and your choice for the following (please check if mosaic is desired)

one 1-meter standard mosaic sector tile for each ortho sector

one 1-meter standard area-wide mosaic(s) (area-wide mosaic in ECW format – MRSID available for an additional charge – see section B below)

b. 104 Oblique images from four perpendicular directions

ELITE Neighborhood Images will be taken when there is less than 30% leaf cover.

ELITE NEIGHBORHOOD Image Price	\$ 337.00 per sector per year
Less 40% EAP Discount	<u>\$ 137.00</u>
	\$ 200.00
Less first capture 10% LTI*	<u>\$ 20.00</u>
	\$ 180.00 @ 49 Sectors = \$ 8,820.00 per year – 1st Image Capture

ELITE NEIGHBORHOOD Image Price	\$ 337.00 per sector per year
Less 40% EAP Discount	<u>\$ 137.00</u>
	\$ 200.00
Less second capture 5% LTI*	<u>\$ 10.00</u>
	\$ 190.00 @ 49 Sectors = \$ 9,310.00 per year – 2nd Image Capture

ELITE NEIGHBORHOOD Image Price	\$ 292.00 per sector per year
Less 40% EAP Discount	<u>\$ 117.00</u>
	\$ 200.00 @ 49 sectors = \$ 9,800.00 per year – 3rd Image Capture

- 3) **Premier Infra-red** covering **49** sectors of the Licensee as indicated on the attached map. Premier Orthogonal perspective images are 12" GSD. EcoView Plug-n for EFS. Imagery to be captured in same timeframe as Neighborhood Obliques, Years 1, 3 and 5 in this contract.

12 inch Standard Mosaic Sector Tiles: 49 Sectors.
 12 inch area-wide tile(s) delivered in ECW format: 49 Sectors.

12" GSD IR imagery (leaf-off): 49 Sectors @ \$ 100.00 per sector = \$ 4,900.00 – 1st Image Capture

12" GSD IR imagery (leaf-off): 49 Sectors @ \$ 100.00 per sector = \$ 4,900.00 – 2nd Image Capture

12" GSD IR imagery (leaf-off): 49 Sectors @ \$ 100.00 per sector = \$ 4,900.00 – 3rd Image Capture

- B. Pictometry images (individual frames) are delivered in Pictometry .PSI and .PMI format (JPG combined with a meta-data trailer). For each sector that includes ortho imagery (Community or Neighborhood), Pictometry includes a 1m ortho sector mosaic tile created from the individual ortho frames in JPG with a world file and separate trailer, minimal overlap, projected in State Plane, NAD 83, feet unless the projection is stated otherwise (other projection desired: _____). These 1m Ortho Sector Tiles are primarily for use in EFS.

Tiles – WITH REFERENCE TO THE FOLLOWING TILES, LICENSEE HAS REVIEWED AND AGREES TO ACCEPT THE TILE SPECIFICATIONS (Schedule C1) LISTED AT THE END OF THIS SCHEDULE A

Mosaic Tile and Format charges:

Tiles

6 inch Standard Mosaic Sector Tiles (4" or 6" ortho imagery required):

	\$ 40.00 per sector
100% LTI early adopter credit	- <u>\$ 40.00</u>
	\$ 0.00 per sector x 49 sectors = \$ 0.00 for 1st Image Capture
	\$ 40.00 per sector
50% LTI early adopter credit	- <u>\$ 20.00</u>
	\$ 20.00 per sector x 49 sectors = \$ 980.00 for 2nd Image Capture
	\$ 40.00 per sector x 49 sectors = \$ 1,960.00 for 3rd Image Capture

Format

6 inch Sector Tiles:

49 Sectors delivered in **uncompressed TIFF @ \$ 2.00 = \$98.00 for 1st Image Capture**

49 Sectors delivered in **uncompressed TIFF @ \$ 2.00 = \$98.00 for 2nd Image Capture**

49 Sectors delivered in **uncompressed TIFF @ \$ 2.00 = \$98.00 for 3rd Image Capture**

Area Wide

6 inch area-wide tile(s) delivered in **MRSID: 49 Sectors @ \$ 2.00 = \$98.00 for 1st Image Capture**

6 inch area-wide tile(s) delivered in **MRSID: 49 Sectors @ \$ 2.00 = \$98.00 for 2nd Image Capture**

6 inch area-wide tile(s) delivered in **MRSID: 49 Sectors @ \$ 2.00 = \$98.00 for 3rd Image Capture**

C. Ancillary Products:

- a. Change Analysis Software

One (1) Seat Licenses for one (1) Department @ \$1,000/seat minus discount = \$ 0.00

(Cap of \$5,000 for unlimited seats in one department or a cap of \$15,000 for unlimited seats in all departments)

- b. Pictometry Online Self Hosting as indicated on attached order form.
- c. ChangeFindr Project as indicated in attached order form

D. Image Captures:

1) Three Images Captures during this six (6) year agreement (one capture in Year One, one capture in Year Three and one capture in Year Five). Year Three and Year Five Captures shall be identical to Year One Capture (with regard to sector count and types of images) unless Licensee submits a "Request for Change" prior to each capture. Sector price shall stay the same for these changes.

- d. Images are to be delivered with an image size of approximately 3-5 MB.

E. US Census Bureau TIGER line files of County or a base map supplied by Licensee.

F. DEMS (Digital Elevation Models) - check one:

U.S.G.S Digital Elevation Models (DEMs) (provided by Pictometry)
 DEMs in _____ format (provided by Licensee).
Licensee **DEMs must** be provided to Pictometry within 30 days of signing this agreement, or a re-processing fee may be charged.

- 2. Documentation: Pictometry International Corp. shall furnish 1 digital copy of the Documentation for the Licensed Software.
- 3. Training included in License Fee: Pictometry International Corp. shall conduct two (2) End User orientation sessions of up to 25 people for employees of the Licensee or Authorized Subdivisions thereof at the Licensee's site. In addition there will be one (1) Advanced User technical training for one group of up to 10 people using Licensee computers. Pictometry also provides one Administration / IT training session designed to provide the administrators of the Pictometry image library with the knowledge they will need to manage and distribute access to the Pictometry solution. This session is done remotely using online tools such as GotoMeeting. Licensee has the option of receiving two (2) End User Orientation Sessions, one (1) Advanced User technical training and one (1) Administration/IT training upon shipment of second and third Image Library.

Optional (additional cost) Advanced Training Program. Pictometry Advanced Training (FutureView) is designed to provide the participants with a better working knowledge of existing and new technologies as well as introducing partner integrations. This 3-day annual training program is invaluable for Assessment, GIS, Public Safety, Environmental, Public Works and all other levels of government. Each Advanced Training Package includes registration, hotel room for three nights and round-trip airfare up to \$500.00.

Licensee will be supplied with a discount code (via email) to be used when registering for the FutureView Training. This code will indicate that the Training Package was pre-paid in this License Agreement. Training Packages must be redeemed during the term of this agreement. (Air travel restrictions: 30 day advance registration for airfare - continental US flights only – airfare not to exceed \$500.00 per person)

One (1) All-inclusive Training Package(s) in year one (2011) of this Agreement @ \$ 2,165 = \$ 2,165.00

One (1) All-inclusive Training Package(s) in year two (2012) of this Agreement @ \$ 2,165 = \$ 2,165.00

One (1) All-inclusive Training Package(s) in year one (2013) of this Agreement @ \$ 2,165 = \$ 2,273.25

One (1) All-inclusive Training Package(s) in year two (2014) of this Agreement @ \$ 2,165 = \$ 2,273.25

One (1) All-inclusive Training Package(s) in year one (2015) of this Agreement @ \$ 2,165 = \$ 2,386.91

One (1) All-inclusive Training Package(s) in year two (2016) of this Agreement @ \$ 2,165 = \$ 2,386.91

4. Telephone Support: During the six (6) years of this Agreement, Pictometry shall provide thirty (30) hours of telephone support to the people who have completed the Advanced User technical trainings and who are individually identified by Licensee.
5. Licensed Software: Pictometry International Corp. shall supply one copy of the Pictometry Electronic Field Study (EFS) software, latest version, on the Storage Media supplied as specified herein. Licensee and Authorized Users may download updated versions of the Licensed Software free of charge for a period of six years from the initial date of shipping of the EFS Software, along with a copy of the updated documentation.
6. Annual Image License Fees of **Nine Thousand Eight Hundred Twelve Dollars and Twenty Five Cents (\$ 9,812.25) for 1st Image Capture.**
Annual Image License Fees of **Ten Thousand Three Hundred Fifty Seven Dollars and Thirteen Cents (\$ 10,357.13) for 2nd Image Capture.**
Annual Image License Fees of **Ten Thousand Nine Hundred Two Dollars and Fifty Cents (\$ 10,902.50) for 3rd Image Capture**
 - This is the Annual License Fee for the Licensed Images, Licensed Software, Licensed Documentation and support.
 - Long Term Incentives ("LTI") have been applied to the fees shown above. In the event License terminates this Agreement prior to the end of the six (6) year Agreement term, all LTI monetary considerations shall be revoked and these funds shall be immediately due and payable to Pictometry. Repayment of LTI considerations does not apply if funds for Oblique Imagery are not appropriated. If such funds are not appropriated, Licensee shall provide Pictometry with written documentation of non-appropriation from the funding source (such notification shall be prior to any pending image capture). If funds are not appropriated for the purchase of Oblique Imagery, contract shall stay in force but new Image Libraries shall not be captured or delivered until outstanding balances due have been paid.
 - The duration of the License is six (6) years at the above fees.
 - At the end of the term of this Agreement, the Licensee is granted a Perpetual License for all Licensed Images and Licensed Software at no additional cost.
 - At the end of this License Term, optional Support and Upgrades for Licensed Software may be continued by:
 - Entering into a new license for new images, or
 - Paying an annual Support and Maintenance Fee of 5 % of the Annual License Fee of the last capture
 - **Pictometry Economic Alliance Partnership** – Licensee shall be eligible for the Pictometry Economic Alliance Partnership as outlined on Schedule B. The EAP Program described on the attached Schedule B shall stay in effect for a two (2) year term. EAP coverage shall continue for an additional four (4) year term and offerings will be based on the then prevailing EAP Program.
 - The annual cost of the Images is fixed for a period of five (5) years from the date of this License Agreement with Pictometry to provide consistency in pricing should the Licensee wish to amend the Schedule A to purchase annual imagery (an additional set of images on the one year anniversary of this License).
7. Storage Media. For each delivery, delivery media will be a **500 GB** storage device delivered by (and purchased from) Pictometry at a cost of \$ 315.00 each x 3 captures = **\$ 945.00**

8. Total Cost: The Total Cost of this License Agreement is **One Hundred Thirty Three Thousand Eight Hundred Ninety Dollars and 28/100 Cents (\$ 133,890.28)**, plus any applicable sales tax. Long Term Incentives ("LTI") have been applied to this total cost. Total cost is broken down as follows:

First Year – 1st Image Capture

Annual License Fee	\$ 9,812.25
Delivery Media	\$ 315.00
Advanced Training	\$ 2,165.00
Change Analysis Fee (1 Seat)	\$ 0.00
6" Standard Mosaic Tiles	\$ 0.00
6" Mosaic Tiles in Uncompressed Tiff	\$ 98.00
6" Area-Wide Mosaic in MrSID	\$ 98.00
12" Infra-red Imagery	\$ 2,450.00
Pictometry Online Self Hosting	\$ 7,200.00
ChangeFindr Project	\$ 8,174.40

* See attached Self Hosting Order form.
* See attached ChangeFindr Order form.

First Year Total **\$ 30,312.65**

Second Year

Annual License Fee	\$ 9,812.25
Advanced Training	\$ 2,165.00
12" Infra-red Imagery	\$ 2,450.00
Pictometry Online Self Hosting	
Maintenance Fee	\$ 1,440.00

* See attached Self Hosting Order form.

Second Year Total **\$ 15,867.25**

Third Year – 2nd Image Capture

Annual License Fee	\$ 10,357.13
Advanced Training	\$ 2,273.25
Delivery Media	\$ 315.00
6" Standard Mosaic Tiles	\$ 980.00
6" Mosaic Tiles in Uncompressed Tiff	\$ 98.00
6" Area-Wide Mosaic in MrSID	\$ 98.00
12" Infra-red Imagery	\$ 2,450.00
Pictometry Online Self Hosting	
Maintenance Fee	\$ 1,440.00
ChangeFindr Project	\$ 8,174.40

* See attached Self Hosting Order form.
* See attached ChangeFindr Order form.

Third Year Total **\$ 26,185.78**

Fourth Year

Annual License Fee	\$ 10,357.13
Advanced Training	\$ 2,273.25
12" Infra-red Imagery	\$ 2,450.00
Pictometry Online Self Hosting	
Maintenance Fee	\$ 1,440.00

* See attached Self Hosting Order form.

Fourth Year Total **\$ 16,520.38**

Fifth Year – 3rd Image Capture

Annual License Fee	\$ 10,902.50	
Advanced Training	\$ 2,386.91	
Delivery Media	\$ 315.00	
6" Standard Mosaic Tiles	\$ 1,960.00	
6" Mosaic Tiles in Uncompressed Tiff	\$ 98.00	
6" Area-Wide Mosaic in MrSID	\$ 98.00	
12" Infra-red Imagery	\$ 2,450.00	
Pictometry Online Self Hosting		* See attached Self Hosting Order form.
Maintenance Fee	\$ 1,440.00	
ChangeFindr Project	\$ 8,174.40	* See attached ChangeFindr Order form.
<u>Fifth Year Total</u>	<u>\$ 27,824.81</u>	

Sixth Year

Annual License Fee	\$ 10,902.50	
Advanced Training	\$ 2,386.91	
12" Infra-red Imagery	\$ 2,450.00	
Pictometry Online Self Hosting		* See attached Self Hosting Order form.
Maintenance Fee	\$ 1,440.00	
<u>Sixth Year Total</u>	<u>\$ 17,179.41</u>	

LICENSEE SHALL BE ELIGIBLE FOR 200 SEATS OF PICTOMETRY ONLINE (POL) AS INDICATED ON **THE ATTACHED POL ORDER FORM.** THE COST OF THIS SUBSCRIPTION SHALL BE COVERED BY A LONG TERM INCENTIVE (LTI) FOR THE FIRST YEAR.

9) Taxes: All License Fees or other prices listed in this Agreement are exclusive of Federal, State and Local taxes. Licensee will be responsible for any taxes due under this License Agreement.

10) Payment: The Licensee shall remit to Pictometry International, Corp. twenty-five percent (25%) of the First Year Total Fee upon signing this Agreement and the balance of the First Year Total Fee within 30 days of the shipment of the Licensed Software and first Image Library, as specified in this Schedule A. All shipment efforts by Pictometry International Corp. shall be coordinated with the Licensee. Payment of the Second Year Total Fee shall be due on the one-year anniversary of the first Image Library shipment date.

Payment of the Third Year Total Fee shall be within 30 days of the shipment of the second Image Library, as specified in this Schedule A. Payment of the Fourth Year Total Fee shall be due on the one-year anniversary of this second Image Library shipment date.

Payment of the Fifth Year Total Fee shall be due within 30 days of the shipment of the third Image Library, as specified in this Schedule A. Payment of the Sixth Year Total Fee shall be due on the one-year anniversary of this third Image Library shipment date.

It is understood that the payment schedule is for the convenience of the Licensee. All monies are considered earned upon shipment of the first Image Library. Payment of the Second, Third, Fourth, Fifth and Sixth Year Total Fees with the First Year total Fee will receive a 2% discount on those Second, Third and Fourth Year Total Fees. Fees past due for 30 days shall be charged a late fee of 1.5% per month.

Payment Breakdown:

- Down payment due at signing = **\$ 7,578.16**
- Balance of First Year Total Fee due on first Image Library shipment = **\$ 22,734.49**
- Second Year Total Fee due on one-year anniversary of first Image Library shipment = **\$ 15,867.25**
- Third Year Total Fee due on second Image Library shipment = **\$ 26,185.78**
- Fourth Year Total Fee due on one-year anniversary of second Image Library shipment = **\$ 16,520.38**
- Fifth Year Total Fee due on third Image Library shipment = **\$ 27,824.81**
- Sixth Year Total Fee due on one-year anniversary of third Image Library shipment = **\$ 17,179.41**

- 11) Delivery Schedule: The image capture process and the delivery date may be affected by weather conditions or aircraft availability. Licensee will accept delivery within thirty (30) days of notification by Pictometry.
- 12) Recommended Minimum System Requirements for Electronic Field Study. A Pentium III with a 450 MHz processor, 256MB memory minimum 512MB+ recommended, Windows 2000/XP, a video card with 4 MB memory capable of 1024 x 768 resolution, , display color of 24bit or higher, 100MB NIC and 50MB free disk space for software.
- 13) Training and Support Services: Additional training and support services are available to Licensee at the then prevailing prices.

SCHEDULE "B"

Pictometry Economic Alliance Partnership

(EAP benefits apply to the initial term of the License Agreement as noted on Schedule A)

1. Benefits

A. Imagery – with Pictometry’s EAP program the Licensee shall keep its imagery forever, the EFS Software and Image License becomes perpetual at the end of the term of the License Agreement.

- **Ortho Imagery** – With the purchase of Pictometry Oblique Imagery, Licensee receives Ortho Imagery at no additional charge
- **Ortho Mosaic Imagery** – With the purchase of Pictometry Oblique Imagery, Licensee receives Ortho Mosaics at no additional charge, including an area-wide Mosaic of all imagery captured.

B. Disaster Coverage at No Additional Charge – Pictometry’s proven background in rapid response image capture, processing, and delivery is unmatched. Cities, Counties and States can benefit from Pictometry’s expertise. Pictometry will image up to 200 sq mi of affected areas of Federally Declared Disasters caused by Hurricanes (category 2 and above), populated areas affected by fires, terrorist attacks, Tsunami and Earthquakes at no charge. Affected areas are determined by Pictometry and Pictometry will work with county and state governmental licensees and request their additional input regarding their needs. Note: There is no wait for a Federal Declaration under the following circumstances:

- **Hurricane Coverage at No Cost** – Pictometry will capture and quickly deliver imagery of affected areas of Category II hurricanes and above to your city, county or state at no additional expense. Coverage for hurricanes below this category may be arranged at reduced EAP rates.
- **Tornado Coverage at No Cost** – Pictometry will capture and quickly deliver imagery of areas impacted by Tornadoes with ratings of EF4 and above to your city, county or state at no additional cost. Coverage, for tornadoes below EF4, may be arranged at reduced EAP rates.
- **Terrorist Coverage at No Cost** – Pictometry will capture and quickly deliver imagery of damage due to terrorist attack for up to 200 square miles at no additional cost.

Software – Use of Pictometry Change Analysis™ or Web Deployment of Disaster Imagery – Pictometry’s Rapid Response Program includes the use of our ready-to-use, unique Change Analysis software for ninety days. The powerful Change Analysis software simultaneously compares pre and post disaster images to make recovery and restoration efforts more effective and efficient. Pictometry Web Deployment of disaster imagery may also be available at no charge for ninety days.

C. Enterprise-wide Infrared Software at No Additional Charge – Pictometry will provide Eco-View™, an easy-to-use Infra-Red Software solution, at no additional charge when you purchase Pictometry’s Near Infra-Red imagery.

D. Software Installation and Maintenance Costs - During the initial term of the Pictometry License Agreement, Pictometry shall provide Licensed Software to Licensee with no charge for upgrades, maintenance or support under Licensee’s EAP. At the end of the term of the Software License Agreement, the license for software and imagery becomes perpetual. Support for the Perpetual Licensed Software may be continued at no charge with the signing of a License Agreement with EAP Program for another Image Library.

E. Marketing – Pictometry will market your GIS Layer data to Pictometry’s many business partners only upon your written request. Revenue derived from this sale shall be split 50/50 between Licensee and Pictometry.

Pictometry initial _____

Licensee initial: _____

05012009

SCHEDULE "C"
Digital Imagery Specifications

Dimensions and Resolution:

All values are approximates based on target height-over-ground. The actual values vary due to elevation changes.

Individual Images:

Premier Community Images

C5 Oblique (Nominal 12 Inch)

Footprint:

Front Line: 3,700 feet (1128 meters)
Back Line: 5,100 feet (1554 meters)
Front to Back: 4,600 feet (1402 meters)

Ground Sample Distance:

Front Line: 0.9 feet/pixel (0.27 meters/pixel)
Middle Line: 1.1 feet/pixel (0.34 meters/pixel)
Back Line: 1.3 feet/pixel (0.40 meters/pixel)

C5 Orthogonal (Nominal 12 Inch)

Footprint: 3,600 x 2,400 feet (1097 x 731 meters)
Ground Sample Distance: 0.9 feet/pixel (0.27 meters/pixel)

Premier Community Images

C3 Oblique (Nominal 12 Inch)

Footprint:

Front Line: 3,100 feet (975 meters)
Back Line: 6,300 feet (1524 meters)
Front to Back: 6,100 feet (1311 meters)

Ground Sample Distance:

Front Line: 1.0 feet/pixel (0.24 meters/pixel)
Middle Line: 1.3 feet/pixel (0.30 meters/pixel)
Back Line: 2.0 feet/pixel (0.38 meters/pixel)

C3 Orthogonal (Nominal 12 Inch)

Footprint: 4,000 x 2,700 feet (1219 x 823 meters)
Ground Sample Distance: 1.0 feet/pixel (0.31 meters/pixel)

Elite Community Images

Oblique (Nominal 8 Inch)

Footprint:

Front Line: 3,000 feet (915 meters)
Back Line: 6,000 feet (1830 meters)
Front to Back: 4,700 feet (1,433 meters)

Ground Sample Distance:

Front Line: 0.8 feet/pixel (0.24 meters/pixel)
Middle Line: 1.0 feet/pixel (0.30 meters/pixel)
Back Line: 1.5 feet/pixel (0.46 meters/pixel)

Orthogonal (Nominal 8 Inch)

Footprint: 2,600 x 1,700 feet (793 x 518 meters)
Ground Sample Distance: 0.6 feet/pixel (0.18 meters/pixel)

Premier Neighborhood Images

Oblique (Nominal 6 Inch)

Footprint:

Front Line: 2,500 feet (762 meters)
Back Line: 4000 feet (1220 meters)
Front to Back: 3400 feet (1037 meters)

Ground Sample Distance:

Front Line: 0.6 feet/pixel (0.18 meters/pixel)
Middle Line: 0.8 feet/pixel (0.24 meters/pixel)
Back Line: 1.0 feet/pixel (0.30 meters/pixel)

Orthogonal (Nominal 6 Inch)

Footprint:

2,000 x 1,330 feet (610 x 405 meters)

Ground Sample Distance:

0.5 feet/pixel (0.15 meters/pixel)

Elite Neighborhood Images

Oblique (Nominal 4 Inch)

Footprint:

Front Line: 1,400 feet (427 meters)
Back Line: 2,000 feet (610 meters)
Front to Back: 1,800 feet (549 meters)

Ground Sample Distance:

Front Line: 0.35 feet/pixel (0.11 meters/pixel)
Middle Line: 0.41 feet/pixel (0.12 meters/pixel)
Back Line: 0.49 feet/pixel (0.15 meters/pixel)

Ortho (Nominal 4 Inch)

Footprint:

1,385 x 923 feet (422 x 281 meters)

Ground Sample Distance:

0.35 feet/pixel (0.11 meters/pixel)

Sector Tiles:

One-Meter Sector Tiles

Footprint:

5,280 x 5,280 feet (1,609 x 1,609 meters)

Pixel Size:

3.28 feet/pixel (1.0 meters/pixel)

Source Imagery:

Community Orthogonal (12 and 9 inch) and/or Neighborhood Orthogonal (Premier and Standard)

Radiometry:

Not radiometrically balanced, may have observable cut lines and could consist of imagery taken over a period of several days.

File Size (Approx.):

8,000 KB (JPG format)

One-Foot Sector Tiles

Footprint:

2,640 x 2,640 feet (805 x 805 meters)

Pixel Size:

1.0 feet/pixel (0.3048 meters/pixel)

Source Imagery:

Community Orthogonal (12 and 9 inch) and/or Neighborhood Orthogonal (Premier and Standard)

Radiometry:

Not radiometrically balanced, may have observable cut lines and could consist of imagery taken over a period of several days.

File Size (Approx.):

20,900 KB (JPG format)

Six-Inch Quarter Sector Tiles

Footprint:

2,640 x 2,640 feet (805 x 805 meters)

Pixel Size:

0.5 feet/pixel (0.1524 meters/pixel)

Source Imagery:

Premier Neighborhood Orthogonal and/or Neighborhood Orthogonal

Radiometry:

Not radiometrically balanced, may have observable cut lines and could consist of imagery taken over a period of several days.

File Size (Approx.):

83,500 KB (JPG format)

Custom Ortho-Mosaics:

Pictometry can create custom ortho-mosaics based on the resolution of the imagery captured. If a custom ortho-mosaic is desired, the full specifications will be spelled out in a separate addendum. It is important to note that while the ortho-mosaic can

be created at any pixel resolution, up or down, creating an ortho-mosaic with a pixel size smaller than the ground sample distance of the input imagery will not contain any more information than the resolution of the input imagery. In other words, if you create a six-inch ortho-mosaic from one-foot imagery, even though the pixels will be six-inch, the overall image data resolution will still only be one-foot. For this reason, it is important to ensure the base imagery purchased meets or exceeds the resolution requirements of any ortho-mosaics you need. Under-sampling, for instance creating a one-foot ortho-mosaic from six-inch resolution imagery, is not a problem and generally produces very good results.

Pictometry also has licensed partners who can create an ortho-mosaic product that can be certified to a particular accuracy. In general, ortho-mosaics from Pictometry's neighborhood orthogonal imagery can meet NMAS 1:1200 (1.0-meter RMS error at 95% confidence interval) in relatively flat terrains or areas with good elevation data. For areas with highly variable terrain or areas with poor elevation data, this number generally drops to NMAS 1:2400 (2.0-meter RMS error at 95% confidence interval). Certified ortho-mosaics can be created from Pictometry's community orthogonal imagery, but only under certain capture parameters. As such, it is important to include any custom ortho-mosaic requirement with the image capture requirements such that the community orthogonal imagery can be captured in a way consistent with certification requirements.

General Specifications:

Orthogonal Images

Sensor Size	Pixels: 4008 x 2672 (or 3208 x 2672 for some Community level imagery) in a Landscape orientation.
Image Format	Industry-standard image format with proprietary image trailer, including JFIF (JPEG), TIFF, and BMP.
Image Quality	Images will have an unobstructed view of the ground. In controlled airspace around airports, etc., and in areas of rapid elevation changes, the image footprint sizes and resolutions may vary. There may be varying degrees of ground illumination and color variations due to lighting and cloud shadows.
Measurement Accuracy	<0.5% measurement error, excluding user pixel selection error
Pixel Placement Accuracy	Pictometry provides a visualization system and therefore does not certify image accuracy. However, some Pictometry customers have done their own certification on the Pictometry data after delivery and have shared their results. On average, customers have been seeing better than 1.0-meter RMS error at a 95% confidence level (NMAS 1:1200) for orthogonal imagery over relatively flat terrain or in areas with accurate elevation data, and 2.0-meter RMS error at a 95% confidence level (NMAS 1:2400) for more varied terrain or in areas with poor elevation data. However, Pictometry does not guarantee these accuracies and your results may vary.
Sensor Orientation	Pictometry utilizes an IMU (Inertial Measurement Unit), ground station post-corrected differential GPS, and Kalman filtering to achieve a high degree of positional and directional accuracy.
Sensor Positional Accuracy	mean 15cm absolute
Sensor Directional Accuracy	0.015 degrees absolute (roll/pitch) 0.035 degrees absolute (heading)
Ortho-Rectification	The images are ortho-rectified to back out the optical deviations of the capture system and the variations due to elevation changes (utilizing the best DEM data available, including customer provided DEM data), resulting in geographically square pixels aligned to a rectilinear grid. This grid can be one of any number of coordinate systems, including Latitude/Longitude, State Plane, UTM, and more. The desired coordinate system should be specified in the contract, or a default coordinate system will be used.
Image Export	JFIF (JPEG), TIFF, BMP EFS software can be utilized to export the images into any of the above industry-standard formats. The orthogonal images can optionally be re-projected during this export process, and an associated geography file can be created as well for use in importing the images into GIS mapping software.
Image Tiling	Individual orthogonal images are edge-feathered and mosaiced to produce orthogonal image tiles with tile sizes selected to balance single image coverage as well as manageability of open images.

These orthogonal tiles provide continuous coverage across the area of interest. While some color balancing is done, these orthogonal tiles are not fully radiometrically balanced or edge-matched.

Oblique Images

Sensor Size	Pixels: 4008 x 2672 (or 3208 x 2672 for some Community level imagery) in a Landscape orientation.
Image Format	Industry-standard image format with proprietary image trailer, including JFIF (JPEG), TIFF, and BMP.
Image Quality	Images will have an unobstructed view of the ground. In controlled airspace around airports, etc., and in areas of rapid elevation changes, the image footprint sizes and resolutions may vary. There may be varying degrees of ground illumination and color variations due to lighting and cloud shadows. Due to the nature of oblique aerial photography, there may also be artifacts such as haze and glint and glare caused by reflected sunlight.
Measurement Accuracy	<0.75% measurement error, excluding user pixel selection error
Pixel Placement Accuracy	Pictometry provides a visualization system and therefore does not certify image accuracy. However, some Pictometry customers have done their own certification on the Pictometry data after delivery and have shared their results. On average, customers have been seeing better than 2.0-meter RMS error at a 95% confidence level (NMAAS 1:2400) for oblique imagery over relatively flat terrain or in areas with accurate elevation data, and 4.0-meter RMS error at a 95% confidence level (NMAAS 1:4800) for more varied terrain or in areas with poor elevation data. However, Pictometry does not guarantee these accuracies and your results may vary.
Sensor Orientation	Pictometry utilizes an IMU (Inertial Measurement Unit), ground station post-corrected differential GPS, and Kalman filtering to achieve a high degree of positional and directional accuracy.
Sensor Positional Accuracy	mean 15cm absolute
Sensor Directional Accuracy	0.015 degrees absolute (roll/pitch) 0.035 degrees absolute (heading)
Image Export	JFIF (JPEG), TIFF, BMP EFS software can be utilized to export the images into any of the above industry-standard formats.

Notes

1. The existing National Map Accuracy Standards focus on conventional analog aerial photography products. When used for digital mapping products, it is necessary to specify the approximate image scale (e.g. 1:1200) when stating NMAAS requirements.
2. Pictometry's orthogonal images provide the coordinate accuracy fulfilling most planimetric requirements, however, Pictometry data is not intended for authoritative definitive mapping or surveying replacement. If there is a need for authoritative mapping products, additional work is required by licensed individuals in order to certify Pictometry's orthogonal imagery. Alternatively, a separate, authoritative orthogonal image capture can be done and those orthogonal images used inside of Pictometry. Our oblique images are unique to Pictometry and are intended to provide data not available elsewhere and lateral views with more visual information, such as building stock analysis. In Pictometry the orthogonal and oblique images are linked for your convenience and additional study. With a few clicks you can find the revealing lateral views, height measurements, and other information afforded by the oblique images while using the coordinate accuracy afforded by the orthogonal images.

SCHEDULE C1

Mosaic Tile

Pictometry Standard Ortho Mosaic Products

Pictometry ortho mosaic products are the result of high definition, full color aerial images and automated mosaicking processes that incorporate digital elevation data to create large-area mosaicked ortho images from the individual Pictometry ortho frames. Pictometry ortho images are captured along with the oblique imagery to create libraries of images that are unequalled in cost-effectiveness, high detail and ease of use.

Pictometry builds in quality control, programmatic error correction, and data integrity checks into the planning, capture, and processing of the images. There are a few artifacts of the Pictometry ortho mosaic process that may still be evident with the automated mosaicking process. This is a summary of the types of artifacts that may be evident in a small portion of the Pictometry ortho mosaic tiles. Examples of mosaic tiles and the artifacts described below are on the following pages.

Disconnects in Non-Elevated Surfaces

These disconnects are generally caused by inaccurate elevation data

Disconnects in Elevated Surfaces (Roadways, Bridges, etc.)

Elevated roads, bridges, etc. that are not represented in the elevation data may result in disconnects along mosaic seam lines

Building Intersect and Clipping

Similar to elevated roads and bridges, buildings that are not represented in the elevation data may result in disconnects along the structure

Seasonal Cutoffs

Visible cutoffs may exist between images taken at different times in a season, or between seasons

Ground Illumination Cutoffs

Variations in illumination (sunny, high overcast, morning/afternoon, etc.) between flight days may result in visible cutoffs

Color Variations - Single GSD

Illumination differences and multiple-aircraft/camera capture result in varying color temperature which can appear as visible cutoffs in a mosaic

Color Variations - Mixed GSD

When a customer chooses portions of their area to be flown at different ground sample distances (GSDs), there will frequently be a noticeable difference (cutoff) along the seams between the two resolutions

Color Variations - Water

When multiple individual frames are used to create a mosaic across a body of water (lakes, ponds, rivers, etc.), there will likely be noticeable cutoffs in the water

Regions Geographically Misplaced

From time to time, the geospatial data is corrupt or improperly processed and will mis-position the images and result in a defective mosaic. These are inspected for and corrected in Processing

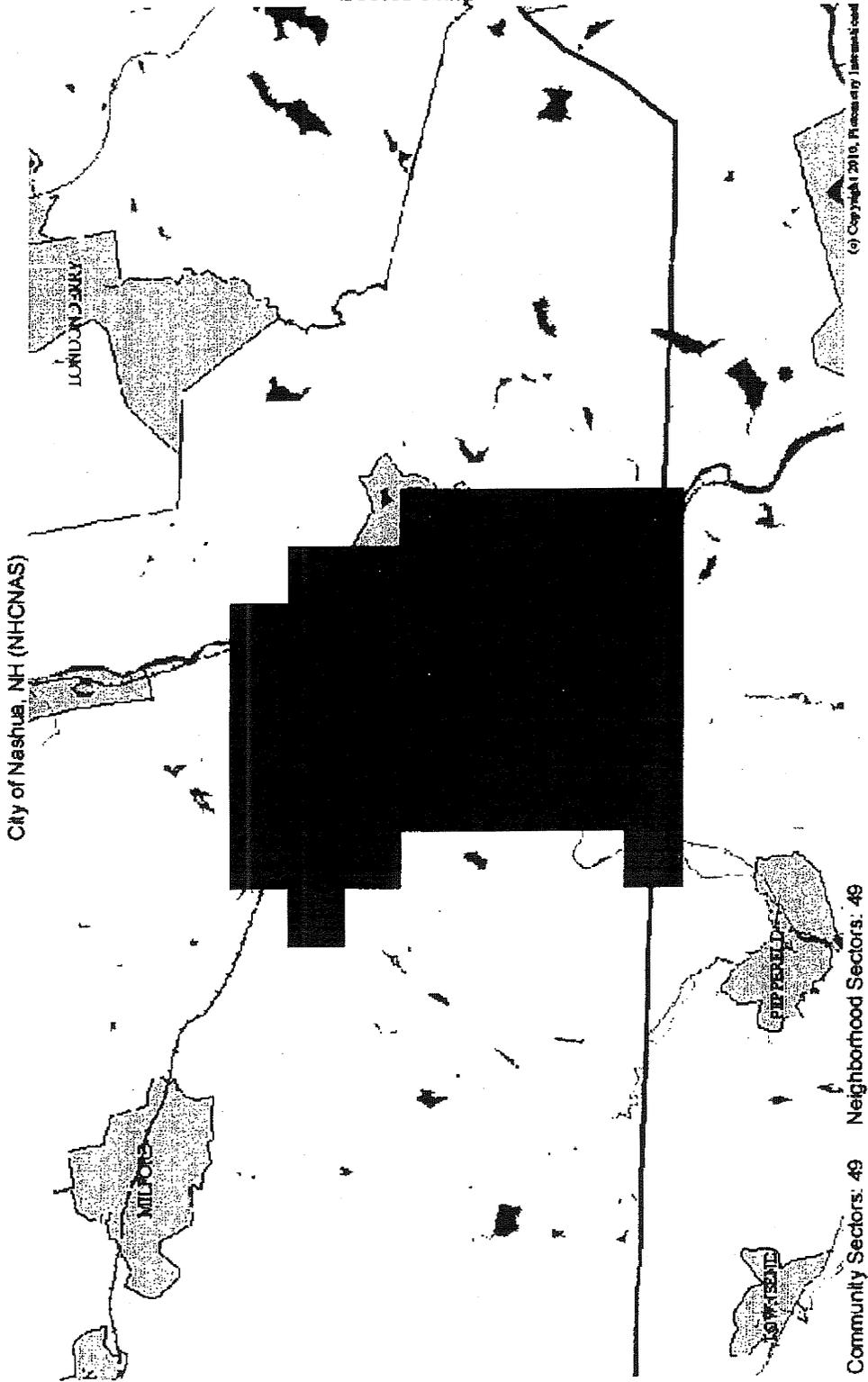
Lack of / Edges of Coverage

Along the edges of an area being captured (the border of a county, for example), there may be mosaic tiles created with partial coverage. The missing areas along the edge are filled with black. Where coverage in one GSD does not exist but other GSD imagery is available, the second GSD imagery will be used to fill the gap

Processing Errors

Software bugs and improperly applied geospatial data is inspected for and corrected before products are delivered to customers

SCHEDULE "D"
Sector Map



PRODUCT SPECIFICATIONS

Target of Services

The following structures of 150 square feet or larger and 5 pixels wide or larger (based on imagery with 1ft GSD or better) are targeted by the ChangeFindr process:

- Residential, Commercial, and Industrial Buildings
- Attached decks and porches with a roof or railing are also targeted.
- Isolated Garages, Mobile Homes, Sheds
- Greenhouses and Silos
- Water Storage Tanks
- Other features with a roof

The following structures are Not targeted by the ChangeFindr process:

- Vehicles, Boats, Ships
- Pools
- Paved areas, including patios without a railing or wall
- Bare ground surrounded by a fence or wall
- Steel Tower/Frames, Antenna, Cell phone towers
- Billboards
- Tombstones
- Changes in the vertical direction (e.g. a one story building that is renovated to a two story building)

Structures or components that are invisible or unrecognizable due to image resolution, quality or artifacting from the mosaicing process or are concealed by shadowing are not targeted by the service.

Accuracy

Building Outline Creation

- Positional Accuracy: offset from the imagery _ 5 pixels
- Geometric Accuracy: length of untraced edges _ 5 pixels
- Error Rate: ratio of positionally/geometrically inaccurate buildings and missed buildings _ 0.5%

Change Detection

- The process is greater than 98% accurate – the standard error rate is 2% for false positives, and 0.2% for false negatives.
- False Positive Rate: ratio of buildings with fault state for all Changed/New/Demolished buildings _ 2.0%
- False Negative Rate: ratio of buildings with fault state for Existing buildings _ 0.2%

Other Conditions

- The service is conducted based on the information visible in the vertical aerial photos.
- Shifting or redrawing the original building vector data to fit the latest imagery is not a part of the Change Detection service.

ChangeFinder Order Form



DATE	QUOTE #
7/2/2010	4928MSD

BILL TO	City of Nashua, NH
	Angelo Marino
	229 Main Street
	Nashua, NH 03060
	marinoa@nashuanh.gov 603.589.3040

SHIP TO	City of Nashua, NH
	Angelo Marino
	229 Main Street
	Nashua, NH 03060
	marinoa@nashuanh.gov 603.589.3040

P.O. Number	Customer ID	REP	SHIP	Terms	PROJECT
4928	1126 Nashua, NH	MSD	Pictometry	25% upon signing, balance due on delivery	ChangeFinder
QUANTITY	ITEM CODE	DESCRIPTION		PRICE EACH	AMOUNT
20,436	CHGDCT	Change Detection		0.4000	8,174.40
1	CHANALY	Pictometry Change Analysis - unlimited seats for one department. Note that there is no charge for this software per the ChangeFinder Grant. The grant applies only when Change Detection is ordered.		5,000.00	0.00
<p align="center">***PARCEL MAP/SHAPE FILE ATTACHED***</p> <p>Optional Deliverables (NO CHARGE)</p> <p>Regional Status Report</p> <p><input checked="" type="checkbox"/> Length of Building Sides</p> <p>Coordinate System of Parcels:</p> <p>State Plane New Hampshire, NAD 83, Feet</p> <p>DataSets to be Used:</p> <p>Pictometry Imagery 2011</p> <p>Customer Outlines 2009</p> <p>Acceptance of Quote/Order:</p> <p>Signature _____</p> <p>Printed Name _____</p> <p>Date _____</p> <p align="center">Sample data must be provided for approval prior to signing order. Client to initial completed sample data approval form attached to order.</p>					

Special Instructions or Terms	
Thank you for choosing Pictometry as your service provider. Order subject to the terms and conditions of Customer's existing License Agreement with Pictometry. **NOTE: Pricing based on volume. Final parcel count may vary based on final parcel file provided by customer at the time the project is launched. Total cost of project will be adjusted accordingly.	
Total	8,174.40

(See Regular Specifications on Next Page)

RESOLUTION

R-10-58

Approving a six-year Agreement with Pictometry International Corp. for imaging, software and data products

Endorsed by

Jonathan Hoyle

MAYOR

IN THE BOARD OF ALDERMEN

1ST READING SEPTEMBER 15, 2010

Referred to:

FINANCE COMMITTEE

2nd Reading OCTOBER 12, 2010

3rd Reading _____

4th Reading _____

Other Action _____

Passed OCTOBER 12, 2010

Indefinitely Postponed _____

Defeated _____

Attest: *Carol Bergeron* City Clerk

[Signature] President

Approved: *Jonathan Hoyle* Mayor's Signature

10/18/10 Date

Vetoed: _____

Veto Sustained: _____

Veto Overridden: _____

Attest: _____ City Clerk

President