

**AMENDMENT TO AGREEMENT DATED 3/26/2010 BETWEEN
 PICTOMETRY INTERNATIONAL CORP. (“Pictometry”)
 AND
 MILWAUKEE WI (“Customer”)**

1. This Amendment, including all Sections and Appendices referenced herein (collectively, this “Amendment”) is entered into by and between Pictometry and Customer and supplements and modifies the terms of the Agreement dated 3/26/2010 as, to the extent applicable, previously modified by addenda or amendments thereto (collectively, the “Agreement”).

Section A: Product Descriptions, Prices and Payment Terms
 Appendix 1: Photogrammetric Product Specifications

2. MODIFICATIONS TO AGREEMENT (THIRD IMAGE CAPTURE):

Replacing 4-inch GSD products with 3-inch GSD products

The AccuPlus products, product descriptions, price, payment terms, and product parameters set forth in Schedule A and Schedule C of the Agreement, with respect to the Third Image Capture, shall be deleted in their entirety and replaced with the AccuPlus products, product descriptions, price, payment terms, and product parameters set forth in Section A attached to this Amendment.

The AccuPlus deliverables shall include area-wide ortho mosaic tiles in both ECW and MrSID formats.

Adding Connect products

Schedule A and Schedule C of the Agreement are hereby modified to include the Connect products, corresponding pricing, payment obligations, and product parameters set forth on Section A attached to this Amendment. All use of the Connect products set forth on Section A attached to this Amendment shall be in accordance with the Online Services General Terms and Conditions, the Web Visualization Offering Terms and Conditions, and the Software License Agreement entered into between Pictometry and Customer on September 27, 2013.

Except as expressly modified by this Amendment, all other terms and conditions set forth in the Agreement shall remain in full force and effect.

3. All notices under this Agreement shall be in writing and shall be sent to the following respective addresses:

CUSTOMER NOTICE ADDRESS	PICTOMETRY NOTICE ADDRESS
2711 W. Wells St. Rm 426	100 Town Centre Drive, Suite A
Milwaukee, Wisconsin 53208	Rochester, NY 14623
Attn: Bill Shaw, GIS Supervisor	Attn: Contract Administration
Phone: (414)-278-2176 Fax:	Phone: (585) 486-0093 Fax: (585) 486-0098

Either party may change their respective notice address by giving written notice of such change to the other party at the other party’s then-current notice address. Notices shall be given by any of the following methods: personal delivery; reputable express courier providing written receipt; or postage-paid certified or registered United States mail, return receipt requested. Notice shall be deemed given when actually received or when delivery is refused.

This Amendment shall become effective only upon execution by duly authorized officers of Customer and Pictometry, respectively, and receipt by Pictometry of such fully executed document.

PARTIES:

CUSTOMER	PICTOMETRY
MILWAUKEE WI	PICTOMETRY INTERNATIONAL CORP.
(entity type)	a Delaware corporation
SIGNATURE:	SIGNATURE:
NAME:	NAME:
TITLE:	TITLE:
DATE:	EXECUTION DATE:
	DATE OF RECEIPT (EFFECTIVE DATE)

SECTION A

PRODUCT DESCRIPTIONS, PRICES AND PAYMENT TERMS

Pictometry International Corp.
 100 Town Centre Drive, Suite A
 Rochester, NY 14623

ORDER #
C106368

BILL TO
Milwaukee County, WI
Bill Shaw, GIS Supervisor
2711 W. Wells St. Rm 426
Milwaukee, Wisconsin 53208
(414)-278-2176
william.shaw@milwaukeecountywi.gov

SHIP TO
Milwaukee County, WI
Bill Shaw, GIS Supervisor
2711 W. Wells St. Rm 426
Milwaukee, Wisconsin 53208
(414)-278-2176
william.shaw@milwaukeecountywi.gov

CUSTOMER ID	SALES REP	FREQUENCY OF PROJECT
A116717	DLars	Biennial

THIRD IMAGE CAPTURE					
QTY	PRODUCT NAME	PRODUCT DESCRIPTION	LIST PRICE	DISCOUNT PRICE (%)	AMOUNT ¹
269	AccuPLUS 3in - CUSTOMER DTM - Per Sector - Custom Area	Product includes: 3-inch GSD AccuPlus ortho mosaic tiles (GeoTIFF format), 3-inch GSD oblique frame images (4-way), 3-inch GSD orthogonal frame images, 3-inch GSD area-wide ortho mosaic (ECW format), 1-meter GSD ortho mosaic sector tiles and one area-wide 1-meter GSD mosaic (ECW format). Orthogonal GSD: 0.25 feet/pixel; Nominal Oblique GSD (all values +/-10%): Front Line: 0.24 feet/pixel, Middle Line: 0.28 feet/pixel, Back Line: 0.34 feet/pixel. Ortho-mosaic accuracy: 0.75 ft. RMSE (X or Y); 1.84 ft NSSDA 95%; meets or exceeds NMAS & ASPRS Class 1 at 1"=100'. Pricing discounted to reflect use of customer-provided DTM to support ortho-rectification (subject to Pictometry testing and validation). Refer to attached terms and conditions.	\$526.00		\$141,494.00
1	Pictometry Connect View - CA	Pictometry Connect View - CA (Custom Access) provides visualization-only access to the Pictometry-hosted custom imagery libraries specified elsewhere in this Agreement via a web application or server based integration. Requires a customer-provided web application or server based application. With respect to imagery available through this product to third parties or the Public, Pictometry reserves the right to reduce the resolution of the imagery available. Term commences on date of activation. Term ends upon the earlier to occur of (i) the expiration of the term specified elsewhere in this Agreement, or (ii) the volume of geocode requests submitted through the application exceeding 10,000. License Term: 2 Year(s)	\$1,000.00	\$0.00 (100%)	\$0.00
1	Pictometry Connect - CA - 100	Pictometry Connect - CA - 100 (Custom Access) provides up to 100 concurrent authorized users the ability to login and access the Pictometry-hosted custom imagery libraries specified elsewhere in this Agreement via a web-based, server-based or desktop integration. The default deployment is through web-based Pictometry Connect. Term commences on date of activation. License Term: 2 Year(s)	\$6,000.00	\$0.00 (100%)	\$0.00
SUBTOTAL – THIRD IMAGE CAPTURE					\$141,494.00

Thank you for choosing Pictometry as your service provider.

FEES; PAYMENT TERMS

All amounts due to Pictometry pursuant to this Agreement (“Fees”) are expressed in United States dollars and do not include any duties, taxes (including, without limitation, any sales, use, ad valorem or withholding, value added or other taxes) or handling fees, all of which are in addition to the amounts shown above and, to the extent applicable to purchases by Customer, shall be paid by Customer to Pictometry without reducing any amount owed to Pictometry unless documents satisfactory to Pictometry evidencing exemption from such taxes is provided to Pictometry prior to billing. To the

extent any amounts properly invoiced pursuant to this Agreement are not paid within thirty (30) days following the invoice due date, such unpaid amounts shall accrue, and Customer shall pay, interest at the rate of 1.5% per month (or at the maximum rate allowed by law, if less). In addition, Customer shall pay Pictometry all costs Pictometry incurs in collecting past due amounts amount due under this Agreement including, but not limited to, attorneys' fees and court costs.

THIRD IMAGE CAPTURE

Due at Initial Shipment of Imagery	\$70,747.00
Due at First Anniversary of Shipment of Imagery	\$70,747.00
Total Payments	\$141,494.00

PRODUCT PARAMETERS

ACCUPLUS IMAGERY – THIRD IMAGE CAPTURE

Product: AccuPLUS 3in - CUSTOMER DTM - Per Sector - Custom Area
Ortho Tile Projection: Custom – Wisconsin State Plan Coordinate System, South Zone, NAD27, Feet
Ortho Tile Format: JPG
Units: Feet
Elevation Source: Pictometry on File – LiDAR
Coverage Area Format: Shapefile
Leaf: Less than 30% leaf cover (Off)
Special Instructions:

Standard Ortho Mosaic Products: Pictometry standard ortho mosaic products are produced through automated mosaicking processes that incorporate digital elevation data with individual Pictometry ortho frames to create large-area mosaics on an extremely cost-effective basis. Because these products are produced through automated processes, rather than more expensive manual review and hand-touched corrective processes, there may be inherent artifacts in some of the resulting mosaics. While Pictometry works to minimize such artifacts, the Pictometry standard ortho mosaic products are provided on an 'AS IS' basis with respect to visible cutlines along mosaic seams resulting from the following types of artifacts:

- i. Disconnects in non-elevated surfaces generally caused by inaccurate elevation data;
- ii. Disconnects in elevated surfaces (e.g., roadways, bridges, etc.) generally caused by elevated surfaces not being represented in the elevation data;
- iii. Building intersect and clipping generally caused by buildings not being represented in the elevation data;
- iv. Seasonal variations caused by images taken at different times during a season, or during different seasons;
- v. Ground illumination variations caused by images taken under different illumination (e.g., sunny, high overcast, morning light, afternoon light, etc.) within one flight day or during different flight days;
- vi. Single GSD color variations caused by illumination differences or multiple-aircraft/camera captures;
- vii. Mixed GSD color variations caused by adjacent areas being flown at different ground sample distances (GSDs); and
- viii. Water body color variations caused by multiple individual frames being used to create a mosaic across a body of water (e.g., lakes, ponds, rivers, etc.).

Other Pictometry products may be available that are less prone to such artifacts than the Pictometry standard ortho mosaic products.

CONNECT – THIRD IMAGE CAPTURE

Product: Pictometry Connect View - CA
Admin User: Bill Shaw
Admin User Email: william.shaw@milwaukeecountywi.gov
Requested Activation:
Special Instructions:

Product: Pictometry Connect - CA - 100
Admin User: Bill Shaw
Admin User Email: william.shaw@milwaukeecountywi.gov
Requested Activation:
Special Instructions:

CONNECT: GEOFENCES – THIRD IMAGE CAPTURE

Geofence: WI Milwaukee
Geofence: WI Milwaukee

APPENDIX 1 PHOTOGRAMMETRIC PRODUCT SPECIFICATIONS

AccuPlus® Premium Ortho-Mosaic

Product Overview:

Seamless ortho-mosaic produced from individual frames and tiled to customer's preferred tiling scheme.

Acquisition:

Flight plans will be prepared to capture image frames with nominal 60% forward overlap and nominal 30% sidelap in order to provide sufficient overlap for automatic aerial triangulation and mitigation of building lean in orthophotography produced. Source imagery will be acquired during times of optimal environmental conditions. Imagery will generally be captured when solar altitude is 30 degrees or greater and/or by using the most optimal four-hour window, except where capture season offers significantly longer window. Imagery will be acquired with ground free of snow cover and deciduous vegetation less than 30% of full bloom. Frames with clouds will be rejected and reflown. Any planned deviation from these conditions imposed by capture window constraints will be discussed with client prior to commencement of acquisition.

Camera:

Pictometry utilizes its USGS certified, custom designed mapping camera incorporating a Kodak sensor and custom designed photogrammetric lenses. The sensor is fully calibrated according to Pictometry's USGS approved calibration process. Pictometry's sensor provides a dynamic range of 12 bits per band, RGB (resampled to 8 bits during processing).

Ortho-Rectification:

Prior to the production of orthophotography, Pictometry will perform automatic aerial triangulation, utilizing the directly observed Exterior Orientations (EOs) and ground control points (GCPs), measured by a licensed surveyor, for the purpose of orienting the individual frames for creation of the final ortho imagery. In addition to the GCPs, sophisticated matching techniques will be employed to automatically create tie points for use in performing a bundle adjustment. Pictometry will utilize best available Digital Terrain Models, combined with the calibrated camera interior orientations, ground control points, and triangulated EOs to rectify the images. When the rectification requires a resampling of the source imagery, a cubic convolution method will be utilized.

Mosaic:

Global color balancing will be applied to all orthophotos to create homogeneous orthophotos within the project area. Local adjustments of brightness values, color and contrast will be performed if needed. There will be no obvious seam edge between two adjacent orthophotos. Mosaic will be created using automated seamline steering, with manual edits to eliminate feature misalignment caused by seamlines which pass thru features above the elevation surface. Feature alignment across seamlines will be 3 pixels or better. When possible, seamlines will be steered away from elevated features to improve orthophoto quality. Once the mosaic has been produced, the imagery will be tiled and named according to the customer provided (or Pictometry generated) schema for delivery.