County of Los Angeles
CHIEF EXECUTIVE OFFICE
Kenneth Hahn Hall of Administration
500 West Temple Street, Room 713, Los Angeles, California 90012
(213) 974-1101
http://ceo.lacounty.gov

WILLIAM T FUJIOKA
Chief Executive Officer

Board of Supervisors
GLORIA MOLINA
First District

MARK RIDLEY-THOMAS
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

March 8, 2011

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

AUTHORIZATION TO USE INFORMATION TECHNOLOGY FUNDS TO SUPPORT THE LOS ANGELES REGIONAL IMAGERY ACQUISITION CORSORTIUM 3 AND APPROVE AMENDMENT NO. 3 TO THE AGREEMENT BETWEEN THE COUNTY OF LOS ANGELES AND DEWBERRY & DAVIS SERVICES OPERATIONS INC., FOR DIGITAL AERIAL IMAGERY DATA QUALITY ASSURANCE/QUALITY CONTROL AND DISTRIBUTION SERVICES
(ALL SUPERVISORIAL DISTRICTS) (3 VOTES)

SUBJECT

The Los Angeles Regional Imagery Acquisition Consortium is a multi-jurisdictional purchasing arrangement that enables participating governmental entities to benefit from economies of scale to cost-effectively acquire and update high-definition aerial imagery. The Chief Executive Office and the Chief Information Office recommend Board authorization to: 1) utilize $2.0 million in Information Technology Fund monies as project bridge funding for the Los Angeles Regional Imagery Acquisition Consortium 3; and 2) authorize the execution of Amendment No. 3 to an existing Agreement with Dewberry & Davis Services Operations, Inc., for quality control and distribution for the Los Angeles Regional Imagery Acquisition Consortium 3 data products for a maximum contract sum of $570,000.

JOINT RECOMMENDATION WITH THE CHIEF INFORMATION OFFICE THAT YOUR BOARD:

1. Approve and authorize the use of $2.0 million from the Information Technology Fund (ITF), to encumber necessary funding and, if required, to ensure timely

payment of invoices for contracts established to support the Los Angeles Regional Imagery Acquisition Consortium 3 (LAR-IAC 3). The requested funds will be returned to the ITF on receipt of committed funds from participating municipalities and other government agencies.

2. Approve and authorize the Chief Information Officer (CIO) to finalize and execute Amendment No. 3 (Attachment) to the existing Agreement between the County of Los Angeles and Dewberry & Davis Services Operations, Inc., (Dewberry & Davis) for digital aerial imagery quality assurance/quality control, creation of one foot resolution images, and distribution services of all LAR-IAC 3 data products to the project participants. This Amendment will extend the contract term for one-year effective upon Board approval with two one-year options at the County's discretion and increase the maximum contract sum by $570,000, from $1,129,517 to $1,699,517.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Since 2003, LAR-IAC participating governmental entities have benefited from acquiring updated high-definition aerial imagery. LAR-IAC participants (58 cities, County departments, and agencies) have saved an estimated $10.0 million in individual acquisition costs since program inception by participating in this arrangement.

On November 20, 2007, your Board approved $2.0 million in bridge funding that enabled LAR-IAC 2 to proceed while committed funding from participating jurisdictions was being received. At the conclusion of the LAR-IAC 2 project, these funds were returned to ITF and a $350,000 surplus was accrued for future project updates.

Consortia members have recommended once again to acquire updated imagery. Updated aerial imagery allows for comparative analysis to identify areas of change so that emergency responders' data can be up-to-date, ensure permit compliance, provide validation of planning, and support service integration and delivery across the County.

To meet this need, the Chief Executive Office and CIO recommend LAR-IAC 3, which will refresh this imagery during the winter months and deliver processed image data in the December 2011 timeframe.

LAR-IAC 3 project scope will include:

- Aerial top-down (orthophoto) imagery with 4 inch pixel resolution in urban areas and 1 foot pixel resolution in National Forest Areas;
- Oblique (side-view) aerial imagery with 4 inch pixel resolution in urban areas;

- Updated elevation data only where development has changed the surface elevation; and
- Quality control and distribution of all imagery products from an independent vendor.

CIO is requesting Board approval to use $2.0 million from the ITF as bridge funding to supplement the existing $550,000 ($350,000 LAR-IAC 2 surplus + $200,000 LAR-IAC 3 participating contributions) that is available to fund the LAR-IAC 3 project, while contributions from participating jurisdictions are collected. All bridge funding used to support LAR-IAC 3 will be repaid to ITF.

CIO is also requesting Board approval to finalize and execute Amendment No. 3 to the Agreement with Dewberry & Davis for LAR-IAC 3 digital aerial imagery quality assurance/quality control and distribution services.

Services under this Amendment include:

- Performing quality assurance/quality control for all LAR-IAC 3 digital imagery data products to ensure that they fully meet project specifications;
- Creating compressed imagery data sets for use in public safety and emergency response vehicles;
- Creating one foot resolution images for display in the public domain; and
- Distributing LAR-IAC 3 countywide to consortium participants.

Implementation of Strategic Plan Goals

The recommended action is consistent with the County's Strategic Plan Goal No. 1, Operation Effectiveness, which is to maximize the effectiveness of processes, structure, and operations to support timely delivery of customer-oriented and efficient public services.

FISCAL IMPACT/FINANCING

The estimated total project cost for LAR-IAC 3 is $2.8 million. The proposed Amendment will increase the maximum contract sum of the County Agreement with Dewberry & Davis by $570,000, from $1,129,517 to $1,699,517. ITF funds will be used as bridge funding to ensure the County timely meets the contract payment obligations. These funds will be returned to ITF on receipt of committed funds from participating municipalities and other government agencies.

As of February 1, 2011, 22 County departments, 19 municipalities, and three other governmental agencies have signed a Letter of Intent to participate in the project and their intention to make payments equaling approximately $2.8 million for project funding (see Table). Additional funds are expected as more cities and agencies join LAR-IAC. All funds received from participants that exceed project costs will be used to further update the data or will be refunded to participants.

DESCRIPTION	AMOUNT
LAR-IAC 2 Surplus & LAR-IAC 3 Contributions	$ 550,000
County Departments Commitments	850,000
Municipalities Commitments	925,000
Other Agencies Commitments	450,000
Total	**$ 2,800,000**

No additional net County cost is required.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

On January 31, 2006, your Board authorized the Chief Information Officer to sign an Agreement with Dewberry & Davis with a maximum contract sum not to exceed $400,000 to provide for the independent quality assurance/quality control and distribution of aerial imagery products for LAR-IAC 1 (formerly Los Angeles Region-Imagery Acquisition Project). This Agreement was executed on March 30, 2006.

On August 15, 2006, your Board approved Amendment No. 1 to the Agreement with Dewberry & Davis to increase the contract sum by $84,517, from $400,000 to $484,517 to acquire an additional orthogonal imagery product, provide additional quality control/assurance services, and distribution of imagery products to LAR-IAC 1 participants.

On March 26, 2008, your Board approved Amendment No. 2 to the Agreement with Dewberry & Davis to increase the contract sum by $645,000, from $484,517 to $1,129,517 to acquire orthogonal imagery product, provide quality control/assurance services, and distribution of imagery products to LAR-IAC 2 participants.

The proposed Amendment has been approved as to form by County Counsel.

IMPACT ON CURRENT SERVICES

Approval of the requested actions will expand the imagery available to County departments and LAR-IAC participants, and complete required quality control activities.

CONCLUSION

We recommend approval of the temporary use of monies from ITF to encumber necessary funding for LAR-IAC 3 contracts, and approval to execute attached Amendment No. 3 with Dewberry & Davis that will allow the LAR-IAC 3 project to move forward and increase benefits to our constituents and reduce overall cost through meaningful public agency collaboration and partnerships.

Respectfully submitted,

WILLIAM T FUJIOKA
Chief Executive Officer

RICHARD SANCHEZ
Chief Information Officer

WTF:EFS:cg

Attachments (1)

c: Executive Office, Board of Supervisors
County Counsel
Auditor-Controller

03.08.11 CEO And CIO Authorization To Use ITF To Support LAR-IAC 3 And Approve Amendment No 3 With Dewberry And Davis.Docx

AMENDMENT NUMBER 3

TO

AGREEMENT BY AND BETWEEN

COUNTY OF LOS ANGELES

AND

DEWBERRY & DAVIS SERVICES OPERATIONS, INC.

FOR

DIGITAL AERIAL IMAGERY DATA QUALITY ASSURANCE/QUALITY CONTROL AND DISTRIBUTION SERVICES

AMENDMENT NUMBER 3 TO

AGREEMENT BY AND BETWEEN

COUNTY OF LOS ANGELES AND

DEWBERRY & DAVIS SERVICES OPERATIONS, INC. FOR

DIGITAL AERIAL IMAGERY DATA QUALITY ASSURANCE/QUALITY CONTROL AND DISTRIBUTION SERVICES

This Amendment Number 3 ("Amendment No. 3") to the Agreement (as such term is defined below), as amended, is entered into as of _____, 2011 by and between the County of Los Angeles in the State of California ("County") and Dewberry & Davis Services Operations, Inc., a Virginia corporation ("Contractor"), with reference to the following facts:

Recitals

WHEREAS, County and Contractor entered into that certain Agreement for Independent Quality Assurance/Quality Control and Distribution Services For Digital Ortho Imagery, Digital Terrain Models and Oblique Aerial Digital Imagery (the "Agreement") which was approved by County's Board of Supervisors and executed by the County's Chief Information Officer on March 30, 2006;

WHEREAS, the Agreement was amended under that certain Amendment Number 1 ("Amendment No. 1") which was approved by the County's Board of Supervisors on August 15, 2006;

WHEREAS, the Agreement was further amended under that certain Amendment Number 2 ("Amendment No. 2") which was approved by the County's Board of Supervisors on March 26, 2008; and

WHEREAS, the parties now wish to further amend the Agreement to, among other things, extend its term in order to allow for the continuation of the services being performed under the Agreement and provide a corresponding increase in the Maximum Contract Sum under the Agreement.

NOW, THEREFORE, pursuant to Paragraph 6 (Change Notices and Amendments) of the Agreement, County and Contractor hereby agree to further amend the Agreement as follows.

1. Paragraph 3.1 (County Project Director) of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 3.1 (County Project Director) to read as follows:

"3.1 County Project Director.

County Project Director for this Agreement shall be the following person:

Mark Greninger
Geographic Information Officer
County of Los Angeles
350 S Figueroa Street, Suite 188
Los Angeles, California 90071
Telephone: (213) 253-5624
E-mail: mgreninger@cio.lacounty.gov"

2. Paragraph 3.2 (County Project Manager) is hereby deleted in its entirety and is not replaced.

3. Paragraph 4.3.4 of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 4.3.4 to read as follows:

"4.3.4 The following persons have been identified by Contractor as the lead members of its Project Team and are hereby approved as of the Effective Date by County in the following roles:

Name	Position
Phillip Thiel	Project Director
David Maune	Project Manager
Brian Mayfield	Deputy Project Manager
Bruce Hunsaker	Project Surveyor (Towill) CA PLS
Jennifer Novac	Orthophoto QA/QC Team Leader
Tim Blak	DTM QA/QC Team Leader
Andrew Peters	Contour QA/QC Team Leader
Josh Novac	Product Generation Team Leader"

4. Paragraph 8.2 (Maximum Contract Sum) of the Agreement is hereby deleted in its entirety and is replaced by the following new Paragraph 8.2 (Maximum Contract Sum) to read as follows:

"8.2 Maximum Contract Sum. The "Maximum Contract Sum" under this Agreement shall be the total monetary amount payable by County to Contractor for supplying all the tasks, subtasks, deliverables, goods, services, optional work and other work specified under this Agreement. All work completed by Contractor must be approved in writing by County. If County does not approve work in writing, no payment shall be due to Contractor for that work. Notwithstanding such limitation of funds, Contractor shall satisfactorily perform and complete all work required of Contractor under this Agreement.

The Maximum Contract Sum for this Agreement, including all applicable taxes, authorized by County hereunder, shall not exceed One Million Six Hundred Ninety-Nine Thousand Five Hundred Seventeen Dollars ($1,699,517), which includes Five Hundred Twenty-One Thousand Seven Hundred Twenty Eight Dollars and Ninety Six Cents ($521,728.96) for the required deliverables and Forty Eight Thousand Two Hundred Seventy One Dollars and Four Cents ($48,271.04) for optional work, as further specified in Exhibit C (Price and Schedule of Payments), unless modified by a duly authorized Amendment under the provisions of Paragraph 6 (Change Notices and Amendments)."

5. Paragraph 10.2 (Submission of Invoices) of the Agreement is hereby deleted in its entirety and is replaced with the following new Paragraph 10.2 (Submission of Invoices) to read as follows:

"10.2 Submission of Invoices. Contractor shall invoice County upon completion of Tasks, subtasks, Deliverables, goods and services and other Work which are specified in this Agreement, Exhibit B (Statement of Work), Exhibit C (Price and Schedule of Payments), and any Change Orders, as applicable, and which have been approved in writing by County pursuant to Paragraph 5 (Work; Approval and Acceptance). Contractor agrees not to submit any invoice for payment until County has approved in writing the Work for which payment is claimed. All invoices and supporting documents under this Agreement shall be submitted in duplicate to the County Project Director.as set forth in Paragraph 3.1 (County Project Director)"

6. Paragraph 12 (Notices) of the Agreement is hereby deleted in its entirety and is replaced with the following new Paragraph 12 (Notices) to read as follows:

"**12. NOTICES**. All notices or demands required or permitted to be given or made under this Agreement, unless otherwise specified, shall be in writing and shall be addressed to the parties at the following addresses and delivered: (1) by hand with signed

receipt, (2) by first-class registered or certified mail, postage prepaid, (3) by facsimile or electronic mail transmission, or (4) by overnight commercial carrier, with signed receipt. Notices is deemed given at the time of signed receipt in the case of hand delivery, three (3) days after deposit in the United States mail as set forth above, on the date of facsimile or electronic mail transmission if followed by timely confirmation mailing, or on the date of signature receipt by the receiving party of any overnight commercial carrier delivery. Addresses may be changed by either party giving ten (10) days prior notice in accordance with the procedures set forth above, to the other party.

To County:

Chief Information Office
County of Los Angeles
350 S Figueroa Street, Suite 188
Los Angeles, CA 90071
Attention: Mark Greninger, GIO
Facsimile: (213) 633-4732
E-mail: mgreninger@cio.lacounty.gov

with a copy to:

County Counsel, Los Angeles County
500 West Temple Street
Los Angeles, CA 90012
Attention: Jose Silva, Esq.
Facsimile: (213) 617-7182
E-mail: josilva@counsel.lacounty.gov

To Contractor:

Dewberry & Davis Services Operations, Inc.
8401 Arlington Boulevard
Fairfax, Virginia 22031-4666
Attention: Phil Thiel
Facsimile: (703) 849-0182
E-Mail: pthiel@dewberry.com

County Project Director shall have the authority to issue all notices or demands, which are required or permitted by County under this Agreement."

7. Exhibit B (Statement of Work) of the Agreement is hereby deleted in its entirety and is replaced with a new Exhibit B (Statement of Work), a true and correct copy of which is attached hereto and incorporated herein by this reference.

8. Exhibit C (Price and Schedule of Payments) of the Agreement is hereby deleted in its entirety and is replaced with a new Exhibit C (Price and Schedule of Payments), a true and correct copy of which is attached hereto and incorporated herein by this reference.

9. In all other respects, the Agreement, as amended under Amendment No. 1, Amendment No. 2, and this Amendment No. 3, shall remain in full force and effect.

IN WITNESS WHEREOF, the undersigned have duly executed this Amendment No. 3 as of the date first written above.

COUNTY OF LOS ANGELES By RICHARD SANCHEZ Chief Information Officer	
APPROVED AS TO FORM: ANDREA SHERIDAN ORDIN County Counsel By Jose Silva Principal Deputy County Counsel	
	DEWBERRY & DAVIS SERVICES OPERATIONS, INC. By Name: PHILLIP THIEL Title: VICE PRESIDENT

EXHIBIT B — STATEMENT OF WORK

All deliverables shall be in digital media format such as .pdf file format.

1. Major QA/QC Management Tasks

Contractor shall develop a *Quality Plan* that outlines the project, and delivered during a kick-off meeting for LAR-IAC.

Task 1a: Develop a *Quality Plan* for the Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) Program, including Acceptance Criteria for: digital orthophotos at two image resolutions (4" and 1"); aerial triangulation (AT); digital terrain model (DTM) suitable for orthorectification for "spot updates" only (areas of significant grading).

Task 1b: Attend a QA/QC kick-off meeting as well as one additional meeting in Los Angeles or via teleconference to be scheduled by the LAR-IAC Project Manager, and document key activities and decisions.

Task 1c: Develop a LAR-IAC QA/QC project tracking spreadsheet that shows the status of all Pictometry International Corp. and/or The Sanborn Map Company, Inc. (Pictometry/Sanborn) product tiles by delivery area: (a) delivered to Contractor, (b) reviewed by Contractor with edit calls provided to Pictometry/Sanborn, (c) corrected by Pictometry/Sanborn and delivered to Pinnacle Mapping Technologies (Subcontractor), and (d) delivered by Subcontractor to LAR-IAC and/or its stakeholders and communities. Incorporate the project tracking spreadsheet into Weekly Progress Reports that report on all significant activities each week.

Schedule: The draft *Quality Plan*, incorporating feedback and guidance received during the QA/QC kick-off meeting will be submitted by Contractor to LAR-IAC within two weeks of the QA/QC kick-off meeting, and it will be updated continuously thereafter as new guidance is received from LAR-IAC. Attend meetings in Los Angeles and/or telecons as scheduled by the LAR-IAC Project Manager and document key activities/decisions in a report to the LAR-IAC Project Manager within one week thereafter. Establish the tracking spreadsheet as of the end of the first week in which products are received from Pictometry/Sanborn the image provider to be quality assured by Contractor; update weekly thereafter.

Deliverables:

Deliverable 1a: *Quality Plan for the Los Angeles Region Imagery Acquisition Consortium (LAR-IAC).*
Deliverable 1b: *Report that documents key activities and/or decisions made during meetings and telecons.*
Deliverable 1c: *Project tracking spreadsheet and weekly progress reports that document key activities for the prior week, including information that shows tiles received from Pictometry/Sanborn, QC'd by Contractor, corrected by Pictometry/Sanborn and submitted to Subcontractor, and delivered by Subcontractor to LAR-IAC.*

2. **Aerial Triangulation (AT) Reports**

Task 2: Prepare a report for each Pictometry/Sanborn AT block that documents control used by Pictometry/Sanborn, and results of AT adjustment statistics, compared with the AT Acceptance Criteria D1 through D8 documented in the *Quality Plan.*

Schedule: Submit individual AT reports to LAR-IAC within 30 days of receipt of all required AT documentation from Pictometry/Sanborn for each AT block as completed.

Deliverables:

Deliverable 2: *AT Report in for each AT block, signed and sealed by an ASPRS Certified Photogrammetrist.*

3. **QA/QC of 4" Digital Orthophotos in Urban Areas (Project Areas 1 and 3)**

Task 3a: Using horizontal photo-identifiable QA/QC checkpoints from LAR-IAC (2006) and/or LAR-IAC 2 (2008), measure ground coordinates of these checkpoints on the 4" orthophoto tiles, and prepare Horizontal Accuracy Assessment Reports for each 4" AT block consistent with requirements of the National Standard for Spatial Data Accuracy (NSSDA) and Acceptance Criteria C3 and C4 of the *Quality Plan.* Each Horizontal Accuracy Assessment Report will be signed and sealed by an ASPRS Certified Photogrammetrist.

Task 3b: Review all 4" orthophoto tiles [using TIFF-QC software selected by Contractor] and compare aesthetics of each 4" digital orthophoto GeoTIFF image with Acceptance Criteria A1 through A27, C1, C2, C5 and C6 (use Sanborn QC website if applicable). The aesthetic review should identify color and tone imbalance as well as radiometry, artifacts, smears, warping, distortions, seam lines, mosaicking, and processing errors using commonly accepted professional standards. Contractor will submit a TIFF-QC report each week to Pictometry/Sanborn and LAR-IAC, including a Microsoft Word document with project information, point shapefiles that show the location of edit calls made, and an associated Excel file that lists edit calls by major edit call categories, using codes coordinated with Pictometry/Sanborn and LAR-IAC.

Task 3c: Perform completeness reviews of all 4" orthophoto tiles for countywide datasets and subsets to be used for each of the spatially-limited dataset (SLDS) areas. Contractor shall ensure proper geographic coverage, check file-naming convention, verify that there are no gaps or overlap, ensure that previously rejected tiles have been corrected by Pictometry/Sanborn and verify that all datasets are complete and include metadata.

Task 3d: Generate all 4" orthophoto products required for countywide and spatially-limited datasets.

Schedule: For Task 3a, the Horizontal Accuracy Assessment Report for each 4" AT block will be submitted to LAR-IAC within 30 days of receipt of 4" orthophoto tiles covering all

such QA/QC checkpoints for each AT block to be evaluated. For Task 3b, TIFF-QC reports for aesthetics will be submitted weekly, but never later than 30 days after receipt of 4" orthophotos from Pictometry/Sanborn. For Task 3c, document individual 4" orthophoto datasets as complete in Weekly Progress Reports. For Task 3d, document individual 4" orthophoto datasets as generated and ready for delivery in Weekly Progress Reports.

Deliverables:

Deliverable 3a: *Horizontal Accuracy Assessment Report for each 4" AT block, signed and sealed by an ASPRS Certified Photogrammetrist.*
Deliverable 3b: *Weekly TIFF-QC report as described above.*
Deliverable 3c and 3d: *Paragraphs and graphics in each Weekly Progress Report that report on the status of tiles that are complete and received by Subcontractor from Pictometry/Sanborn, and datasets that have been generated and ready for delivery.*

4. QA/QC of 1' Digital Orthophotos in National Forest Areas (Project Area 2)

The 1' orthophoto tiles in national forest areas will not be reviewed by Contractor for horizontal accuracy.

Task 4a: Review all 1' orthophoto tiles [using TIFF-QC software selected by Contractor] and compare aesthetics of each 1' digital orthophoto GeoTIFF image with Acceptance Criteria A1 through A27, B1, B2, B5 and C6. Submit a TIFF-QC report each week to Pictometry/Sanborn and LAR-IAC, including a Microsoft Word document with project information, point shapefiles that show the location of edit calls made, and an associated Excel file that lists edit calls by major edit call categories, using codes coordinated with Pictometry/Sanborn and LAR-IAC.

Task 4b: Perform completeness reviews of all 1' orthophoto tiles in national forest areas for countywide datasets and subsets to be used for each of the spatially-limited areas. Ensure that there are no gaps or overlaps and that all datasets are complete and include metadata.

Task 4c: Generate all 1' orthophoto products in national forest areas required for countywide and spatially-limited datasets.

Schedule: For Task 4a, TIFF-QC reports for aesthetics will be submitted weekly, but never later than 30 days after receipt of 1' orthophotos from Pictometry/Sanborn. For Task 4b, document individual 1' orthophoto datasets as complete in Weekly Progress Reports. For Task 4c, document individual 1' orthophoto datasets as generated and ready for delivery in Weekly Progress Reports.

Deliverables:

Deliverable 4a: *Weekly TIFF-QC report as described above.*

Deliverable 4b and 4c: *Paragraphs and graphics in each Weekly Progress Report that report on the status of tiles that are complete and received by Subcontractor from Pictometry/Sanborn, and datasets that have been generated and ready for delivery.*

5. **QA/QC of Photogrammetric Breaklines and LiDAR DTMs in Urban Areas (Project Areas 1 and 3)**

Participants will identify areas of major development for "spot updates". The County will provide DTM of the first LAR-IAC delivery for these areas.

Task 5a: Perform completeness reviews of all updated urban area DTM tiles. Ensure that there are no gaps and that all datasets are complete and include metadata.

Task 5b: Generate all updated DTM products required for countywide and spatially-limited datasets.

Schedule: For Task 5a, document individual DTM tiles as complete in Weekly Progress Reports. For Task 5b, document individual DTM datasets as generated and ready for delivery in Weekly Progress Reports.

Deliverables:

Deliverables 5a and 5b: *Paragraphs and graphics in each Weekly Progress Report that reports the status of updated DTM tiles that are complete and received by Subcontractor from Pictometry/Sanborn, and datasets that have been generated and ready for delivery.*

6. **QA/QC of Oblique Aerial Digital Images (OADI) from Pictometry**

The Contractor shall only be responsible for completeness and horizontal and vertical accuracy reporting. No aesthetic QC is to be done for the Oblique Imagery.

Task 6a: Evaluate OADI for complete coverage.

Task 6b: Evaluate horizontal accuracy of OADI imagery.

Task 6c: Evaluate vertical accuracy of OADI imagery.

Task 6d: Generate OADI deliverables.

Schedule: For Task 6a, 6b, and 6c, document tasks as complete in Weekly Progress Reports. For Task 6d, document OADI datasets as generated and ready for delivery in Weekly Progress Reports.

Deliverables:

Deliverables 6a, 6b and 6c: *Paragraphs and graphics in each Weekly Progress Report that reports the status of tasks completed.*
Deliverables 6d: *Paragraphs and graphics in each Weekly Progress Report that documents OADI datasets that have been generated and ready for delivery.*

7. Full Delivery of Countywide and Spatially-Limited Datasets (SLDS)

The Contractor shall be responsible for the delivery of QA/QC accepted products from Pictometry/Sanborn (digital orthophotos, DTMs, and contours) to the County as well as to LAR-IAC participants.

Task 7a: Full delivery to County & SLDS participants. Deliver a countywide and an estimated 40 spatially-limited datasets (SLDS) of all products from Pictometry/Sanborn using transfer methods determined by LAR-IAC. SLDS datasets shall be defined by shapefiles provided by LAR-IAC to define each spatially-limited area to include buffers. "Full delivery" is all data products for the entire County (the entire "data" for the project). All other entities will receive data based on a 1 or 2 mile buffer (based on their jurisdiction and appropriate grid system. These are called "spatially limited dataset participants". A shapefile for the delivery area for each LAR-IAC Participant will be provided. The average size of the imagery product deliverables for an individual city will be approximately 20 GB (but this does vary widely).

Task 7b: Store all LAR-IAC data for one year. The Contractor shall be responsible for storing the LAR-IAC product deliverables for a period of at least one year after all product deliverables for LAR-IAC's initial delivery.

Schedule: All deliverables will be provided within 30 days of receipt of all final datasets from Pictometry/Sanborn.

Deliverables:

Deliverable 7a: *Full delivery of the complete countywide datasets of all products to LAR-IAC using transfer methods determined by LAR-IAC.*
Deliverable 7b: *One year storage of all LAR-IAC data.*
Deliverable 7c and d: *Full delivery of all SLDS datasets, including up to 5 more SLDS participants to be delivered on demand using transfer mechanisms determined by LAR-IAC.*

8. Additional Data Products

Task 8a: Create a complete, seamless, countywide dataset with 1' pixels, resampled from 4" pixels, delivered in the 4-inch tile scheme.

Task 8b: Create a JPEG2000 dataset of all tiles (1' and 4" resolution).

Task 8c: Create 40 seamless SDE export format files, file geodatabases (FGDB), or Image Catalogs, for each SLDS (based on shapefiles provided by LAR-IAC), as determined by each SLDS.

Schedule: All deliverables for additional data products will be provided within 30 days of receipt of all final datasets from Pictometry/Sanborn.

Deliverables:

Deliverable 8a: *Provide resampled set of imagery tiles from 4" pixels to 1' pixels (keep in GeoTIFF format).*
Deliverable 8b: *Provide JPEG2000 set of imagery tiles (1' and 4" resolutions).*
Deliverable 8d: *Provide 40 SDE, FGDB, or Image Catalog datasets for SLDS participants.*

9. Mosaic Generation

Generate MrSID and ECW mosaics for color products.

Task 9a: Generate 56 countywide MrSID mosaics.

Task 9b: Generate 40 MrSID mosaics for SLDS participants.

Task 9c: Generate 56 countywide ECW mosaics.

Task 9d: Generate 40 ECW mosaics for SLDS participants.

Schedule: All deliverables will be provided within 30 days of receipt of all final datasets from Pictometry/Sanborn.

Deliverables:

Deliverable 9a: *Generate and deliver 56 countywide MrSID mosaics.*
Deliverable 9b: *Generate and deliver 40 MrSID mosaics for SLDS.*
Deliverable 9c: *Generate and deliver 56 countywide ECW mosaics.*
Deliverable 9d: *Generate and deliver 40 ECW mosaics for SLDS.*

10. Production Management

The Contractor's Project Manager will assume some project management duties for project related issues arising during the delivery and QA/QC process. This mechanism could serve as a way to ensure cooperation between all vendors (Pictometry/Sanborn, Dewberry, Pinnacle and LAR-IAC) and also will help identify potential problems before they are bigger problems that lead to project delays. More precise guidelines and scope of this effort to be detailed in the LAR-IAC Quality Plan (deliverable from the Contractor) after all vendors selected for LAR-IAC.

Task 10: Because the aerial triangulation and production of digital orthophotos have not previously been produced to rigorous standards when using Pictometry imagery, Contractor will provide on-call technical support as required by LAR-IAC for management of digital orthophotos produced from Pictometry imagery, development of acceptance criteria, and resolution of technical issues.

Schedule: Technical support will be on-call and responsive to LAR-IAC requirements.

Deliverables: *Deliverables may be in the form of emailed recommendations or could be verbal as the result of teleconferences, subsequently formalized by written documentation.*

11. Optional Work

Task 11: As necessary and required by LAR-IAC, a number of optional items can be completed under this task using the mechanisms in Section 6.2 (Change Order) of this Agreement as long as funding remains to complete the optional tasks.

Schedule: Each optional item will include a schedule for completion.

Deliverables: *Each optional item will include deliverable(s) as defined in the change order.*

Exhibit C
Price and Schedule of Payments

The following table represents the Contractor's cost bid for Independent QA/QC Services for Los Angeles County; for the LAR-IAC Project.

#	A	B	C	D	E	F
	Major QA/QC Tasks	**Total Number of tasks**	**Unit Cost where applicable**	**Total Costs if all tasks are performed**	**QA/QC Tasks and Subtasks**	**Deliverable #**
1	Major QA/QC Management Tasks	1	$48,608.00	$36,814.18	Quality Plan – PM	1a
		3	$3,466.80	$10,400.40	Meetings in LA	1b
		1	$1,728.40	$1,728.40	Progress Tracking	1c
2	AT Reports	29	$1,180.68	$34,239.72	AT Reports	2
3	4" Digital Orthophotos in Urban Areas – each tile is ½ mi²	29 AT blocks	$982.54	$28,493.66	Horizontal Accuracy	3a
		12,721 tiles	$14.53	$184,836.13	Aesthetics	3b
		All AT blocks	N/A	$34,197.00	Completeness	3c
			N/A	$27,164.00	Generate products	3d
4	1' Digital Orthophotos in National Forest Areas – each tile is 1 mi²	1,080 tiles	$14.50	$15,660.00	Aesthetics	4a
		2 AT blocks	$3,224.40	$3,224.40	Completeness	4b
			$2,670.00	$2,670.00	Generate products	4c
5	Updated Photogrammetric breaklines and DTMs in Urban Areas – each tile is ½ mi²	1	N/A	$569.25	Completeness	5a
		200 tiles	N/A	$90.00	Generate products	5b
6	Oblique Aerial Digital Images (OADI) from Picteomtry	All	N/A	2,925.00	Image Cover	6a
		Point	N/A	$7,164.00	Horizontal Accuracy	6b
		Point	N/A	$7,164.00	Vertical Accuracy	6c
		All	N/A	$26,010.00	Deliverables	6d
7	Full Delivery of 2 countywide datasets plus 40 spatially-limited datasets for cities and jurisdictions	All	$4,365.00	$4,365.00	Full Delivery	7a
		1	$5,000.00	$5,000.00	One Year Storage	7b
8	Additional Data Products	1	$4,770.00	$4,770.00	4" to 1' resample	8a
		1	$4,410.00	$4,410.00	Create JPEG2000	8b
		40	$279.00	$11,160.00	SDE or FGDB for SLDS	8d
9	Mosaic Generation	68	$90.00	$6,120.00	MrSID countywide	9a
		40	$90.00	$3,600.00	MrSID SLDS	9b
		56	$90.00	$6,120.00	ECW countywide	9c
		40	$90.00	$3,600.00	ECW SLDS	9d
10	Production Management		N/A	$37,440.00	Manage Project	10
	SUB-TOTAL TASKS 1-10			**$521,728.96**		
11	Optional Items	N/A	N/A	$48,271.04	Optional Items	11
	TOTAL COSTS			**$570,000.00**		