LARIAC 4

Product Guide

**For the
Los Angeles Region
Imagery Acquisition Consortium
(LARIAC) Program
2014-2015**

LOS ANGELES ● REGION
LAR|ac
imagery acquisition consortium

Product Guide Developed by:

Los Angeles County

Pictometry
Intelligent Images®

Dewberry

August 2015
Updated February 2016

Orthophotography Data Acquisition & Data Production provided by:
     Prime: Pictometry International Corp.

Oblique Imagery Data and Viewer provided by:
     Pictometry International Corp.

Building Representation Data provided by:
     Pictometry International Corp.
     The Sanborn Map Company

Digital Terrain Data provided by:
     Pictometry International Corp.

Quality Assurance, Quality Control and Deliverables provided by:

Dewberry Consultants LLC

TABLE OF CONTENTS

ATTACHMENT 1 – README – OBLIQUE IMAGERY LIBRARY INSTRUCTIONS

LARIAC – BACKGROUND AND OVERVIEW

Please see the original **LARIAC Product Guide** for complete background and overview information on the LARIAC4 program. The original LARIAC Project Guide (2006 provides plenty of information on the first iteration of the project, orthophotography, digital terrain datasets and oblique aerial digital imagery.

This document, along with reports, documents, presentations, and other information, can be found online on the LARIAC Program Web Site:
http://egis3.lacounty.gov/dataportal/lariac/lariac-data/

Overview of Data Acquisition Process – LARIAC4

Pictometry International Corp. (hereafter referred to as Pictometry) acquired ortho and oblique imagery for the LARIAC4 Project. Aerial photography data were collected and processed by Pictometry for all LARIAC4 project areas. Approximately 278,000 nadir image chips were collected simultaneously with Pictometry's oblique imagery collection. The collected nadir image chips were post processed by Pictometry.

To provide stereoscopic coverage for the compilation, Pictometry modified its standard parameters by both adding frames along lines and increasing the frequency of the lines to ensure that the photography would have a minimum of 60% forward overlap between exposures within a flight line and a minimum of 30% side lap between exposures in adjacent flight lines.

To provide the proper geodetic controls for the production of the digital ortho imagery, a combination of existing GPS ground control points and GPS/IMU were employed during the image capture. Existing digital terrain model (DTM) data from LARIAC4 was provided by Los Angeles County and used in the production of the digital ortho imagery. Pictometry accomplished aerial triangulation (AT solution) of the photo set using automatic analytical aerial triangulation (AAAT) procedures in a softcopy environment and the resulting external orientations.

Pictometry processed the imagery, completed the orthorectification and produced 3-band (RGB), 24-bit (8-bit per channel) digital orthophotos at 4 inch and 1 foot pixel resolution for respective project areas with no overlap between areas. The 4 inch (0.32' final pixel size) and 1 foot (0.8' final pixel size) areas were color balanced independently. The ground resolution of the ortho photography will be approximately nominal 10 cm GSD (Ground Sample Distance) and nominal 28 cm GSD. All products from the LARIAC4 Project underwent rigorous quality assurance and quality control (QA/QC) procedures by Dewberry and Davis LLC (hereafter referred to as Dewberry) as an independent QA/QC firm.

All project data were established and produced in the California State Plane Coordinate System (1983, Zone V). The 4-inch and 1-foot pixel resolution orthophotos were delivered by Pictometry to Dewberry for eventual distribution to the LARIAC4 participants. Oblique imagery was delivered by Pictometry to Dewberry for eventual distribution to the LARIAC4 participants.

PROJECT DELIVERABLES

The LARIAC4 Project consists of digital imagery and elevation products in various delivery formats. The LARIAC4 Technical Advisory Group (TAG) made every effort to consider and include as many products and delivery formats as possible. While not every format is included, the final products can be converted to other formats, if necessary. The following is a description of all LARIAC4 Project Deliverables:

Digital Orthophotography, LiDAR, and Oblique Imagery and Viewers

After the quality assurance team receives, reviews and accepts all of the ortho products delivered by Pictometry for each delivery area, the data is finalized and copied to hard drives for delivery to Los Angeles County and the LARIAC4 participants.

The full countywide delivery of oblique imagery, software and support data is also delivered to Dewberry by Pictometry for creation of the Spatially-Limited Dataset (SLDS) deliveries of all project data products to the various LARIAC4 participants. The final SLDS datasets will be delivered on external hard drives (provided through the LARIAC4 contract).

The delivery extents for each SLDS are defined by two shapefiles developed and provided by Los Angeles County in consultation with each SLDS participant. One shapefile defines the 4inch (urban) and 1-foot (forest) ortho imagery delivery boundaries, and the other defines the Pictometry (oblique product) delivery boundary.

LARIAC4 Project Deliverables (each described below):

There are three (3) main products (now called deliverables) for LARIAC4 and over twelve (12) data formats. The main products include:

> **Deliverable 1** - Color Orthogonal Imagery, 4" resolution (urban areas) and 1' resolution (national forests), 1' resolution for urban areas (for Web/public consumption).
> **Deliverable 2** – LiDAR and Digital Elevation Models – LiDAR will be collected in the fall of 2015 and delivered in the spring of 2016. LiDAR deliverables will be produced to USGS v1.2 specifications and include LAS, Bare-Earth DEM, Intensity Imagery, and Contour deliverables.
> **Deliverable 3** - Color Oblique Aerial Digital Imagery (with viewer application and other integration software).
> **Deliverable 4** – Building Outlines – Esri File Geodatabase containing building footprints collected from the 4" and 1' imagery.

Data Formats

Pictometry translated or transferred the digital data from the original system specific format to the final and required output format. Pictometry will provide their oblique imagery library, software, and supporting materials. Their oblique imagery format is a propriety JPEG format.

The formats listed below for the listed deliverables are for graphic display only and do not contain any written reports.

Delivery Product	Format 1	Format 2	Format 3
Orthophoto – RGB (4" and 1' products)	GeoTIFF & JPG2000	ECW (20:1 mosaic)	File Geodatabase
LiDAR and DEM	LAS	2.5' Bare Earth DEM in Erdas IMG format	File Geodatabase containing Contours
Oblique images	Proprietary JPG	Compressed JPG	

*   *Digital Terrain Model represents the bare earth terrain including the breaklines.*

Reports and support data:

Ground Control:	ESRI ArcGIS shapefile with attributes
	ASCII point file listing
	Report
Tile Grid	ESRI ArcGIS shapefile
Block Adjustment	ESRI ArcGIS shapefile
	Report

Each participant will receive all delivery formats for the area agreed upon prior to joining the LARIAC4 project (provided in their letter of support with the County). For most entities this is their jurisdiction or coverage area along with a buffer area. All products are delivered in the State Plane Coordinate System, NAD83, California, Zone V, U.S. Survey Feet (0405).

Deliverable 1 – Natural Color Orthophotos

1. Four-inch pixel resolution natural color ortho imagery coverage of the urban project area and Santa Catalina Island (Area 1 and Area 3) at a 1" = 100' map scale.
2. One-foot pixel resolution ortho imagery coverage of the national forest areas (Area 2) at a 1" = 200' map scale.
3. One-foot pixel resolution ortho imagery coverage of the urban project area and Santa Catalina Island (Area 1 and Area 3) at a 1"=200' map scale (reprocessed from 4" pixel resolution imagery).
4. Imagery to be delivered as GeoTIFF files (uncompressed) corresponding to each ortho tile in the supplied tile grid.
5. Other data formats to be provided include ECW, JPEG2000, and ESRI File Geodatabase.

Deliverable 2 - LiDAR

Digital Terrain Data (Lidar) is scheduled to start collection in the fall of 2015. Deliverables for the LiDAR data are not anticipated until mid 2016.

*   One (1) set of raw, unclassified LiDAR data, 1 file per swath.

- One (1) set of classified LAS files in version 1.4 formatted to Point Record Format 6 and in accordance with the required tiling scheme. Data will be tiled to the LARIAC Tile Index.
- One (1) set of Raster 2.5 ft DEM's (hydro flattened bare earth) delivered in ERDAS .IMG format
- One (1) set of LiDAR Intensity Ortho Rasters with a ground pixel resolution of 2.5 ft in GeoTIFF format
- One (1) Ground Survey report including a point listing and digital files created of the actual points utilized for this project. Delivered in Microsoft Word, Adobe PDF or other acceptable digital format.
- One (1) Supplemental Ground Control Report including a statistical report summarizing the results of the airborne GPS adjustment and IMU data. Delivered in Microsoft Word, Adobe PDF or other acceptable digital format.
- One (1) set of control points in Esri shapefile format.
- One (1) set of checkpoints in Esri shapefile format.
- One (1) LiDAR data processing report in Microsoft Word, Adobe PDF or other acceptable digital format.
- One (1) report containing Quality Control procedures and results in Microsoft Word, Adobe PDF or other acceptable digital format.
- One (1) set of FGDC Metadata meeting the requirements in the Task Order Detail
- One (1) ESRI shapefile containing the breakline data. This includes hydrographic breaklines, bridge deck breaklines, and bridge saddle breaklines.
- One (1) Esri file geodatabase containing 1' contours

Deliverable 3 - Color Oblique Aerial Digital Imagery

1. 4,276 Sectors of Community 2-Way Images covering 4,083 square miles of the County (all areas plus some buffer). This includes 963 Sectors of Community 2-Way Images covering Area 2 (national forests).
2. 3,309 Sectors of Neighborhood 4-Way Images covering Area 1.
3. 139 Sectors of Neighborhood 4-Way Images covering Area 3 (Santa Catalina Island).
4. 16 Sectors of Neighborhood 8-Way Images covering downtown areas.
5. Shapefiles representing the oblique footprint of each image trapezoid in California State Plane Coordinate System, Zone V, NAD 83, and U.S. Survey Feet.
6. Oblique imagery is a proprietary image trailer tacked onto industry standard image format. May be exported to a number of formats. County DTM with up to 2m spacing will be included in image trailer.

Deliverable 4 – Building Representations (Rooflines)

1. ArcGIS Shapefile and File geodatabase including building rooflines representing all buildings as of date of orthogonal imagery capture, including attributes identifying source of change (modification, new construction, replacement) and links to prior building IDs.
2. ArcGIS shapefile of all buildings that have been updated since 2008, to support change analysis and detection, including attributes identifying source of change (demolition, modification, new construction, replacement) and links to current building IDs.

Map of LARIAC4 Project Areas
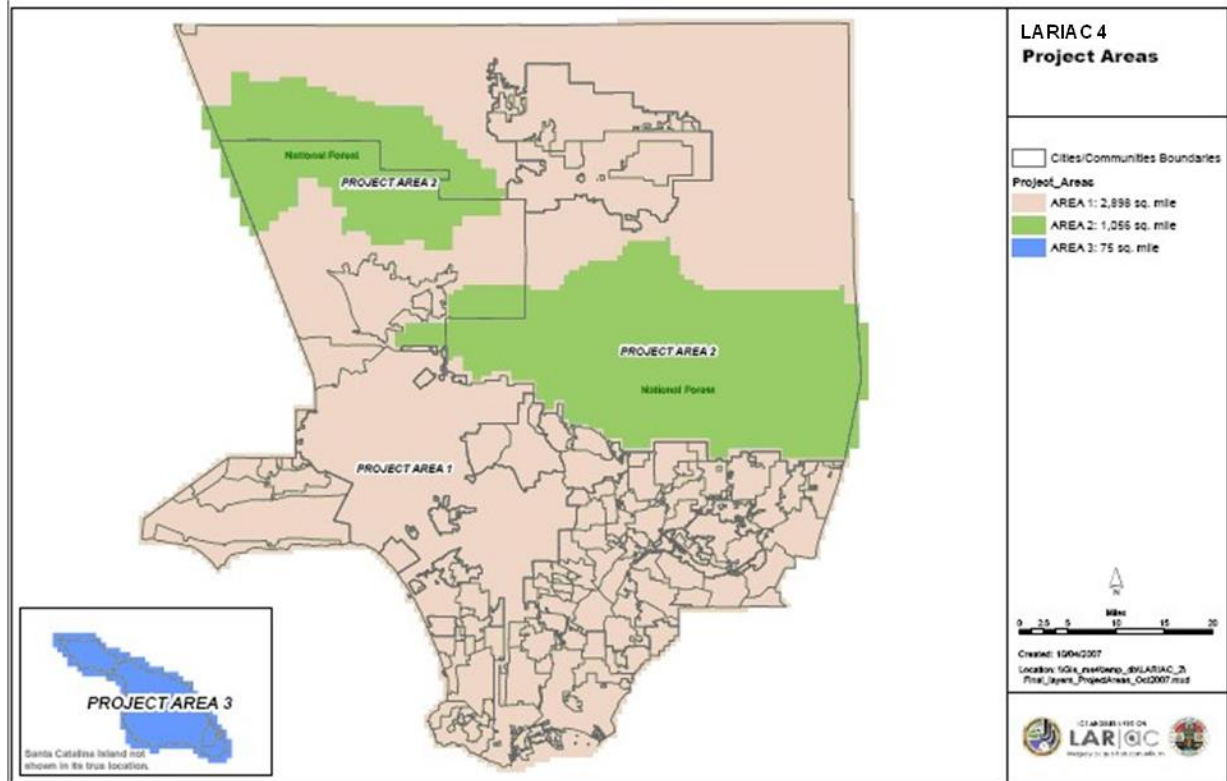
Area 1 – urban, Area 2 – national forests, Area 3 – Santa Catalina Island.

Other Deliverables

1. Federal Geographic Data Committee (FGDC) compliant metadata.
2. Geodetic control network for ground control points used for AT solution.
3. Oblique imagery software from Pictometry
   - Electronic Field Study (EFS) 2.7 R1.19
   - Configuration Editor 2.0 release 3
   - Change Analysis 2.7 R1.19
   - ArcGIS Extension
   - Network Image Warehouse (NIW)

See **Readme** delivered with oblique imagery data products for software information (included here as **Attachment 1**).

DELIVERABLE REVIEW & ACCEPTANCE CRITERIA

All products from the LARIAC4 Project underwent rigorous quality assurance and quality control (QA/QC) procedures. The same Acceptance Criteria was used for LARIAC4 as LARIAC. For detailed information regarding the acceptance criteria, please see the LARIAC Product Guide (pages 15 to 20).

Coordinate System and Datum for LARIAC4 Project Data

All LARIAC4 Project deliverables (except oblique aerial digital imagery) are projected in the State Plane Coordinate System, NAD 83, CA Zone V, US Survey Feet (0405).

Horizontal Datum: North American Datum of 1983 (NAD83); Epoch: 2010.00
Reference Network: High Accuracy Reference Network (HARN) and CGPS
Vertical Datum: North American Vertical Datum of 1988 (NAVD88)
Geoid Model: GEOID12A
Projection: California State Plane Coordinate System Zone 5
Units: U.S. Survey Feet

Horizontal and Vertical Positional Accuracy

Horizontal Accuracy – For Orthophotos

LARIAC4's 4" digital orthophotos were tested in accordance with the 4 inch GSD Acceptance Criteria listed above. The "georeferenced ground positions of higher accuracy," referred to generically as "QA/QC checkpoints," were provided from the first LARIAC project and from other data points collected by the vendors. The National Standard for Spatial Data Accuracy (NSSDA) absolute accuracy statistic (Accuracy$_r$) is computed as RMSE$_r$ x 1.7308 in order to report the tested horizontal accuracy at the 95% confidence level as required by FGDC Geospatial Positioning Accuracy Standards, Part 3: NSSDA. The 4" digital orthophotos were tested with **1.25 feet horizontal accuracy at 95% confidence level.** Class 1 (1 foot accuracy) for Area 1 and 3 and class 2 (2 foot accuracy) are the same standards as LARIAC.

Horizontal and Vertical Positional Accuracy - For Oblique Imagery

The *georeferenced ground positions of higher accuracy*, referred to generically as *QA/QC checkpoints*, were provided by LARIAC4 from multiple sources. Most checkpoints were X's painted on asphalt, accurately surveyed as control points, and used as *target points* by photogrammetric firms for aerial triangulation. Because these checkpoints are accurate, well defined and photo-identifiable on the airborne oblique imagery, Dewberry measured the x-, y- and z-coordinates on these checkpoints on each of the 4-view Pictometry images, where visible, to compute errors in Eastings (Δx), errors in Northings (Δy), and errors in elevations (Δz). For each checkpoint, Dewberry also averaged the Eastings, Northings and elevations for all views that were visible; for many, the average resulted from four views, but some points were obscured by buildings, trees, cars, etc., so the average resulted from the mean of three, two, and (in a few cases) only one view.

When coordinates were averaged from north-view, south-view, east-view, and west-view images, the averaged coordinates were normally more accurate than coordinates from individual views, as summarized with the following accuracy statements:

Accuracy of clearly-defined surveyed targets on Pictometry 4-view images with coordinates averaged from all views in which targets were visible and could be measured: **All-view averaged coordinates tested 2.04 ft horizontal accuracy at 95% confidence level**
All-view averaged coordinates tested 1.13 ft vertical accuracy at 95% confidence level.

These results are well within contract specifications for oblique imagery for the LARIAC4 Project.

OPERATING OPTIONS

The LARIAC4 Project is mainly about data products but it is important to note how the data can be viewed and what special software is included or can be used. For detailed information regarding hardware and software requirement, please see the LARIAC Product Guide (pages 20 to 23).

LARIAC4 product deliverable Index Files (identifying the tile grid, etc.) are provided in ESRI shapefile format. ArcView, or the free ArcExplorer and AccuGlobe applications, and most other GIS software can read the index shapefiles included with the data.

Other LARIAC4 Project reports (Horizontal and Vertical Accuracy, Aerial Triangulation, Geodetic Control, etc.) are provided in Adobe Acrobat (.PDF) file format. Other miscellaneous data tables can be opened and used with a word processing and/or spreadsheet application like Microsoft Word or Microsoft Excel.

Pictometry deliverables may also be accessed through Pictometry Online and the Connect (ConnectExplorer) platform. This is the preferred way to view and use the oblique data collected by Pictometry.

ACCESSING OR LOADING DATA

The following section refers to accessing and/or loading the LARIAC4 data. Most agencies are receiving their data on an external hard drive (provided this time through the LARIAC4 Project). See the original LARIAC Product Guide regarding Data Loading (pages 24 and 25).

2015 LARIAC4 Ortho Data Products Folder Structure
The following folder hierarchy details the folder structure for the LARIAC4 Ortho Data Products.
> **Folder Structure:**
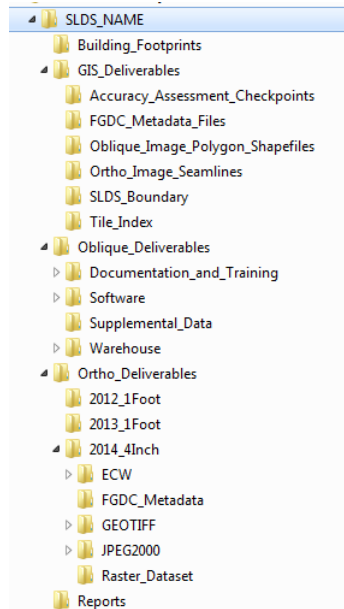
Oblique Imagery File Structure

See **Readme** delivered with oblique imagery data products for this information (included here as **Attachment 1**).

Orthophotography – Delivery Blocks, Tile Counts, Tile Grid and Tile Naming Convention

Delivery Blocks (AT Superblocks):

The LARIAC4 Project is divided into large blocks (formerly called delivery areas and sometimes referred to as AT Superblocks) and each area is divided into delivery tiles (the smallest grid for the project). Each tile represents an orthophoto tile. The size of the grid and tile counts are below:
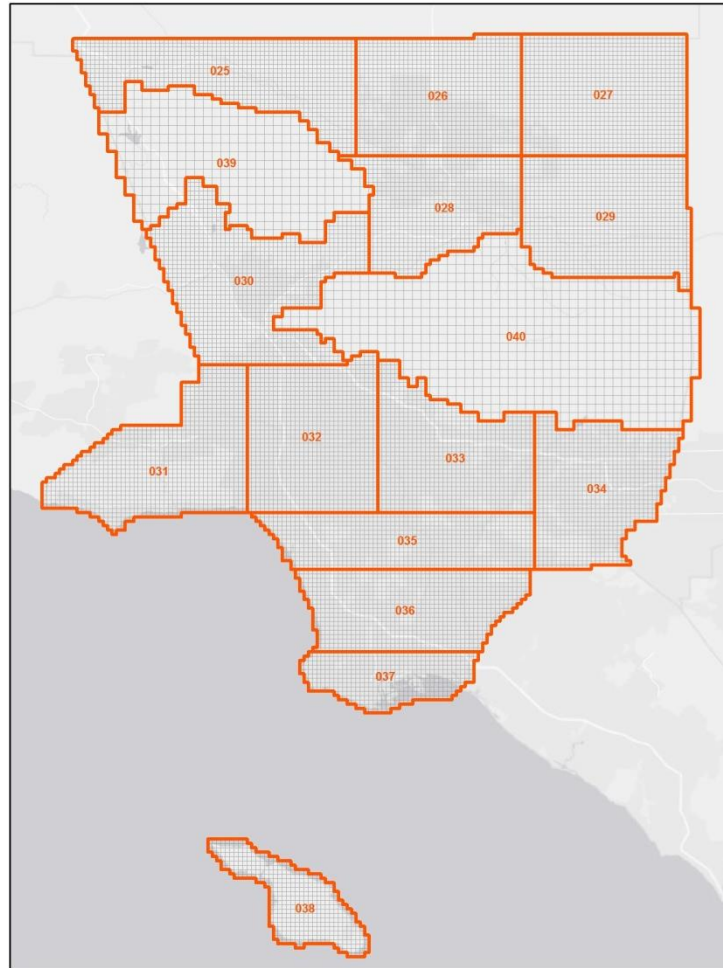
Map of project delivery blocks (ortho products)

Tile Counts:

12,302 tiles for 4" orthos and digital terrain datasets (Area 1 – urban)
1,080 tiles for 1' orthos and digital terrain datasets (Area 2 – national forests)
428 tiles for 4" orthos and digital terrain datasets (Area 3 – Santa Catalina Island)

Tile Grid:

Tiles for Area 1 and Area 3 – 0.25 sq. mile area, 0.5 mile length and width
(2,640 ft. x 2,640 ft.)
Tiles for Area 2 – 1 sq. mile area, 1 mile length and width
(5,280 ft. x 5,280 ft.) – Some tiles (along the edge of Area 1) are 2,640 ft. x 2,640 ft.
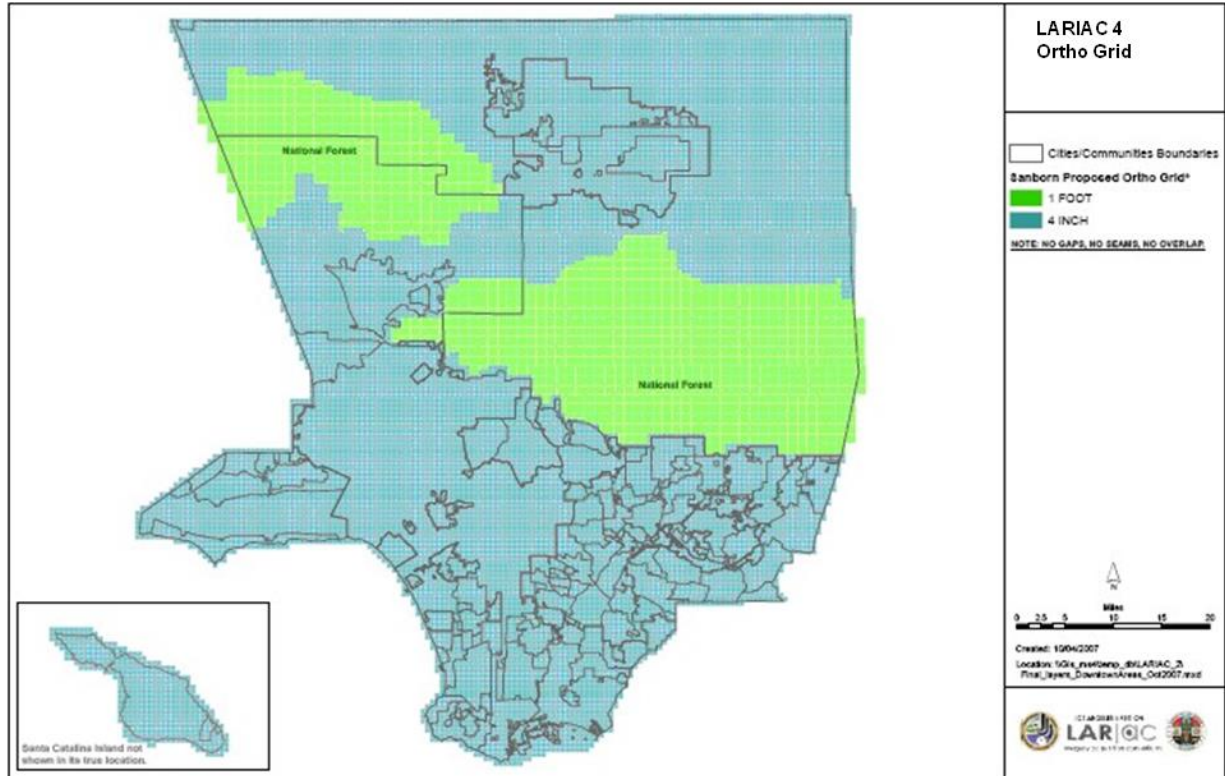
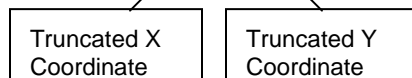*Map of tile grids (ortho delivery products).*

Tile Naming Convention – Tile ID:

In order to be able to work with the tiles, it is necessary to have a unique naming convention that uses a deterministic process to identify both the geographic location, as well as the type of data product and format. Each 1-foot tile name is a 12-character ID. The first three characters, "L4_", distinguish between LARIAC and LARIAC4 data files. The latter part of the name consists of a truncated X coordinate (first 4 digits) in thousands of feet, separated with an underscore from a truncated Y coordinate in thousands (last 4 digits). Each 4-inch tile name has an additional a, b, c, or d quadrant designation.
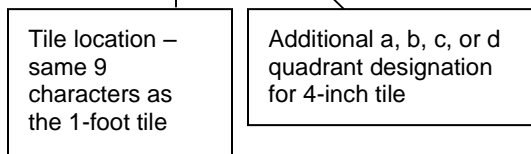
Examples: **1-foot tile**   **4-inch tile**

L4_6550_1762   L4_6550_1762a

| Truncated X Coordinate | Truncated Y Coordinate |

| Tile location – same 9 characters as the 1-foot tile | Additional a, b, c, or d quadrant designation for 4-inch tile |

Sample 4-inch tiles with the LARIAC4 tile grid and naming convention.

All of the core orthophotography files are identified by this tile number and a file extension that designates the files data file format (e.g. .tif or .jp2). For all of the other LARIAC4 data products, the 12-character ID is followed by a product type identifier (suffix). The file type (product) suffix starts with an underscore and is followed by a 2- or 3-character product type designation, consisting of:

_1	1-foot resampled ortho tile
_dem	digital elevation model data
_dtm	digital terrain model data

NOTE:

Following each file name is the file extension. The extension begins with a period and then a 3 (or more) character string designation of the data format (e.g., .dwg, .dgn, .shp, .xyz, etc.).

CREDITS - HOW TO CITE THE LARIAC4 DATA

The mapping products provided under the LARIAC4 Project are an important operative component to all consortium participants and have significant value. This value must be protected by all consortium participants and parties affiliated with LARIAC4 and its

contractors. When using the LARIAC4 datasets for public viewing, media or third party applications, Los Angeles County strongly encourages its LARIAC4 participants to properly cite the source of the data.

NOTE: Third party or "derived datasets" created from the LARIAC4 data are not subject to citation requirements.

Citing Pictometry Data (ortho products)
When citing the source of the Pictometry data please use one of the two following options:

Option 1 - Short Version:
> "This is a proprietary dataset provided courtesy of the Los Angeles Region Imagery Acquisition Consortium (LARIAC) and Pictometry International Corp."

Option 2 - Long Version:
> This is a proprietary dataset provided courtesy of the Los Angeles Region Imagery Acquisition Consortium (LARIAC) and Pictometry International Corp. Use other than what is allowable under license or by written permission from Pictometry International Corp. will be considered unauthorized and may be punishable by law.   Permission for external use may be given with written permission from Pictometry International Corp.

Citing Pictometry Imagery (oblique products)
When citing the Pictometry oblique imagery please use the following:
> "© Copyright 2014, Pictometry International"

Let Us Know How You Are Using the LARIAC4 Data
We want to know about your successes! The LARIAC4 Technical Advisory Group will be documenting how people are using the LARIAC4 products. This valuable information will help Los Angeles County present a strong business case to decision-makers for maintaining the County's geographic information systems (GIS) infrastructure. Please send a few sentences about how you are using the data to gis@planning.lacounty.gov.

LARIAC4 PROJECT HELP

For help using the LARIAC4 data products, users can contact:

Los Angeles County Chief Information Office
> Project Manager and Project Director – Mark Greninger, Associate CIO (County GIO) **mgreninger@cio.lacounty.gov** (213) 253-5624

Los Angeles County Department of Regional Planning – GIS Section
> Outreach Manager – Nick Franchino, GIS Manager
> **gis@planning.lacounty.gov** (213) 893-0881

LARIAC4 Project information can be found at the project Web site:
http://egis3.lacounty.gov/dataportal/lariac/

Data Quality Assurance and Distribution by:
Dewberry & Davis LLC
8401 Arlington Boulevard
Fairfax, VA 22031-4666
Phone: (703) 849-0396
DMaune@dewberry.com

Data Acquisition, Ortho Production, and Oblique Data Production by:
Pictometry International Corp.
100 Town Centre Drive, Suite A
Rochester, NY 14623
Phone   :(888)771-9714
mike.horan@pictometry.com

CITATIONS
All citations should reference the original LARIAC Product Guide (pages 34 and 35).

Readme

This document is provided to you through the Los Angeles Region Imagery Acquisition Consortium 4 (LARIAC4) Project. It provides you with the list of Pictometry software you have received with the oblique imagery delivery, as well as the LARIAC4 Project contact information. For detailed instructions on how to get started with your oblique imagery, please refer to the Oblique Image Library Instructions included in this document.

Pictometry Software Deliverables

- Electronic Field Study (EFS) 2.7 R1.19
- Configuration Editor 2.0 release 3
- Change Analysis 2.7 R1.19
- ArcGIS Extension
- ArcMap Script

LARIAC4 Project Contact Information

For help in using the LARIAC4 oblique imagery, users can contact:

Los Angeles County, Chief Information Office
   Project Director – Mark Greninger, Associate CIO (County GIO)
   mgreninger@cio.lacounty.gov (213) 253-5624

Los Angeles County, Department of Regional Planning – Outreach Manager
   Nick Franchino, GIS Manager
   gis@planning.lacounty.gov (213) 893-0881

Project information, can be found at the project Web site:
   http://egis3.lacounty.gov/dataportal/lariac/
Oblique Imagery Data Acquisition and Data Production by:
   Pictometry International Corp.
   100 Town Centre Drive, Suite A
   Rochester, NY 14623
   Phone: (888) 771-9714
   Scott.Martin@pictometry.com

Data Quality Assurance and Distribution by:
   Dewberry & Davis LLC
   8401 Arlington Boulevard
   Fairfax, VA 22031-4666
   Phone: (703) 849-0396
   **DMaune@dewberry.com**

ATTACHMENT 1

August 2015

WELCOME TO YOUR NEW IMAGE LIBRARY!

The hard drive you have been sent contains your new image library! This document is intended to familiarize you with the content of the delivery media, and describe required procedures to ensure you can quickly start using your new imagery.
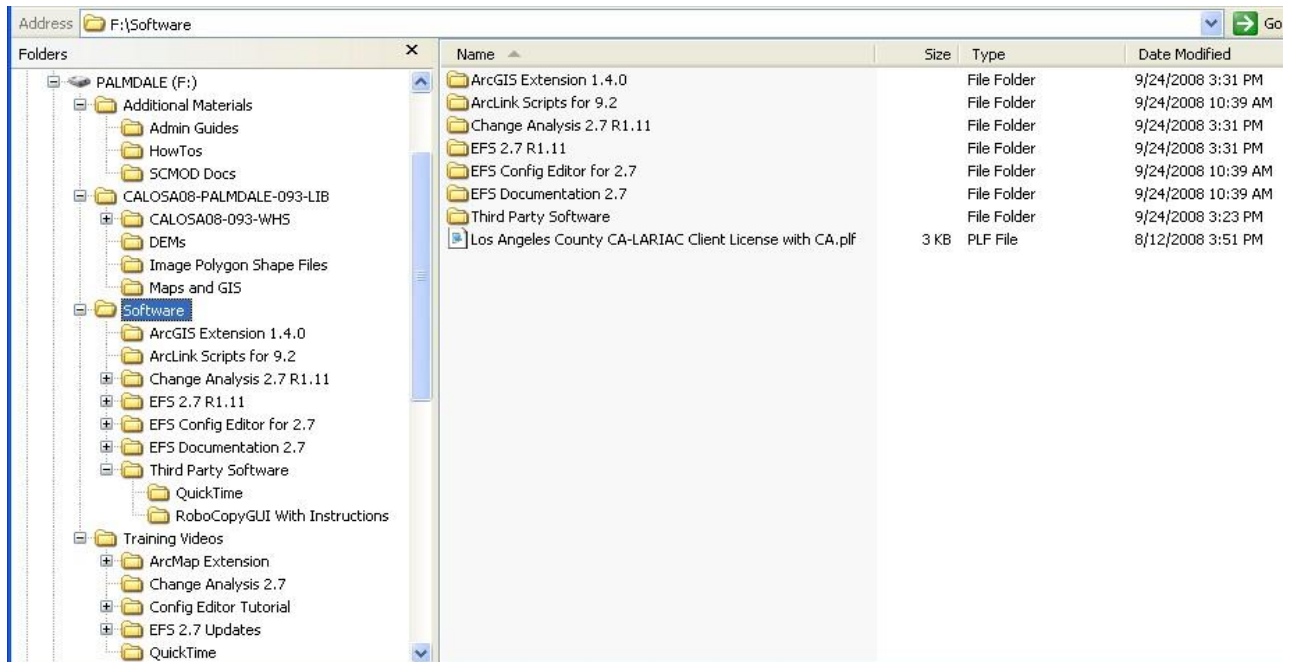
Distribution Media (Hard Drive)

The root of the Distribution Media contains:
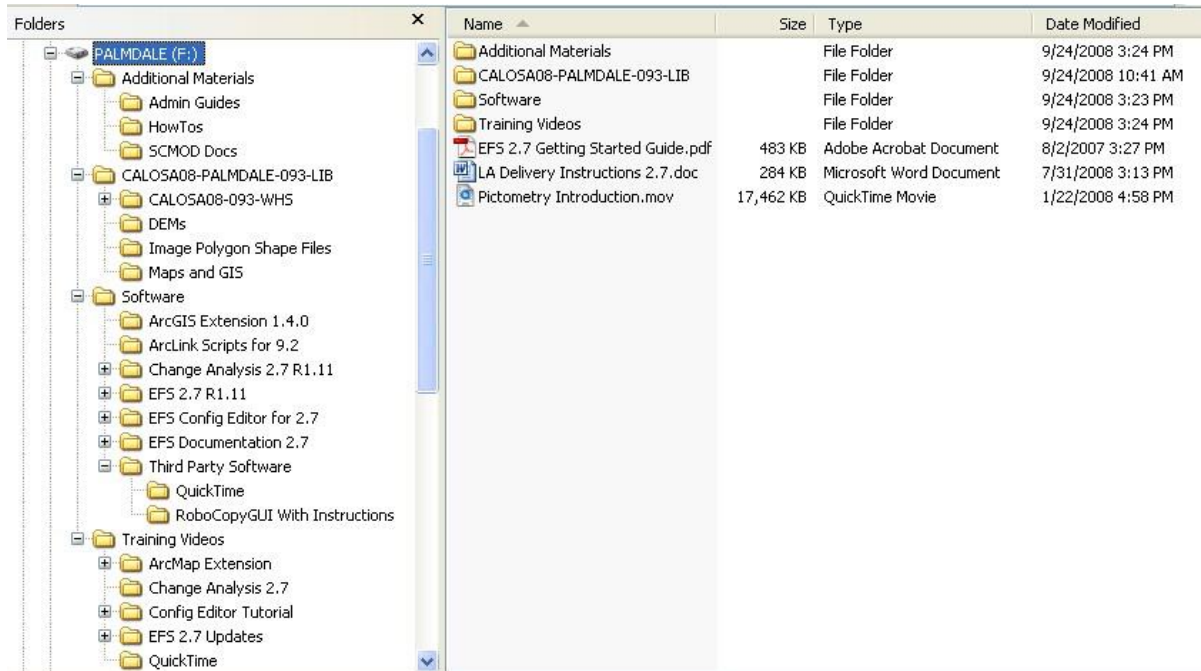
*Example of the contents at the root of the Distribution Media*

Software Folder
Image library (CALOSA08-ENTITYNAME-093-LIB) Folder
Additional Materials Folder
Training Videos Folder
Software Folder:

Example of the contents of the Software Folder

EFS 2.7 Installer Folder (*EFS 2.7*)
This is the latest release of EFS 2.7. EFS installation is required for accessing the image library.
Run Software>EFS 2.7 Rx.x>setup.exe to install.
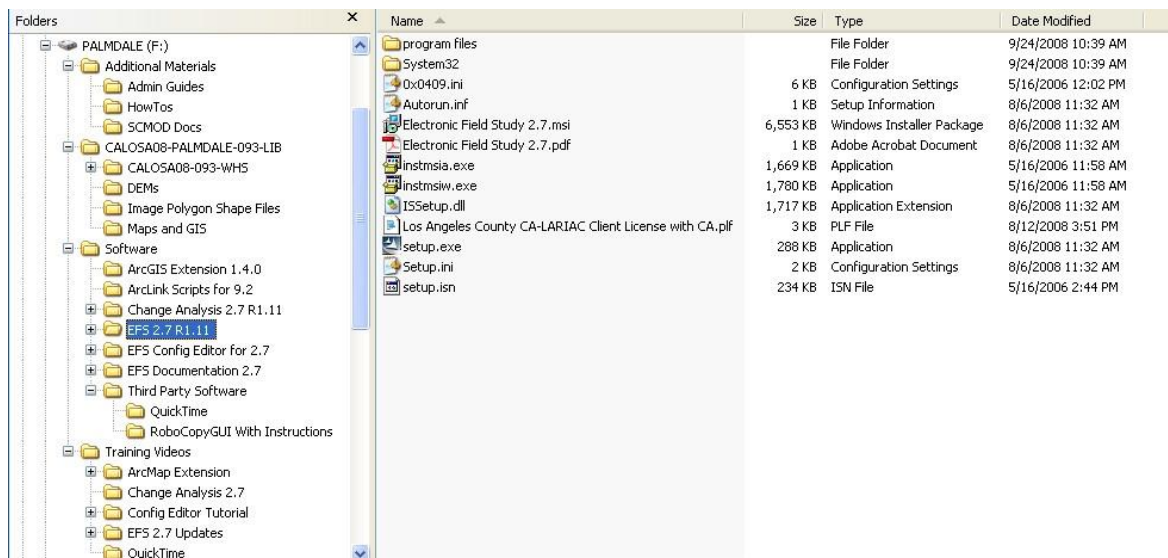
Example of the contents of the EFS 2.7 Installer Folder

EFS 2.7 Configuration Editor Utility
This utility program is for IT Administrators. (Please refer to the Configuration Admin Guide in
Additional Materials>Admin Guides>EFS System Admin Guide – Configuration Editor). This
utility will create Pictometry Configuration Files SPECIFIC to EFS 2.7 (.pcf) that IT Administrators
can use to install EFS without the need for additional configuration.

Change Analysis 2.7 Installer Folder (*Change Analysis 2.7*)
This is the latest release of Change Analysis 2.7. This application allows the user to compare two sets of imagery, usually from two different years of capture. Based on EFS, Change Analysis shares its capabilities and interface. Change Analysis installation is required for accessing the image library. Run Software>Change Analysis 2.7 Rx.x>setup.exe to install.

There can be a variety of other programs in the Software directory; these names often have a version number with them as well.

ArcGIS Extension: A "lite" front-end for accessing Pictometry imagery intelligently through a viewer interface in ArcMap.

ArcMap Script: Create a custom ArcMap tool to pass ArcMap coordinates to Electronic Field Study.

Training Videos Folder: Contains a variety of tutorial and how-to videos for various products.

Your "-LIB" Folder:

**Library** Folder **(CALOSA08-ENTITYNAME-093-LIB)**

Generally speaking, the Image Library needs to be copied to a network accessible location; all users of EFS will need read access to this directory. It contains your aerial imagery as well as starter workspaces, any GIS data supplied to us, base maps and image polygon shape files. This should be read-only for normal users. If you choose to have users access GIS data from the Maps and GIS directory in the image library, your GIS personnel will need write access to that directory to update their Shape files.
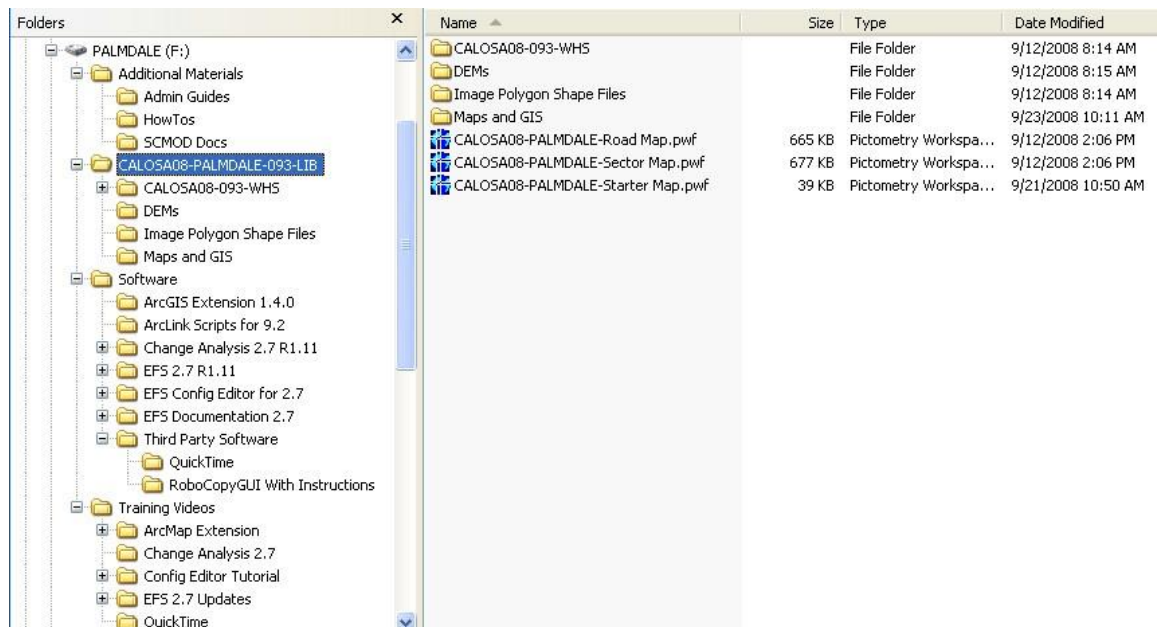
Example of the contents of the Library Folder

Additional Materials Folder:

Contains Training Handouts, a 'How To' folder of Documents and a SCMOD (touchscreen interface) document folder.
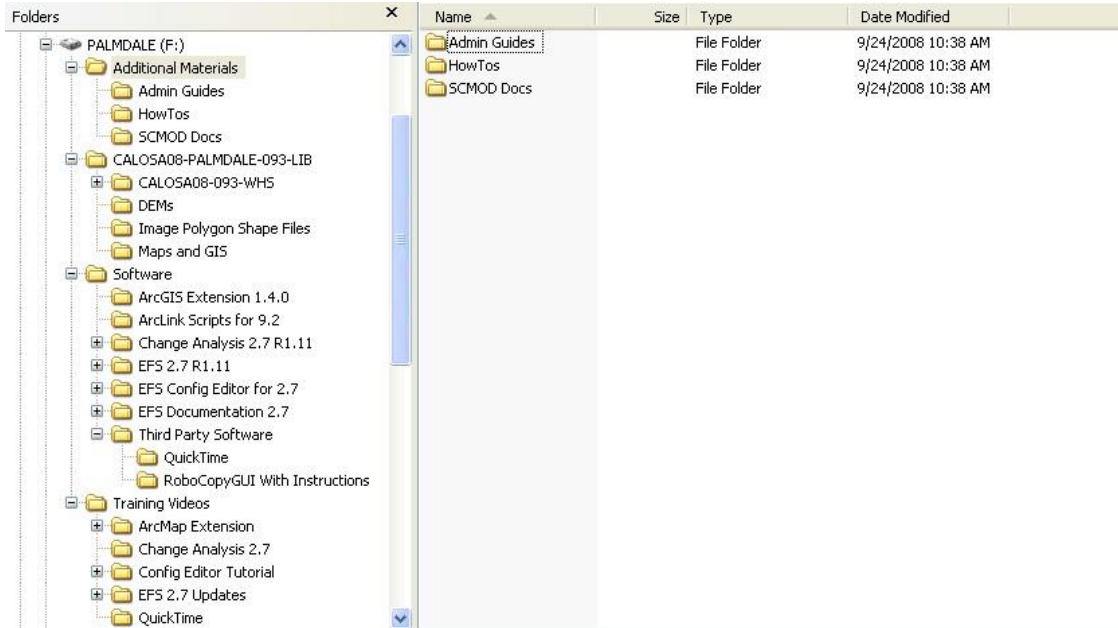
*Example of the contents of the Additional Materials Folder*

EFS Initial Configuration

Each newly installed copy of EFS software needs to be pointed to the Image Warehouse (***–WHS**) located within the Image Library folder. Each user on each workstation will need to do this unless a configuration file is used. (Please refer to the Configuration Admin Guide in Additional Materials>Admin Guides>EFS System Admin Guide – Configuration Editor).

Once EFS is installed:

Go to the **Navigate** menu and select **Image Tool Properties**.

Click on the **Add** button.
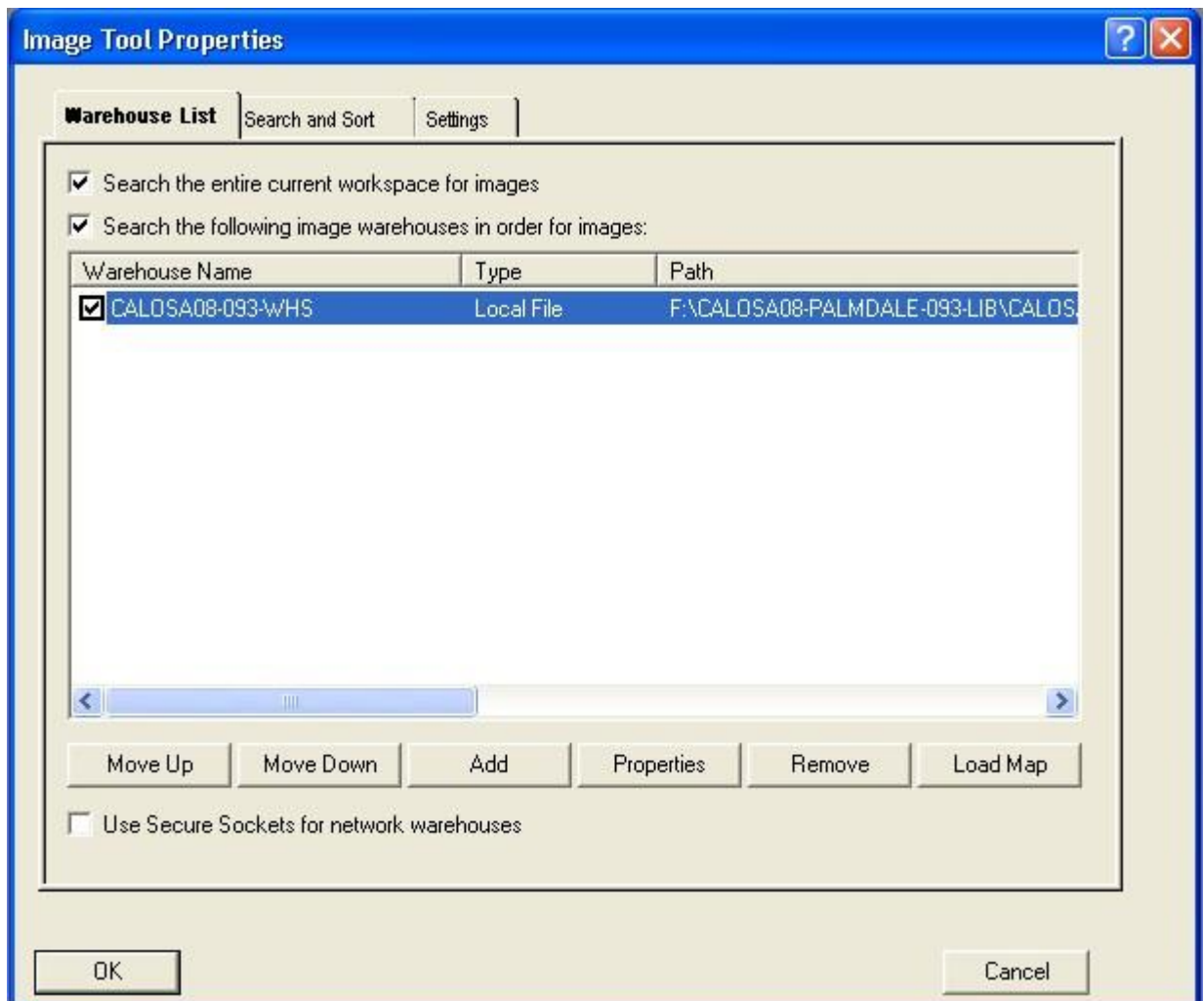
Example of Image Tool Properties dialog box

Click on the **Browse for Local File** button.

Note: 'Local File' refers to an Image Library located on an external hard drive, or a shared drive of a server residing on the Local Area Network, accessible via a mapped drive or UNC path.
'Network Warehouse' refers to an Image Library made available through Pictometry's Network Image Warehouse (NIW).
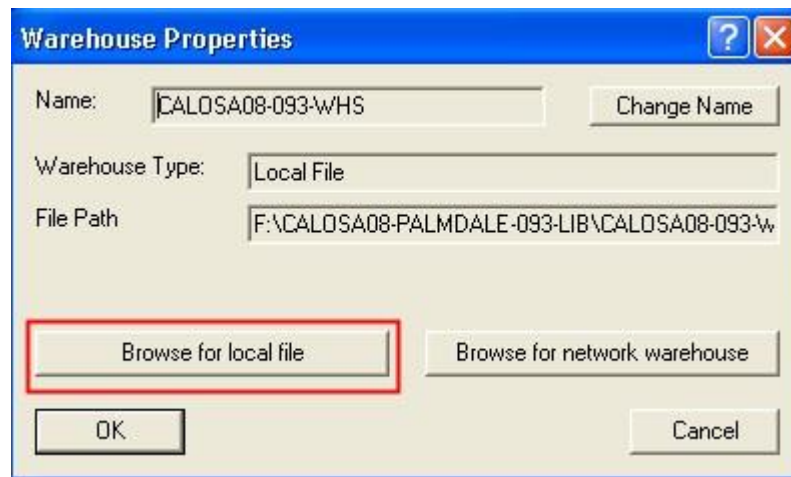
You will then need to browse to your ***–LIB**, open the ***–WHS** folder, and double-click (or open) the ***.PIW** file, which will be at the very **END** of the list. Click **OK** to go back to the Warehouse List tab.

There should now be a warehouse in the list. You can check/uncheck the box next to the warehouse name to turn it on/off. If it is on, its images will be displayed in the main image window and thumbnail window. More than one warehouse can be checked on.

If there are multiple warehouses (2008, 2006 and/or 2003 warehouses), the order in which they are listed will determine the images that will be displayed first (warehouses at the top of the list have priority over warehouses at the bottom). To reorder the warehouses, highlight one and click "Move Up" or "Move Down".

Click **OK** again, and EFS is now linked to the Image Warehouse(s).

Note: Please keep in mind that if the path to your Image Library changes, you will need to reconnect EFS to it. For this reason, we strongly recommend the use of UNC paths rather than mapped drives. It is our experience that these are more "futureproof" and robust than mapped drives unless there is a universal login script used to consistently map drives for *every single user.*

Configuring Starter Workspaces:

The paths to GIS data and base maps in workspaces are stored in the workspace, not based off of the Image Warehouse location. This means that since we did not know the path you and your users would be following from your workstations to the data, they are most likely wrong, since when we configured these files the drive was most likely local to our machine as D:\ or E:\

What this means is that when you open one of the supplied workspaces, *** Sector Map Workspace.pwf**, *** Road Map Workspace.pwf**, or *** Starter Workspace.pwf**, you may not see a base map, and the paths to GIS data may be wrong.

This will need to be fixed on each workspace in turn, so start with whichever you want.

Double click on the workspace, and it will open in EFS.

If you see a blank grey screen where you'd expect the base map to be, you need to click on the ⊞ symbol in the workspace to expand the workspace tree, and right click on the *.pmi base map and choose **Relocate *.pmi**.

Browse to your Maps and GIS folder inside your Image Library, and select that .pmi file.

Once you have relocated the file, you'll need to double click on it in the workspace tree to open it.

The procedure for relocating any GIS layers is exactly the same – right click on the layer in the workspace and choose **Relocate *** and browse to that file in the Maps and GIS directory, or anywhere else that you would rather access GIS data from.

Customer Support:

We are pleased to have you as a customer and look forward to working with you. Please don't hesitate to contact customer support with any issues you're having.

Sincerely,

Customer Support
Pictometry International
100 Town Centre Drive, Suite A
Rochester, NY   14623
888-771-9714 Toll Free
www.pictometry.com