IMAGING

Aerial Photographs

Tippi Flores: Photogrammetry Technician

Photogrammetry Products/Services

- Aerial Photography
- Digital Terrain Modeling
- Mosaics
- Mapping from Aerial Photography
- Photogrammetry Control
- Aerial photo archives

Photogrammetry Products/Services

- Rectified Images
- Scanned Images
- Enlarged Color/ BW Aerial Photos (electronic file only)

No, I don't do ALL of those things...

But I do research and deliver:

- Benchmark Information
- (here's a good place to go…)

  www.ngs.noaa.gov

Archival

- Aerial Photos
- Mosaics
- Maps

AND

Web Editor:

www.odot.state.or.us/tsgeometronicspub

Great resource for:

- LISCAD User Tips/Code Tables
- TCA Tech Tips
- Downloads
- Manuals/Documentation

Requesting Aerial Photos

Archived Photos

Requesting an Aerial Photo

Fax (503-986-3548) or E-mail an image or map of the area.

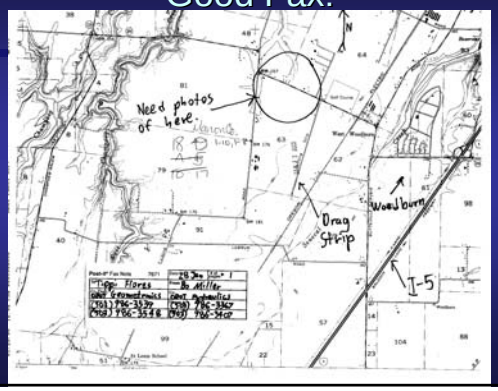
Include:

- Nearest Town
- Proximity to Nearest Highway
- Dates you are looking for (Ex: most recent, oldest, every 5 years, etc.)

Requesting an Aerial Photo

- Specific area
- If you do not have a map; Township, Range, Quarter Section, USGS Quad Name
- Level of detail desired

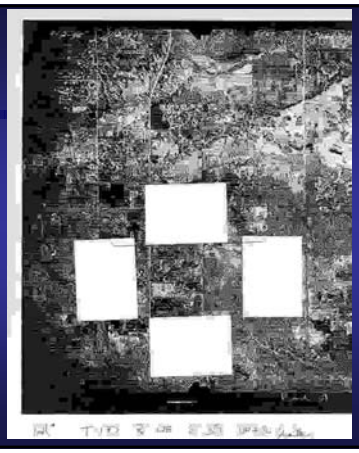
Good Fax:



Bad Fax:

Good Map:

Bad Fax:



Scanning:

- File types: .jpg unless another format specifically requested
- File Size: Maximum 32 MB. .jpg will compress to ~2 MB; will open at 32 MB

Image info:

Image Scale - A measure of the amount of detail displayed in a photo.

- Large scale: Shows small area with more detail

  Ex: 1”= 250’, 1:3000
- Small scale: Shows larger area, but less detail

  Ex: 1”= 2000’, 1:24000

Image Info:

- English Scale: 1”= 1000’
- Metric or Fractional Scale: 1:10000.

The metric scale is a direct ratio:

Ex: 1cm on the photo = 10,000 cm on the ground

Large Scale Photo: 1”= 250’

Small Scale Photo: 1”=2000’

Retrieving your Images

Images will be scanned and either:

- Placed on your share directory
- Placed on the ftp server at:

  ftp://ftp.odot.state.or.us/outgoing/geometronics

Retrieving your Images

1. Get on the internet and enter address in the address/location window

2. Scroll down until you see your file listed in text (I will e-mail you and let you know your file name)

Retrieving your Images

3. Open the file (the image will appear large, don't worry about this). Right click inside of the image and select "save image as…". Save onto your workstation.

4. Open Microsoft PhotoEditor (standard on all ODOT NT Machines). Open your file.

Retrieving your Images

5. Use PhotoEditor to manipulate and view your file.

(NOTE: Be sure to save your image immediately as files are deleted periodically)

Other methods

- Photo may be sent to reprographics for a high quality Xerox copy

(NOTE: an EA will be required for any request to Reprographics)

- Film can may be sent to Bergman for contact print or diapositive

($10 per print, $8 shipping)

Other methods

- If there are many photos required (an entire flight for example), they will be sent to Reprographics for scanning or photocopying.
- If we don't have coverage of your area, contact WAC at www.waccorp.com or Spencer Gross at www.sbgmaps.com.

Rectification

Rectification

Removal of distortion from photograph

- Distortion is caused by camera geometry, aircraft position and/or topography
- Rectified to create photos with map geometry (planimetric)

Rectification

- Rectification is a major project - requires control and digital terrain model
- Photos that are scanned in the office are not rectified

Rectification Accuracy

Different levels of accuracy may be achieved through various rectification methods:

- Based on camera properties in combination with average ground elevation
- USGS Digital Elevation Model - available by order on the internet

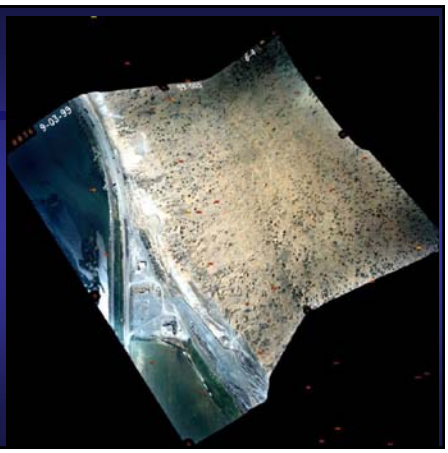
Rectification Accuracy

- Triangulated Terrain Network - InRoads Surface
- Highly detailed DTM (including buildings, trees, etc.)

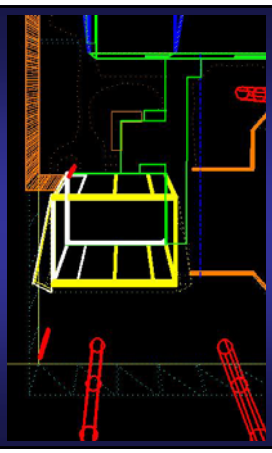
Original Photo

Modoc Landscape

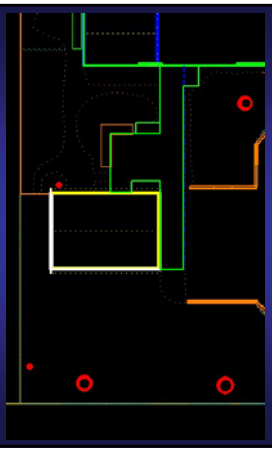
Rectified Photo



Home: Camera View



Home: Camera Removed



Control

Control

Control for aerial photographs:

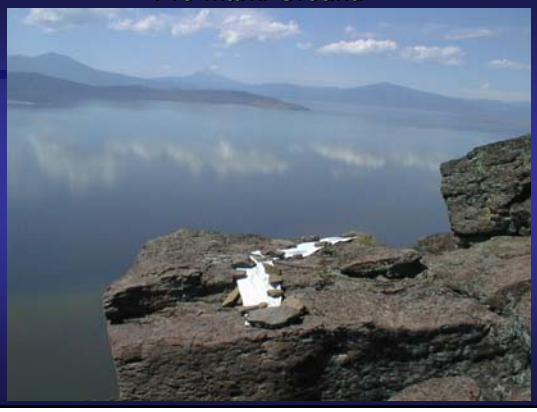
- Photo control pre-marks:

  Physical marks placed on the ground with white plastic, sheet rock or white paint.
- GPS or total stations are used to measure.

Control

- Features on existing maps (USGS Quads, for example) such as road intersections, may be used for control
- Existing benchmarks or monuments may be pre-marked.

Pre-Mark: Ground



Pre-Mark: Aerial photo

Contacts:

Benchmarks, aerial photos, maps, mosaics:
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