

Tip and Tilt

The following steps are used to determine if the camera angle (level) is within specifications. The tip and tilt of the camera at the instant of exposure shall not exceed 5 degrees from vertical.

1. Each flight line will be visually inspected for proper tip and tilt.
2. If there is a question of proper tip and tilt then diapositives of the photography will be set up on a Photogrammetric instrument to determine actual tip and tilt.
3. When the tip and tilt exceed specifications, the aerial photography coordinator will be notified, and a determination will be made to accept or reject the photography. If the photography is rejected, the location will be reflown.

Additionally, flight logs will be reviewed for notes taken by the photographer during the flight and film frames will be inspected for error codes produced by the camera.

***Sec. 5.14* Photogrammetry Quality Control Procedures**

This section is to be used by Virginia Department of Transportation (VDOT) personnel and consultants performing and providing Photogrammetric services for VDOT. It defines the appropriate and necessary procedures to follow for performing quality control/quality assurance checks on all products, data, and services provided by, and to, VDOT. The procedures outlined herein are to be explicitly followed during the development and delivery of all Photogrammetric products and services.

Additionally, the “Quality Control Checklist for Photogrammetric Surveys” outlined in Chapter 12 must be completed for all VDOT projects requiring Photogrammetry.

Project-Related Materials

All project related materials (flight/target maps, contact prints, diapositives, camera calibration report, control values, mapping scale, mapping units, mapping limits, scoping report, project specifications, adjoining project(s) and associated files, unusual circumstances, etc.) must be complete, and correct, and delivered to the internal or outsourced Photogrammetry unit performing the work. The VDOT Photogrammetry supervisor or manager will be responsible for validating the correctness and completeness of these materials. Each item must be verified by the manager or the supervisor as correct.

Prior to project start-up by the Photogrammetry unit, all diapositives are to be randomly checked to determine if any warping has occurred during the processing stage. A sample of 10%-15% of every project’s diapositives is to have the interior orientations measured on an analytic or softcopy Photogrammetric instrument. Interior orientation values at each fiducial must be 20 microns or less. Any value exceeding 20 microns must be brought to the attention of the shift supervisor, and a determination will be made to accept or reject the measurement and/or