

must be reviewed for completeness. DTM file checks will include verifying invert elevations, random spot heights, and miscellaneous other features for horizontal and vertical accuracy and completeness. Field profiles may also be run to provide additional quality checks.

### **Sec. 5.13 Aerial Photography Quality Control Procedures**

This section is to be used by all Virginia Department of Transportation (VDOT) personnel and consultants performing and providing aerial photography 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 of all aerial photography data.

#### **Film processing**

The following steps will be taken to assure the quality of the film and film processing methods used by VDOT and contractors. In all cases it is expected that the film and film-processor manufacturer's instructions and recommendations will be strictly followed for proper processing procedures and equipment maintenance. The film shall be free of scratches, static marks or other blemishes. It shall be exposed and processed with a density range of 1.0 +/- 0.2 with a minimum density of 0.3 +/- 0.1 above base fog. Base fog shall not exceed 0.15. All fiducial marks shall be sharp and clear.

1. Each roll of film will be inspected visually for image quality.
2. If there is a question as to image quality, then density readings will be taken of the affected exposures with a calibrated densitometer with a 0-3.0 range.
3. When the image quality does not meet standards, the aerial photography coordinator<sup>◊</sup> 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.

#### **Flight lines**

The following steps are used to determine whether the photography was taken at the correct location and if atmospheric conditions were suitable for the project. Each flight line shall be flown continuously across the project area. No actual flight line shall deviate horizontally from the specified flight line by more than 10 percent of the specified flight height.

1. Each flight line will be inspected visually to determine if the photography falls on the photo line and to insure that the desired area is covered.
2. Each flight line will be inspected visually for excessive haze, shadows, clouds and snow cover.
3. When the photo location and/or coverage area do not meet standards or if the atmospheric conditions were unsuitable at the time of photography, 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.

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<sup>◊</sup> April 2014