Digitization of data-layers using high-resolution satellite imagery

The high-resolution imagery will be the sole basis for identification and digitization of intended features (e.g., building footprint, road network) through visual inspection and a manual digitization process by a person having proficiency in GIS within a GIS based software. A proprietary GIS software ArcGIS or an open-source software QGIS (www.qgis.org) can be utilized for the process of digitization of the data layers. During the digitization process, it is necessary to ensure that the digitized data is free from any topological errors and maintains geometrical requirements (e.g., right angle maintained for building outlines) that are needed to accurately represent the physical structure in the digital realm. During the process, a strict quality mechanism must be adopted such that digitized features are free from any errors. Topological errors (silver lines, over-shoot, under-shoot, cross breaks, and dangling objects) in case of road features and overlapping polygons, silver & dangles of polygon features must be carefully checked. In addition, it must be ensured that no features visible in the imagery are missed during the digitizing process. It is recommended that error checking is done by a person not involved in the digitation process to guarantee high accuracy and reliability of digitized data.

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