

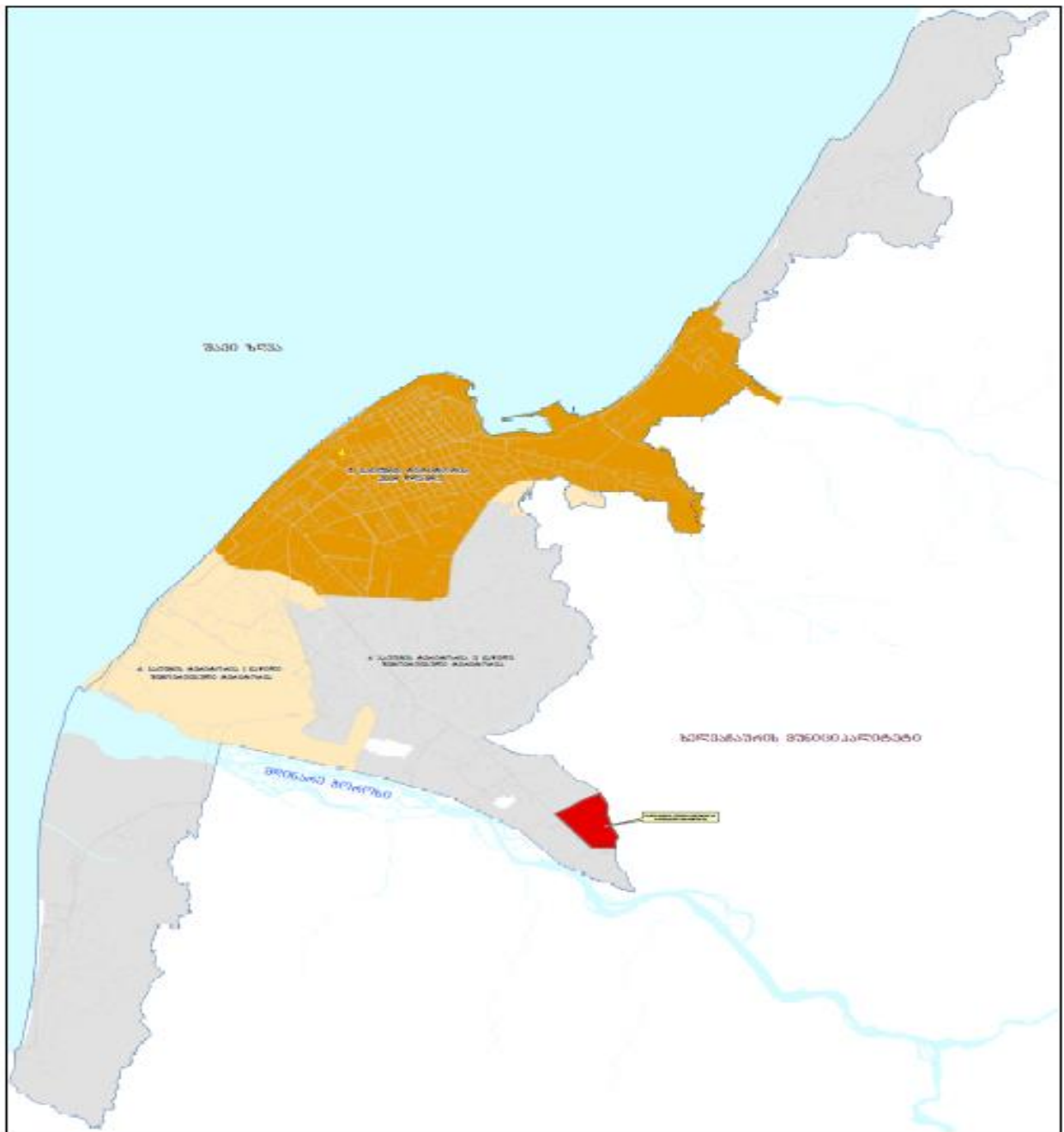
Specification

1.1 Requirements for the service

This section lists the requirements for the implementation of the urban model.

1.2 Assignment Description

The purpose of performing is to production and delivery of one photorealistic 3D urban model across the municipality of the city and a surrounding edge zone, a total of about 65 square kilometer. See map. (Vector files is attached in documentation).



Map 1

1.3 Specification of delivery Reference

system in plan:

Global System – WGS84 / UTM Zone 38N – EPSG:32638 Supplementary

specification of delivery:

Delivery shall be via hard drive.

The performer shall keep raw data for five years from the photography date and deliver to the customer upon demand.

Delivery format of the 3D model must be compatible to one of the following formats per the customer predefinition (for example):

1. ESRI i3s scene database: ESRI Indexed 3d Scene format for ArcGIS Scene Service packaged as a single SLPK.
2. 3D model in Cesium 3D Tiles format.

Each format must support entire LOD structure (LOD across Tiles).

In a case of more than one file/library for the whole city, index map must be delivered with the description of which part is covered by each file.

Description of how data is assembled should be delivered in text format, such as json, xml or corresponding.

1.4 Functional requirements for imagery and urban model

The finished model consists of a 3D mesh model with a draped photo textures. The 3D Mesh model should be in full 3D, ie, as far as possible, to look under tree crowns, viaducts and bridges. Tunnel coins should, as far as possible, be modeled so that you can look into tunnel and it is perceived as a tunnel. Sharp and clear angles in the house land connections and roof shapes should exist. Reduce floating objects to its minimum.

The model should be a continuous network covering all objects such as land, , vegetation, buildings, bridges, facilities and other details. Water surfaces may be replaced by a surface with texture like perceived as a water surface. The surface should be at the same height as replaced water surface.

The TIN model should be optimized so that it is detailed where needed, while flat surfaces should have so few triangles as possible.

The photo textures dragged over the TIN model should be uniform and perceived as the reality strain and include all details such as land, vegetation, facades, ceilings, bridges and other details.

The geometrical resolution of the images should be 5 cm or better at least 90% of area. No joints or transitions between the images should be visible in the model as it may be perceived as images with different resolution, brightness, contrast and color scale are added next to each other.

Textures should have natural colors with minimum saturation for bright or dark color.

1.5 Delivery

Data should be delivered on a removable hard drive.

Data should be supplied in the following reference system –

WGS84 / UTM Zone 38N – EPSG:32638A final report should be provided containing documentation and a statement of the work performed as well as metadata about delivered files.