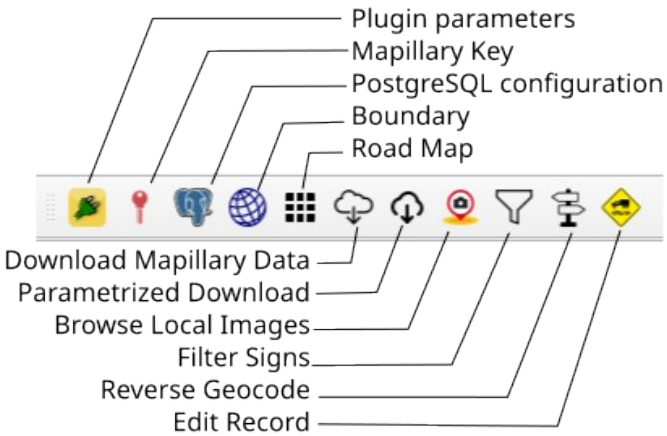
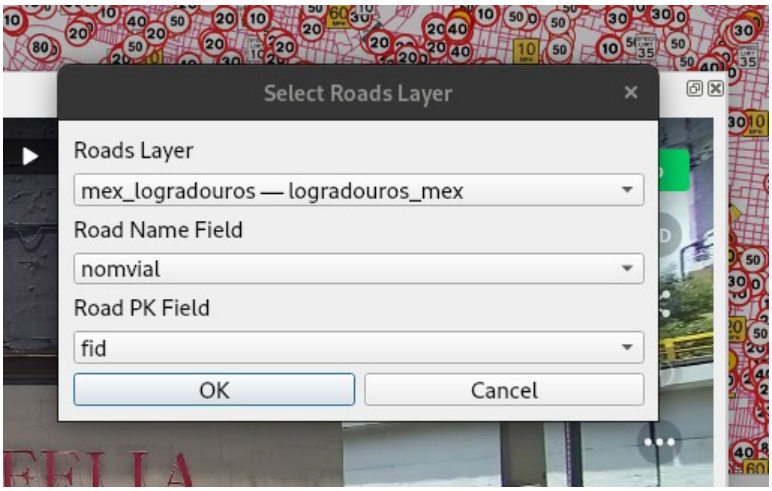
Road Signs Database 4.0.0

A QGIS Plugin to manage traffic signage
by Tiago Barufi

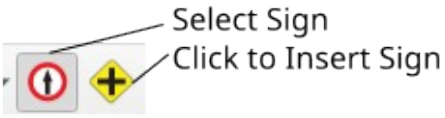
The Plugin Toolbar



The main functions are provided from the plugin toolbar. Each button launches a dialog or a tab to its tool or configuration interface.
The Mapillary key is needed when working with Mapillary images and signs databases. Once downloaded from Mapillary, the signs can be updated from Mapillary API and can be locally modified as well.
PostgreSQL String frmat: host=<host_address> password=<password> user=<user> dbname=<database name> table_name=<table_name>
PostgreSQL is optional. If not provided, a geopackage file will be generated in the project directory, and it can be edited as usual. However, for larger datasets as of any major urban area, performance will be slightly degraded.
A boundary layer must be present in the project. If only one geospatial layer of polygon or multipolygon is provided, it will be automatically chosen. The boundary will limit the region to be queried on Mapillary API.
The Road Map must be chosen from a linestring or multilinestring geospatial layer in the project. A dialog provides its proper configuration:



Tool Selector

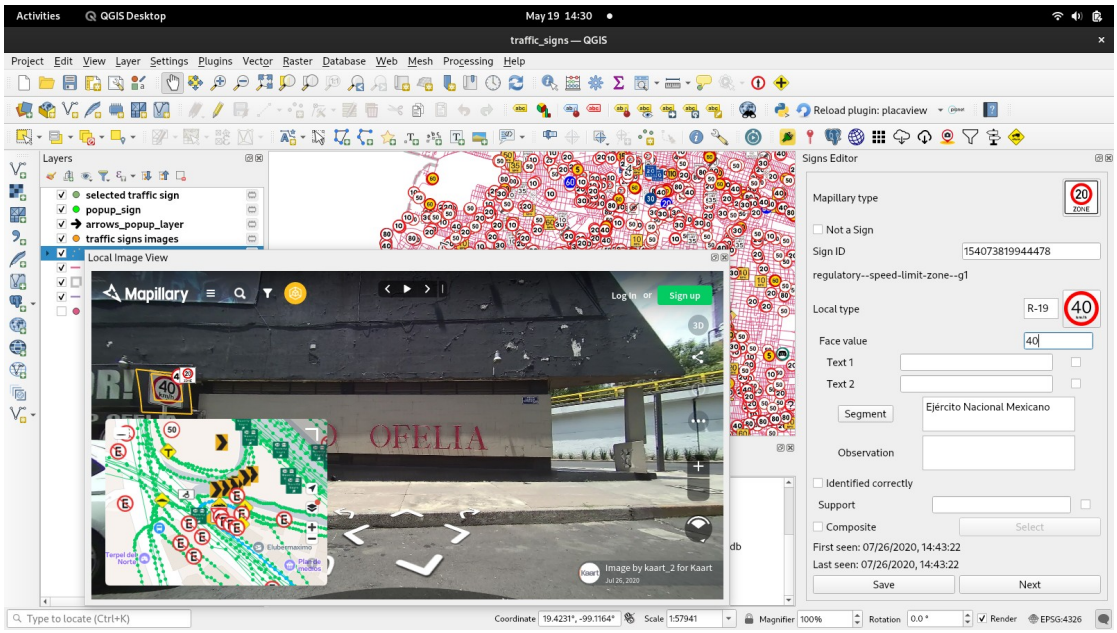


Plugin parameters

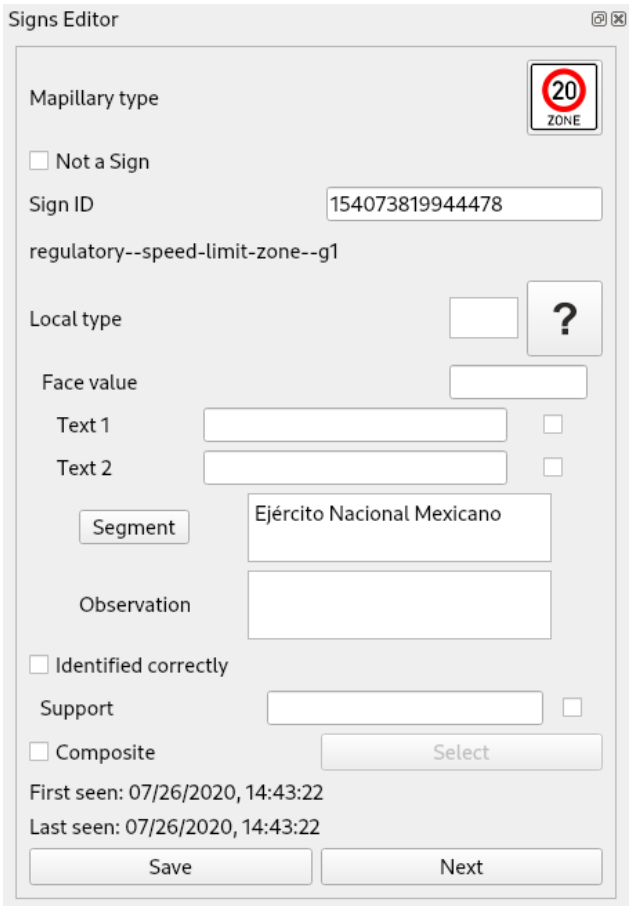
Navigate: switch between mapillary images used to capture the signage
Road and boundary: shows the project configuration
Images source: alternate between Street View and Mapillary
Interval: the chosen time span to be displayed

Plugin Workflow

The form contains the record’s mapillary information (value, ID, first seen and last seen dates) along the information determined by the traffic sign definitions.

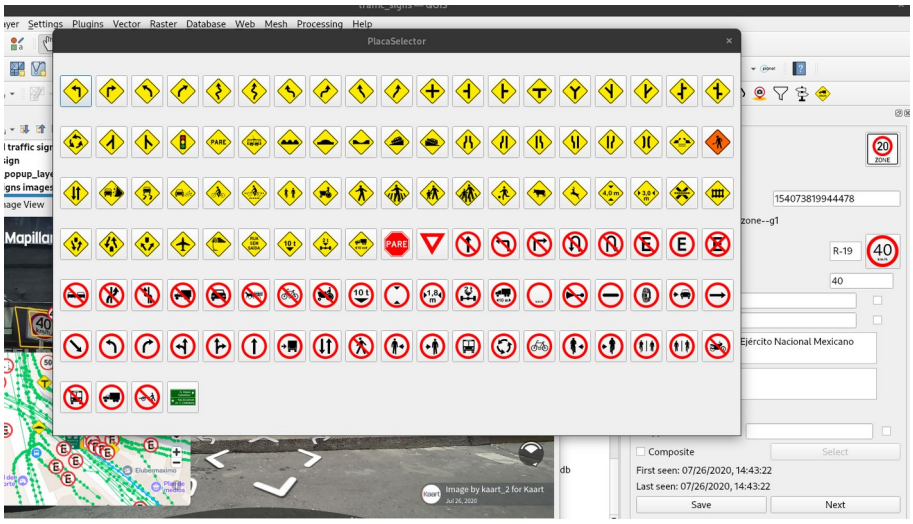


The fields



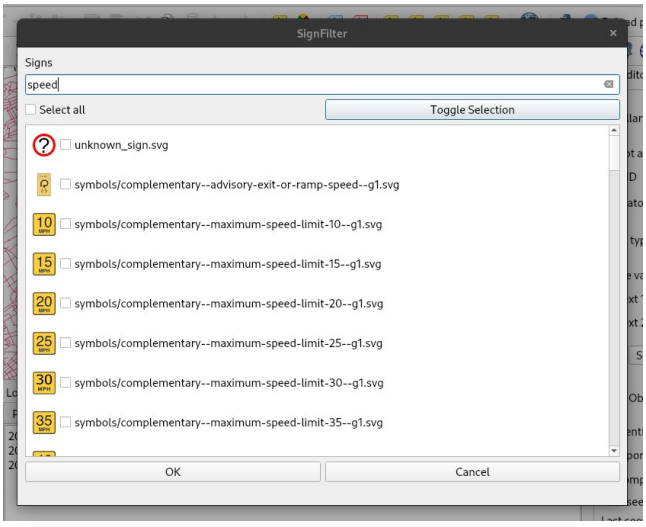
The fields include text completions specified to the sign.

Sign Type Dialog



The signs are defined as a code chosen among the standards for each city. A face value must be provided for signage that requires it – as in max headrom, weight limit and maximum speeds.

Filtering



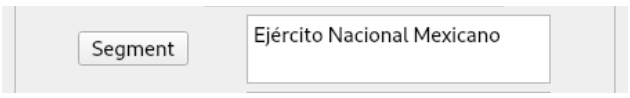
The filering is done using the mapillary value and also the assigned code.

Geocoding

The reverse geocoding is performed with the road map configured in the project. Once the road map and its fields are determined, the correpondence between segments and signs is obtained via a nearest neighbour evaluation.

The chosen segment is attributed to each record.

The edition form shows the name of the segment:



The “Segment” button activates a tool which detects the segment clicked in the map, and attributes it to the sign being edited.