Mapping points of interest in Santa Clara County, California (Silicon Valley)

Santa Clara County and the real Silicon Valley

Santa Clara County, California, is the 18th most populous county in the United States. Home to Silicon Valley and one of the largest local economies in the United States, it is an important barometer for OpenStreetMap's suitability as a data source. People literally check the quality of the map in San José and assume the whole world has similar coverage.

This area is much more diverse than the Silicon Valley one sees on TV: English is not the first language of most residents. Restaurants along El Camino Real serve Afghan to Vietnamese cuisine and everything in between. People live in trailers without utilities, parked right in front of multimillion-dollar houses. There are large, historically underserved neighborhoods where lower incomes, language barriers, and lower rates of broadband Internet adoption present challenges to OSM adoption.

Volunteer mappers in Google's backyard

Silicon Valley is literally the capital of proprietary mapping, but it is also home to a small but growing group of volunteer mappers. Several of us meet regularly at meetups hosted by Code for San José, a local nonprofit dedicated to making technology work better for the whole community. We plan projects to efficiently improve OSM's coverage of our area. We also evangelize the project to members of the public who are accustomed to proprietary maps.
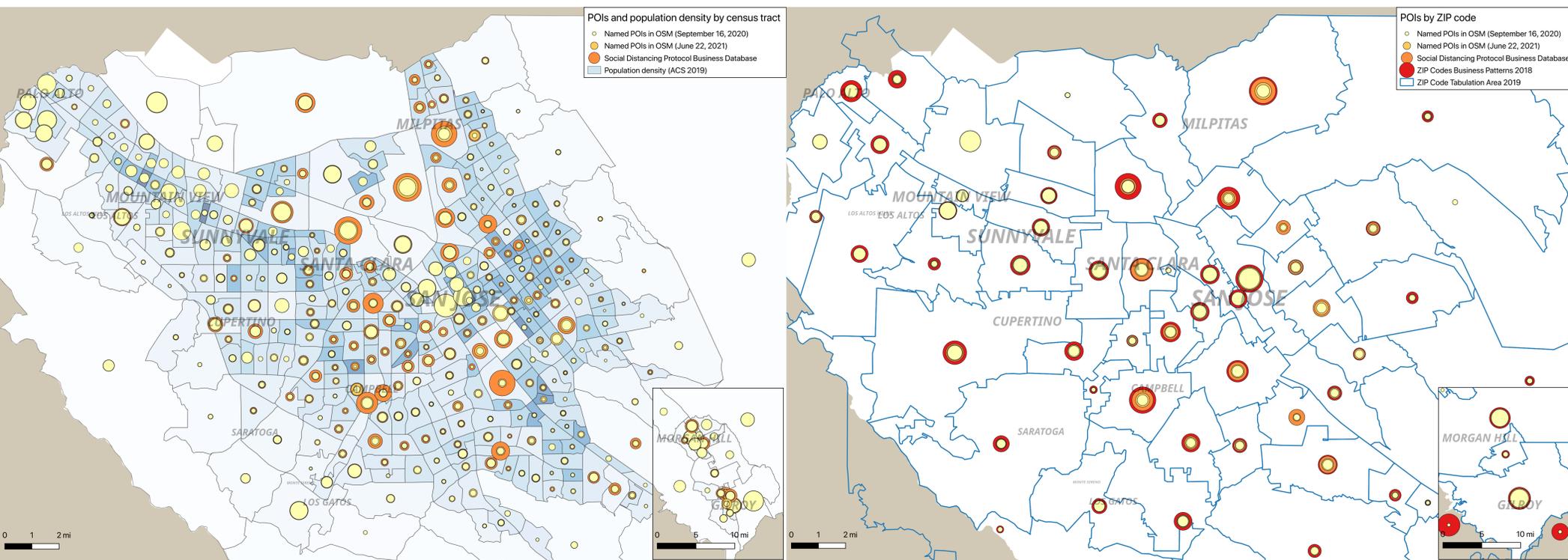
Points of interest

Complete and balanced coverage of points of interest – businesses and other searchable destinations – is important for credibility and attracting mappers and users. For years, we have collected POIs mostly organically, through an ad-hoc combination of field surveys, local knowledge, and armchair mapping from street-level imagery. It is a monumental task for a relatively small number of volunteers.

In November 2020, Code for San José volunteers began meticulously importing and updating POIs throughout the county, focusing on neighborhoods and POI categories that previously had relatively sparse coverage. As of June 2021, the project is 16% complete.

Are we there yet?

The maps below compare OSM's POI coverage before and during the import to two government datasets. The Social Distancing Protocol Business Database, our POI import's primary source, was crowdsourced from business owners as a condition of reopening during the COVID-19 pandemic. ZIP Codes Business Patterns is based on a pre-pandemic census of businesses conducted by mail.

Using these benchmarks, we gauge our progress and identify areas for improvement. Each set of concentric circles represents actual and expected POI counts within a census tract or ZIP code. As OSM coverage of POIs increases in the neighborhood, the lighter inner circle grows to the size of the darker outer circle.

POIs and population density by census tract
- Named POIs in OSM (September 16, 2020)
- Named POIs in OSM (June 22, 2021)
- Social Distancing Protocol Business Database
- Population density (ACS 2019)

POIs by ZIP code
- Named POIs in OSM (September 16, 2020)
- Named POIs in OSM (June 22, 2021)
- Social Distancing Protocol Business Database
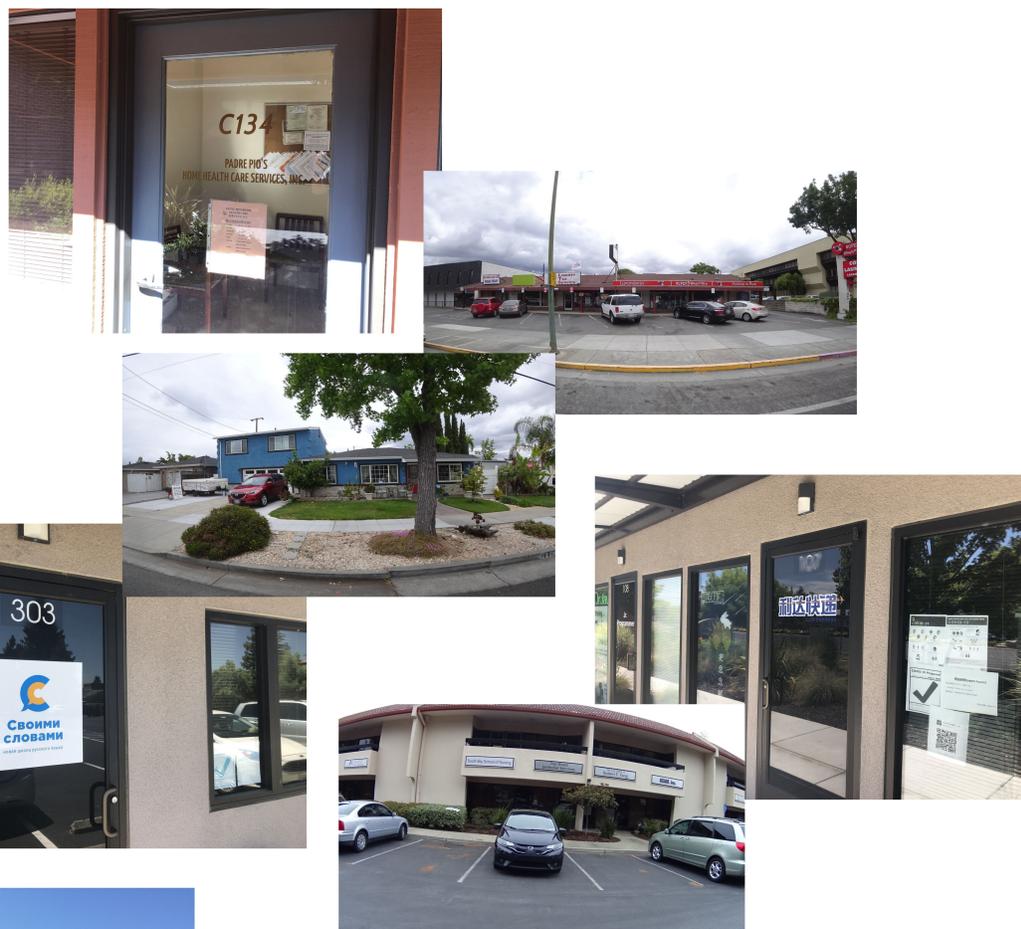- ZIP Codes Business Patterns 2018
- ZIP Code Tabulation Area 2019

No business left behind

Our POI import is no automated import. We are managing the project in MapRoulette, with one POI per task, taking particular care to tag each POI correctly and place it over the correct unit in the building, when possible. On average, each POI has gotten more robust individual attention than it probably would've gotten if we had systematically mapped the businesses from street-level imagery alone.

Below and to the right are just a few examples of businesses that are exclusive to OSM – not found in any proprietary map – thanks to our attention to detail. Some businesses have signs so small that an automated approach would not detect them. In many ethnic enclaves, signs are exclusively in a non-Latin script, requiring manual attention. Some businesses are only visible to pedestrians; others are so remote that they must be surveyed by car.

Not every POI can be mapped. A house church may not welcome members of the general public. A home-based childcare provider or a shelter for domestic abuse survivors normally hides its exact address. We have omitted these POIs to protect their privacy and safety.

Please help! Get started at
maproulette.org/browse/projects/42122