

REALITY



Faced with inadequate data to plan, San Francisco counts its parking spaces and finds benefits in many areas.

By Jay Primus

The San Francisco Municipal Transportation Agency (SFMTA) manages San Francisco's parking, but for many years couldn't answer a simple question: how many parking spaces are there in the city? We weren't alone; to the best of our knowledge, no other major city can accurately answer this question. You can't manage what you can't measure, and measuring is an easy step for cities to take toward better managing parking supply and demand.

SFpark was a demonstration of a new approach to managing parking, and in preparation for that pilot project, the SFMTA collected comprehensive data about San Francisco's publicly available parking supply, both on- and off-street, including existing parking regulations. As a result of the census, for the first time, the SFMTA has detailed information about the city's publicly available parking supply, and while that data are critical for the planning, implementation, and evaluation of the *SFpark* pilot project, they also have broad utility for other types of projects and analyses.

Reasons for a Census

It's difficult to overstate the importance of having accurate data about existing parking supply and regulations. Until its supply data were assembled, the SFMTA suffered from its absence. For example, during *SFpark* pilot project planning, early estimates of the number of parking sensors and meters in pilot areas were too low because the project team did not have ready access

to accurate parking supply data. Project planning and procurements were not as precise as they could have been had accurate supply data been available at the beginning of the project.

Accurate parking census data was also critical for implementing and operating *SFpark*. Final detailed implementation planning for the pilot project equipment, such as the installation of parking sensors and meters, could only be completed if organizers knew how many metered on-street parking spaces were in each pilot area and what regulations governed each space.

In San Francisco, as in many cities, regulations that apply to on-street spaces are often complex. This is particularly true downtown, where a parking space might be part of a metered commercial loading zone during morning hours, a general metered parking zone during afternoon hours, a peak-period, tow-away, no-stopping zone between 4 and 6 p.m., and an unmetered passenger loading zone in the evening. San Francisco has hundreds of parking meter configurations. Having an accurate

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inventory of the regulations for each metered space was necessary to establish an automated database instead of adopting a manual approach to tracking, updating, and managing meter configuration data with parking meter vendors.

Conducting the Census

Gathering citywide parking supply data took place during six years starting in the summer of 2008, with regulatory data continually updated and expanded beginning in 2009. The SFMTA gathered data for metered and off-street parking supply in 2008 and 2009, as well as a random sample of 30 percent of unmetered blocks in the city. The SFMTA finished counting legal unmetered on-street parking spaces on all city blocks in early 2014.

The data collection effort surveyed all of San Francisco's publicly available parking supply, including on-street (metered and unmetered) and publicly available off-street garages and lots (private residential parking spaces were not counted). This effort included:

- Translating existing documents (such as the city assessor's parking tax records to determine the initial list of parking garages and lots) into the geographic information systems (GIS) database used to assemble the data.
- Reconciling different parking-related databases within the SFMTA.
- Extensive field surveys and site visits.
- Entering the data into a database.

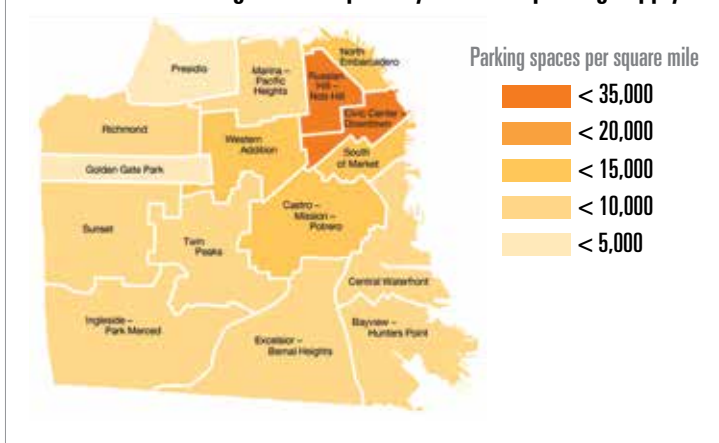


Metered spaces	Number of spaces	Types of Parking
• General metered	2,501-9,000	• General paid parking
• Commercial loading	1,501-2,500	• Permit holders only
• Short term parking	501-1,500	• Customer parking only
• Motorcycle parking	101-500	○ SFMTA-managed
• Disabled parking (unmetered)	26-100	
	4-25	

The work was done primarily by interns and subcontractors (approximately 3,000 person hours) and led by SFpark team members who assembled the database.



San Francisco neighborhood publicly available parking supply



Census Data Use

Parking census data are important not just for parking management but also to provide vital information for many other current and future SFMTA and city projects and policies. To maximize the benefit of this parking data, the SFMTA shared it via datasf.org and *SFpark*.org. Its benefits and uses include:

- **Knowing the parking supply.** The *SFpark* project team recently produced a map of the parking supply around a proposed bus rapid transit (BRT) corridor on Geary Boulevard. Instead of needing to hire consultants to gather the data and produce parking supply maps on an ad-hoc, project-by-project basis, the SFMTA already had all parking supply data for the corridor on hand and could simply and quickly produce the maps. The SFMTA, other city agencies, and others working in San Francisco can rapidly assess existing parking supply when planning and implementing similar projects.
- **Sharing parking information.** Another benefit of having and sharing this parking data is that it can be the basis of new privately developed web and mobile applications and other tools not yet imagined. The SFMTA and the people it serves will benefit as a result.
- **Enabling better demand management for existing parking.** Accurate parking supply data help the SFMTA and the city think more strategically about where and



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how to use transportation demand management (TDM) strategies and identify where there are opportunities for shared parking.

- **Supporting policy decisions.** Accurate data about parking supply inform civic conversations about parking, including decisions about where to build new parking facilities or the effect on the overall parking supply in a neighborhood if some parking spaces are re-used for other purposes (dedicating some on-street spaces to make room for a bicycle lane or redeveloping a parking lot into housing or a park).
- **Enabling management of parking supply, not just demand.** Perhaps the most important use, knowing the parking supply enables the SFMTA and the City of San Francisco to not just manage parking demand via *SFpark*, but also to set policies and goals related to the overall parking supply. In other words, by measuring supply, the City of San Francisco is now in a position to manage it, which is important because parking supply (and its fundamental relation to parking prices and demand) is a large determinant in how people in San Francisco and the region choose to make their trips (i.e., by car or transit).

Next Steps

Moving forward, there are several challenges related to the parking census, including:

- **Keeping the data current.** The SFMTA is working to expand the data set and improve the tools and internal processes used to keep it up to date. This has highlighted the necessity and opportunity to streamline internal business processes to improve how the constant small changes to parking data, from legislation to implementation on the street, are tracked and captured in the *SFpark* system.
- **Capturing temporary changes in parking supply.** Parking spaces are often temporarily closed for construction projects, parades, and other situations or events. The SFMTA is attempting to increase the percentage of those types of events that are captured in the *SFpark* system. This is important for providing real-time parking space availability data because ideally, the data would not indicate that a particular block has open parking spaces when in fact those spaces are temporarily closed for a construction project or special event. Besides improving the accuracy of the real-time data feed, capturing temporary parking space closure data allows evaluation and analysis to be more precise.
- **Estimating the number of private parking spaces.** The first priority for project planning and evaluation was information about the publicly available parking supply, but it will also be useful to have data on the city's private parking supply (private residential or commercial parking). The *SFpark* team has developed a methodology it will use to develop an accurate estimate of the private parking supply; gathering this data and making this estimate will be the next phase of the parking census. P