SFpark

Disabled Placard/Double Parking Data Guide

June 26, 2014

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1 Introduction

Disabled placard usage and double parking both have an impact on the availability of on-street parking. To help evaluate the impact of the SF*park* pilot project, Nelson/Nygaard led the collection of double parking and disabled placard data through a manual survey effort from 2010 through 2013, sampling blocks in pilot and control areas.

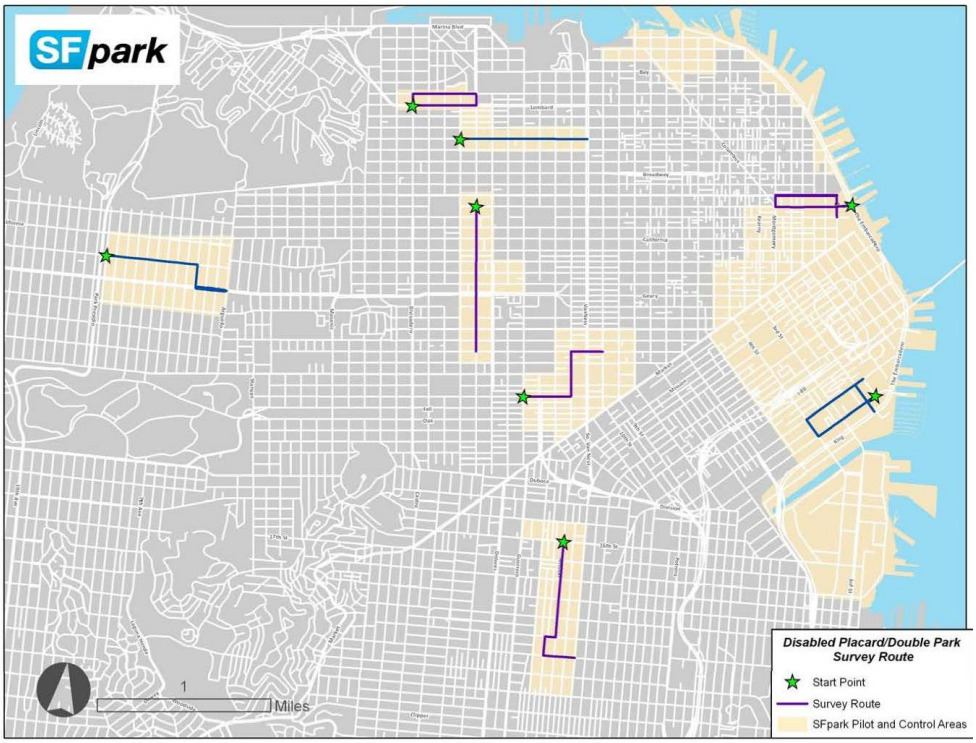
As drivers with disabled placards are not required to pay at the meter in San Francisco, SF*park* rate adjustments are less effective on blocks with significant disabled placard use. This survey provides both a count of disabled placards by block as well as length of stay data for each disabled placard vehicle on surveyed blocks.

While parking sensors monitor occupancy of each SF*park* metered space, they are not able to detect double parked vehicles. To evaluate the impact of the SF*park* pilot project on reducing congestion from double parking, manual survey data was collected on a sample set of blocks in each pilot and control area.

Occupancy data was also collected in this manual survey to provide a reference point for disabled placard and double parking observations, to augment sensor calibration efforts, and to serve as a back-up census of available parking supply.

Shown in Figure 1 below, surveyors followed a pre-determined route within the pilot and control areas for this survey.

Figure 1 Disabled Placard/Double Parking Survey Routes



This document provides critical information regarding the availability and use of this dataset.

1.1 Timeline

SF*park* staff worked with Nelson\Nygaard to collect data over four collection periods:

- Fall 2010: “Before 1”
- Spring 2011: “Before 2”
- Spring 2012: “Midpoint”
- Spring 2013: “After”

With the exception of the fall 2010 data collection period which was considered to be a test run, surveys throughout each pilot and control area were conducted at the same time to minimize seasonal differences in travel patterns.

1.2 Availability of Data

The complete double parking and disabled placard dataset is available as an Excel workbook and includes all disabled placard, double parking, and manual survey occupancy data collected for evaluation of the SF*park* pilot project. A data dictionary defining key elements of the data is listed in section 2.2 of this document and is included as a worksheet in the Excel file. For all data requests and related inquiries, please contact info@sfpark.org and put “SFpark evaluation data request” in the subject line.

The Disabled Placard/Double Parking file name, format and size are as follows:

- File name: SFpark_ ManualSurveyData_DPDP_20102013.xlsx
- File format: 2010 MS Office Excel workbook
- File size: 3.1 MB

2 Overview

This section provides information on the content of the dataset and business rules for the use of this dataset.

2.1 Summary of Contents

The Excel Workbook

The Excel workbook includes several tabs ready for immediate use:

- DPDP - Overview & Notes
- Data Dictionary
- DPDP-Occupancy
- DPDP- Disabled Placard

- DPDP- Double Parking

The DPDP-Occupancy tab includes occupancy and supply counts as well as counts of disabled placard and double parked vehicles by type (e.g. personal, government).

The DPDP-Disabled Placard tab includes one row for each observed disabled placard, including the last four digits of the license plate. The data is structured in this tab to allow for a length of stay analysis for disabled placard vehicles.

The DPDP-Double Parking tab also includes one row for each observed double parked vehicle, and identifies the type of vehicle and whether it was idling or not (I/NI in the "Motor" field).

Please note that an active filter is applied to all data tabs to suppress the Before 1 data collected in fall 2010. Use of fall 2010 data is not recommended, as it was discovered that the data collection methods during this phase were not sufficient.

Temporal Attributes of the Data

The data was collected on two weekdays in fall 2010, spring 2011 and spring 2012. In spring 2013, data was collected on three weekdays. All weekday samples were collected on Tuesday, Wednesday, or Thursday to ensure that the data was reflective of a typical weekday.[1] Data was collected over four time periods: 8:00am to 10:00am, 12:00pm to 2:00pm, 4:00pm to 6:00pm and 8:00pm to 10:00pm. Where meters were in operation during evening hours in 2013, data was also collected from 10:00pm to 12:00am. Surveyors completed the route twice in each of the two hour time periods, approximately once per hour. Observations of disabled placard, double parking, and occupancy were recorded at the same time for each blockface.

To sort by two hour time period, use the "Timeband" field. To sort by hour, use the "StartTime" field.

Geographic Attributes of the Data

For each survey run in the dataset, the name of the pilot or control area is identified in the "Area" field, and the "Area Type" specifies whether it is a pilot or control area. Pilot and control areas consist of:

- Pilot Areas
    - Civic Center
    - Downtown
    - Fillmore
    - Marina
    - Mission
    - South Embarcadero

[1] Mondays and Fridays were excluded due to the atypical travel patterns on these days.

- Control Areas
    - Richmond
    - Union

Data was not collected in Fisherman's Wharf.

The "Blockface ID" and "Block ID" are identified for each survey run. These ID fields correspond to unique ID fields in SF*park* geospatial datasets for blockfaces and blocks as well as the SF*park* hourly occupancy by block dataset (SFpark_ParkingSensorData_HourlyOccupancy_20112013.xlsx). The corresponding name of the street and two cross streets, as well as the side of street, is also identified in this data set.

2.2 Data Dictionaries

Disabled Placard/Double Parking Occupancy Data Dictionary

Field Name	Description	Example
Data Collection Period	The data collection period	Fall 2010
Date	The day the data was collected	11/16/2010
DayOfWeek	What day of the week the data was collected	Tuesday
Day Type	If it was weekday or a weekend	Weekday
Area	The name of the area the data was collected	Civic Center
Area Type	If the area is a control or pilot area	Pilot
Surveyor_Shift1	The ID of the surveyor who did the data collection	MB.
Surveyor_Shift2	The ID of the 2nd surveyor	MB.
Street	The name of the street that the data was collected on	Hayes
Start_Street	The name of the street that the the route started at	Octavia
End_Street	The name of the street that the route ended at	Laguna
Street_Side	The cardinal direction indicating the side of the street the data was collected on	S
Blockface ID	The unique block face identification number that can be spatially joined	464051
Block ID	The unique identifier for this block, including both block faces	46405
StartTime	The time of day the surveyor started data collection	800
Timeband	The start time of the timeband	800
Count of Dis Placard	The total number of disabled placards counted on the block	2
Count of Double Parking - Personal	The total number of personal vehicles that were double parked	
Count of Double Parking - Commercial	The total number of commercial vehicles (taxi's, delivery trucks, etc) that were double parked on that block	
Count of Double Parking - Government	The total number of government vehicles that were double parked	
Count of Double Parking - Unknown	The total number of vehicles surveyors weren't sure of the type that were double parked	
Count of Double Parking - Total	The total number of vehicles double parked	0
Event	If there was an event going on nearby, minor or major.*	Minor
Partial Day	Days where there are not observations for every time period or some time periods have no available parking due to scheduling, street sweep, surveyor error, events, construction, etc…	
Occupied	How many legal spaces were occupied in that block	13
Available	The number of legal parking spaces that were un occupied	0
Blocked	The number of legal parking spaces that were unavailble due to construction, etc.	4
Total Parkable	Total number of legally parkable spaces at the time (subtracting for blockages)	13
Total Spaces	The total number of potentially legally available parking spaces counted in the survey	17
Blocked Space Details	Whatever the surveyor noted to explain why specific spaces were blocked at a particular time.	construction
Space Characteristics	Information observed by surveyors about a blockface's supply at the time of the observation, such as "no parking," street sweeping, meters missing tops, etc.	
Notes	Any other notes that do not fit the previous two categories, such as any activity on the blockface at the time of observation.	

Disabled Placard Data Dictionary

Field Name	Description	Example
Data Collection Period	The data collection period	Fall 2010
Date	The day the data was collected	11/6/2010
DayOfWeek	What day of the week the data was collected	Tuesday
Day Type	If it was weekday or a weekend	Weekday
Area	The name of the area the data was collected	Civic Center
Area Type	If the area is a control or pilot area	Pilot
Surveyor_Shift1	The ID of the surveyor who did the data collection	MB.
Surveyor_Shift2	The ID of the 2nd surveyor	MB.
Street	The name of the street that the data was collected on	Hayes
Start_Street	The name of the street that the the route started at	Octavia
End_Street	The name of the street that the route ended at	Laguna
Street_Side	The cardinal direction indicating the side of the street the data was collected on	S
Blockface ID	The unique block face identification number that can be spatially joined	464051
Block ID	The unique identifier for this block, including both block faces	46405
Time	The time of day the surveyor started data collection	8am
Timeband	The time band this route was surveyed	800
Event	If there was an event going on nearby, minor or major.*	Minor
Partial Day	Days where there are not observations for every time period or some time periods have no available parking due to scheduling, street sweep, surveyor error, events, construction, etc…	
Plate	The last four digits of the license plate number	2345
Notes	Any other notes that do not fit the previous two categories, such as any activity on the blockface at the time of observation.	

Double Parking Data Dictionary

Field Name	Description	Example
Data Collection Period	The data collection period	Fall 2010
Date	The day the data was collected	11/6/2010
DayOfWeek	What day of the week the data was collected	Tuesday
Day Type	If it was weekday or a weekend	Weekday
Area	The name of the area the data was collected	Civic Center
Area Type	If the area is a control or pilot area	Pilot
Surveyor_Shift1	The ID of the surveyor who did the data collection	MB.
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Block ID	The unique identifier for this block, including both block faces	46405
Street	The name of the street the surveyed	Octavia
Start_Street	The name of the street the route started at	Hayes
End_Street	The name of the street that the route ended at	Laguna
Street_Side	The cardinal direction indicating the side of the street the data was collected on	S
Time	The time of day the surveyor started data collection	8am
Timeband	The time band this route was surveyed	800
Event	If there was an event going on nearby, minor or major.*	Minor
Partial Day	Days where there are not observations for every time period or some time periods have no available parking due to scheduling, street sweep, surveyor error, events, construction, etc…	
Vehicle Type	The type of vehicle obersved (personal, commercial, government, etc)	Personal
Motor	If the motor was idling or not - NI= Not Idling, I= Idling.	NI
Notes	Any other notes that do not fit the previous two categories, such as any activity on the blockface at the time of observation.	
Notes2	Any other notes that do not fit the previous two categories, such as any activity on the blockface at the time of observation.	

2.3 Business Rules

Counts of Double Parking and Disabled Placards

To analyze counts of double parked vehicles and disabled placards, users will want to use data from the DPDP – Occupancy tab. A recommended approach for analyzing disabled placard and double parking counts is to look at survey runs by:

- Data Collection Period
- StartTime
- Area
- Blockface ID

And conduct analysis using the following fields:

- Count of Dis Placard
- Count of Double Parking – Personal
- Count of Double Parking – Total
- Occupied
- Total Parkable

The “Occupied” and/or “Total Parkable” fields can be used as a denominator to calculate a rate for disabled placard or double parking, depending on the needs of the analyst.

Disabled Placard Length of Stay

To analyze length of stay for disabled placards, users will want to look at the data by:

- Area
- Plate
- Data Collection Period
- Date
- Start Time

A sample pivot table using these fields is shown on the right.

	Spring 2011							
	5/4/2011							
Row Labels	800	900	1200	1300	1600	1700	2000	2100
⊞Civic Center	13	24	29	31	35	35	25	22
⊞Downtown			103	99			23	19
⊞Fillmore			66	59				
⊞Marina	9	20	26	23				
⊞Mission	17	48	59	52	39	18	6	
⊞Richmond	17	27	60	61				
⊟South Embarcadero	14	28	31	26			2	3
0616				1				
1011		1		1				
115W			1	1				
1193								
11H1								
1339	1	1	1	1				
15C1								

Double Parking - Idling and Vehicle Type

To analyze double parking by idling status and vehicle type, users will want to look at data in the DPDP-Double Parking tab by:

- Area
- BlockfaceID
- Data Collection Period
- Motor
- Vehicle Type

The DPDP- Double Parking tab only includes observed vehicles, and does not include observations for a blockface where there were no observed double parked vehicles. As such, this tab should not be used to analyze overall incidents of double parked vehicles.

This tab can be used to analyze the type of double parked vehicles and whether they were idling or not.

Fall 2010 Data Collection Period

Use of fall of 2010 survey runs is not recommended due to adjustments in data collection methodology and deployment after fall 2010. An active filter has been applied to the "Data Collection Period" field to exclude fall 2010 data. This filter can be removed.

3 Methodology

Surveyors were instructed to start a surveyor route at a specified point to record occupancy and availability of legal metered parking spaces including a count of the supply and any obstructions on each blockface. They also recorded counts of disabled placards and double parked vehicles including the type of vehicle, commercial, personal, government and whether or not the vehicles were idling. For the disabled placard counts, surveyors did not record vehicles parked in blue zones or spaces dedicated to disabled parking only. They also made a note if the space was metered or not. For a more detailed methodology including the instructions and survey instrument, see Appendix A.

3.1 Data Collection Areas

Data was collected in all of the pilot and control areas. The surveyors had specific routes with starting and ending points indicated for consistency in the methodology. See detailed maps of collection routes in Appendix B.

4 Known Issues

The following section notes potential data comparability issues to consider for use of the dataset.

4.1 Partial Data

This data set includes partial data. Partial data is data only collected for a portion of the day due to construction, major events, survey errors, street cleaning, etc. As a result the partial data cannot be used for disabled placard length of stay analysis. However it is still available for disabled placard and double parking incidences.

4.2 Parking Space Closures

During data collection from time to time, 70% to 100% of a blockface's parking supply was closed for construction for all or part of a day or parking on a blockface was closed at a particular time(s) due to street cleaning. To correct for this issue, in the cases where 100% of a blockface's parking supply was closed, we marked the data as "partial day." Where less than 100% of a blockface's supply was closed, we noted this in the notes field.

4.3 Types of Non-Fixable Issues and Solutions

- Issue: Contrary to their training, the surveyor recorded occupancy information at vanpool spaces.
  - Solution: These data were moved to the "unusable" tab.
- Issue: The Civic Center route on 11/18/2010 in the AM has "unidentified" for the plate numbers in 'disabled placards' tab.
  - Solution: These data were left in the "usable" dataset but marked with "partial day" in the occupancy and disabled placard tabs.

Appendix A: Surveyor training materials

Disabled Placard/Double Parking Survey
Practical Instructions

This survey has two parts: counting the frequency of disabled placards displayed on cars parked at meters and counting the frequency of cars double parked in the street. You will also count the total number of parked cars per block so we can calculate percentages of disabled placards and double parking. Each route is performed by one person and should take you about an hour or less.

Your field supervisor today is: _____ at _____ (cell).

Date: _____ Day of the Week: _____

Surveyor : _____ Route: _____

Starting Intersection _____

Shift (Circle one): Shift 1 8:00 AM-10:00 AM and 12:00 PM-2:00 PM

Shift 2 4:00 PM-6:00 PM and 8:00PM-10:00 PM

What you'll need:

Clipboard, pencil, business cards of field supervisor, watch/cell phone (all to be provided at the training)

Methods:

1. Begin at the specified start point, following the route and collecting data on the side of the street specified on your data log. On some stretches you will not be recording data but simply proceeding through areas that have no parking. The block will still be noted on your data entry sheet in case any double parking occurs.
2. Check for disabled placards and plates, recording the last three digits of the license plate in your data log. If the plate is a disabled plate, also write "dp" at the end in addition to the last four full-size digits. (Note: if a vehicle has a disabled placard, but no license plate, please write a note in the margin indicating the make, model, and color of the vehicle).
3. As you walk, make a tick mark for each vehicle on the block that is parked in a legal parking space.
   a. For 2 cars mark ||, for 8 cars mark 𝍸 |||
   b. Mark occupied spaces in the "occupied" space box, and mark empty spaces in the "available" box.
   c. Only mark as "occupied" or "available" those spaces that a typical sedan style personal vehicle may legally park in at the exact time of day and day of week that you are surveying the location. Where meters are located, these are spaces with dark gray meters or green meters. During the evenings and on some weekend days, yellow

meters and spaces may also be counted because they are legal for personal vehicles.

4. Vehicles are "double parked" if they are stationed with or without a driver in the vehicle, adjacent to, but inside of (on the street side of) the curb parking lane, are partially or fully blocking a lane of traffic, and have not moved for more than 30-seconds.
5. To identify double-parked vehicles: When you reach the end of each block, walk into the cross walk (safely) and note if any vehicles are double parked on the same side of the block you just walked, or the block you are about to begin Record any double-parked vehicles in the data log by the code for the type of vehicle that is double parked ("cv" = commercial vehicle, "p" = personal vehicle, "g" = government vehicle) and note whether the vehicles is idling (i=idling, ni=not idling). If there are no double parked vehicles, mark an "L" in the "double park" column to confirm that you checked for double parked vehicles.
6. Note that any legal curbside parking space that is not occupied, but access to which is blocked by a double parked vehicle at that time that you walk past it, should not be recorded as either an occupied or an available parking space.

Tips:

- There are three types of disabled parking permits: red or blue hang tags (displayed either hanging from the rear view mirror, or on the dashboard), and DP license plate permits. See the "what to look for section below".
- Maintain your focus: This survey involves counting multiple things at one time.
- There probably won't be double parked vehicles on every block- so don't forget to keep looking! Look for double parked vehicles systematically, checking at the end of each block.
- Accuracy is important, so if you feel you lost track, please double check.
- Be sure to mark the number of cars for each block face.

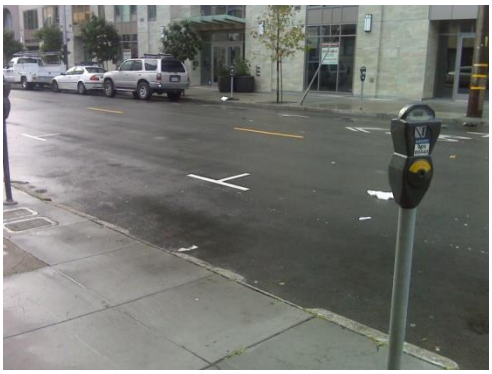
Problems/Contact:

- If someone asks what you are doing, let them know you are working on a time-sensitive survey, collecting non-identifying information. If they press for more information, give them the business card of your field supervisor.
- Call your field supervisor whenever you see a problem along your route, are unsure how to proceed, or have questions.
- Your field supervisor today is : _____ at _____(cell).

What to look for:

Counting total number of spaces

Count cars in marked spaces with parking meters. Count occupied space, only if car in space as you walk past it. Blue car on right is not “parked” fully so you would count it as an “available” space.



Disabled Placards

Disabled/handicapped placards and license plates can look like this:

Sometimes the placard may be placed on the dashboard and not hung from the rearview mirror.

Record the last three digits of the license plate of the disabled placard and double parked license vehicles

:

Only count placards/plates at legal parking spaces

No red zones or hydrants

Do NOT count vehicles in blue zones.

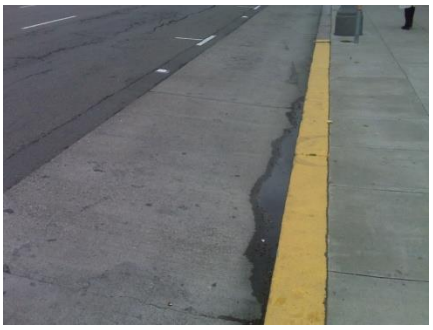
Do NOT count Vanpool spots.

No blue zones

To know if some spots are legal, you'll have to pay attention to signage:

Yellow is illegal unless it is outside of posted hours.

White zones are illegal unless it is outside of the posted hours.



DO count vehicles in green zones.

DO count meters even if they are broken.

Double Park***ed Vehicles***

Double parked vehicles are defined by “X”:

Survey Instrument

SFpark **Civic Center**

cv = commercial vehicle p = personal vehicle
g = government vehicle i / ni = idling / not idling
L = looked

Street	Cross Streets	Disabled	Double
HAYES	Laguna & Octavia		
north			
Occupied			
Available			
Blocked			

Street	Cross Streets	Disabled	Double
FRANKLIN	Hayes & Grove		
west			
Occupied			
Available			
Blocked			

Street	Cross Streets	Disabled	Double
HAYES	Octavia & Gough		
Occupied			
Available			
Blocked			

Street	Cross Streets	Disabled	Double
FRANKLIN	Grove & Fulton		
Occupied			
Available			
Blocked			

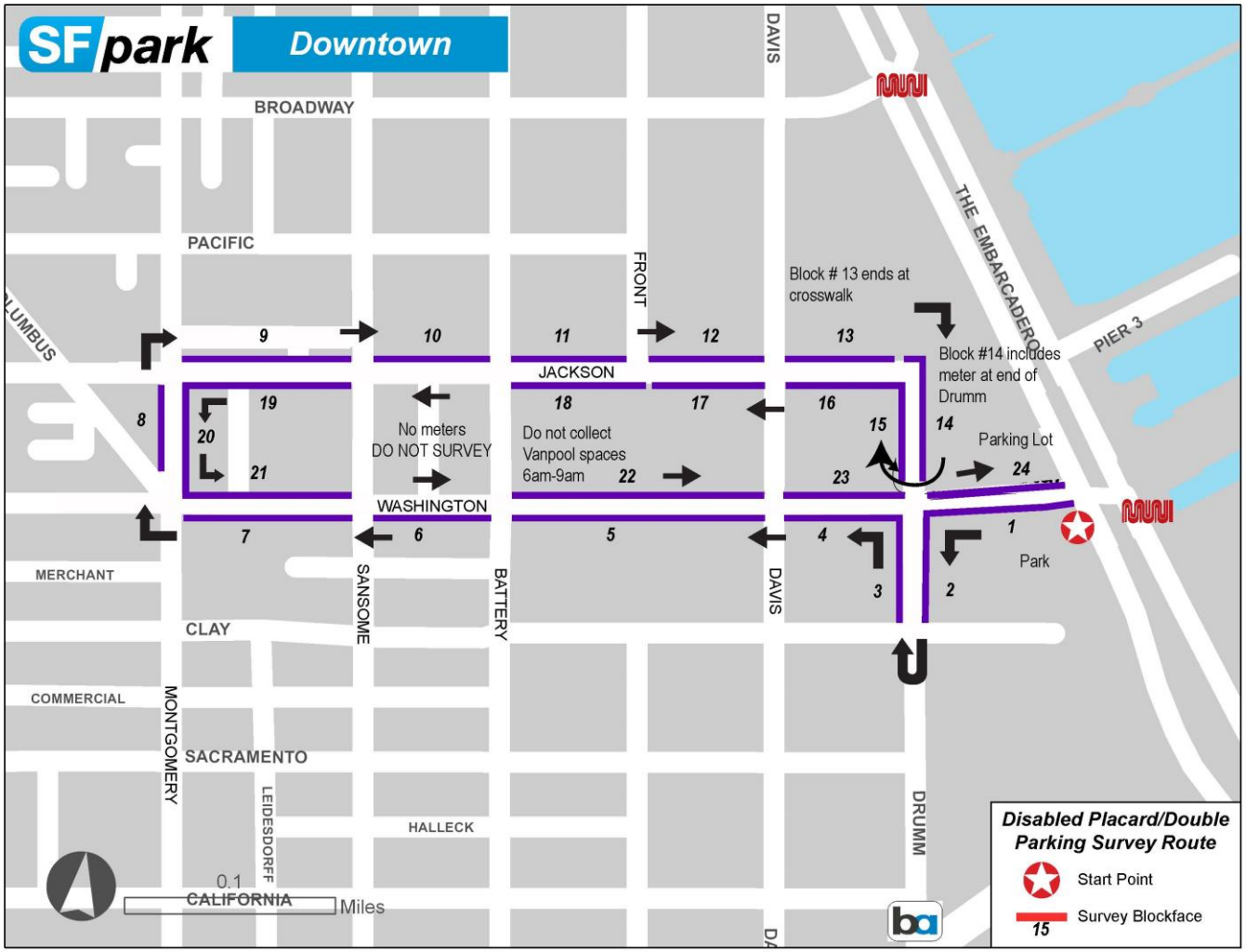
Street	Cross Streets	Disabled	Double
HAYES	Gough & Franklin		
Occupied			
Available			
Blocked			

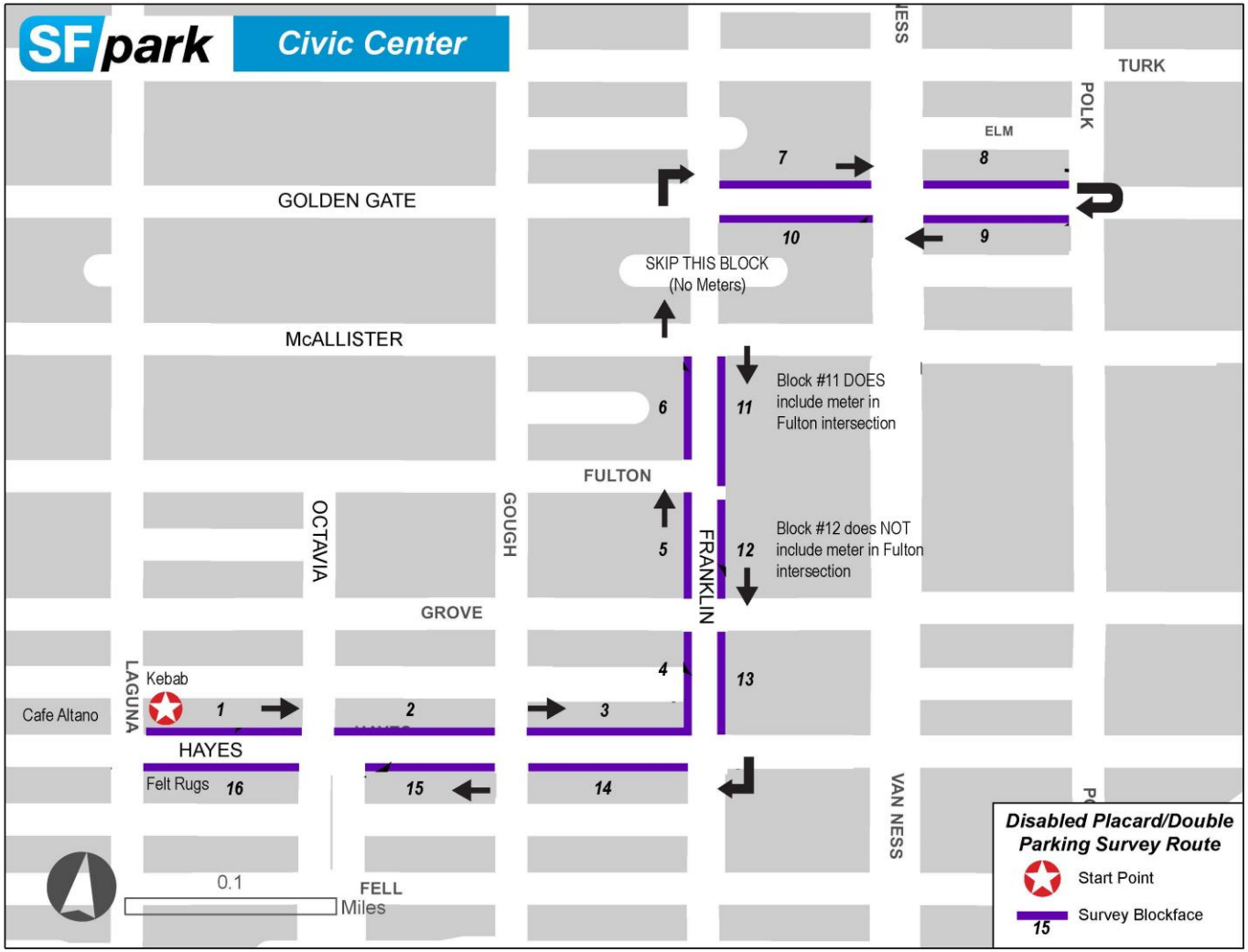
Street	Cross Streets	Disabled	Double
FRANKLIN	Fulton & McAllister		
Occupied			
Available			
Blocked			

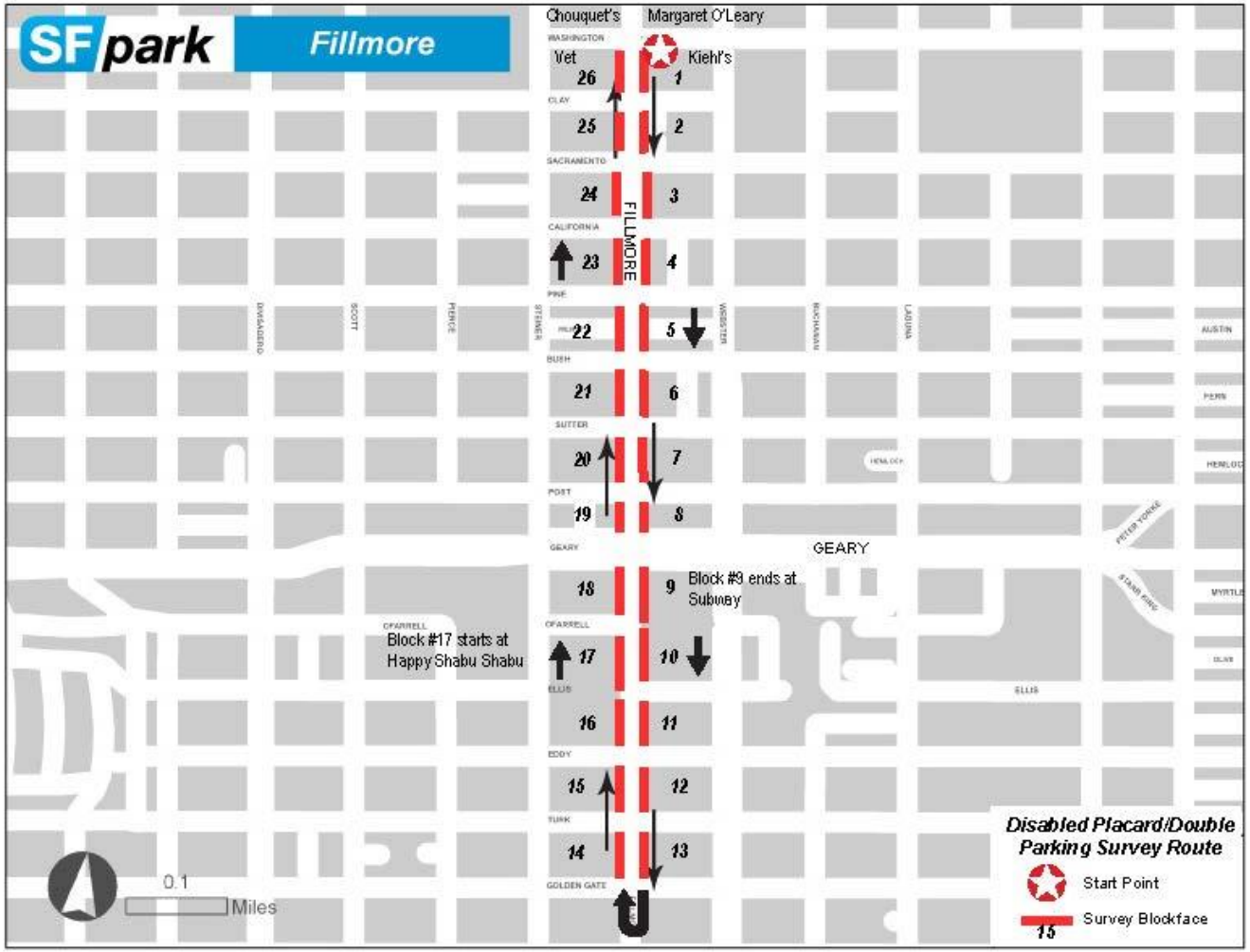
DP-DP

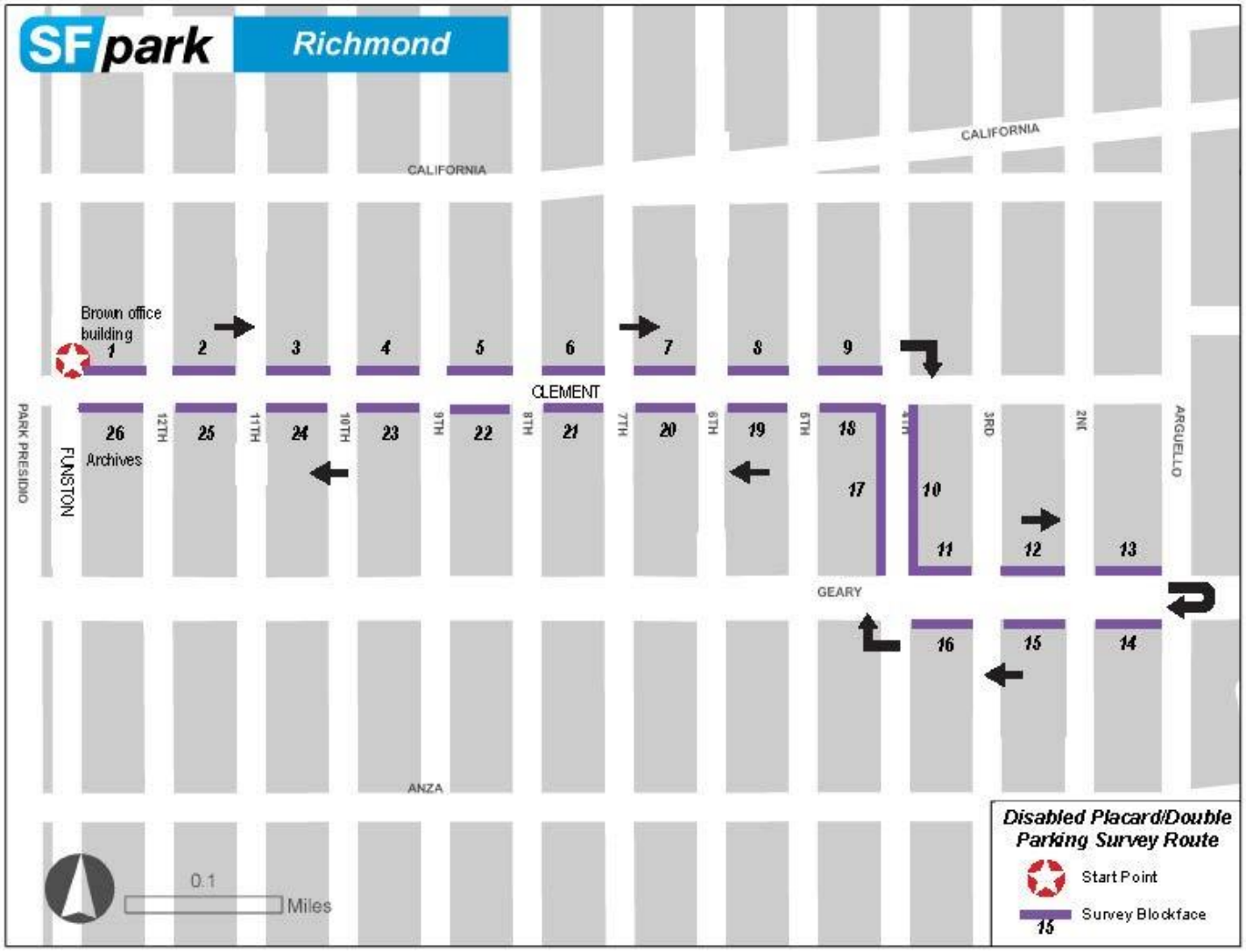
Comments (note location)

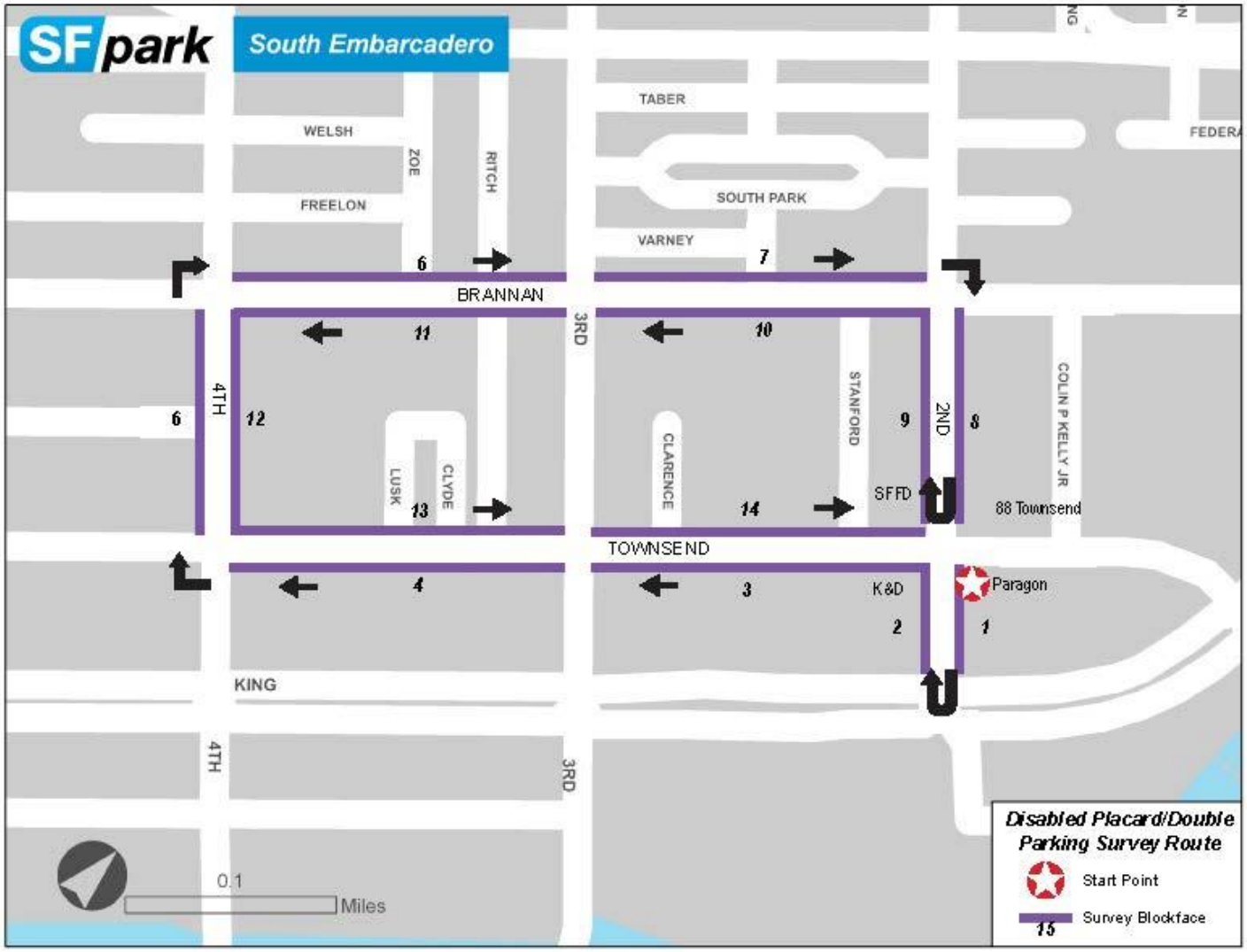
Appendix B: Area Maps

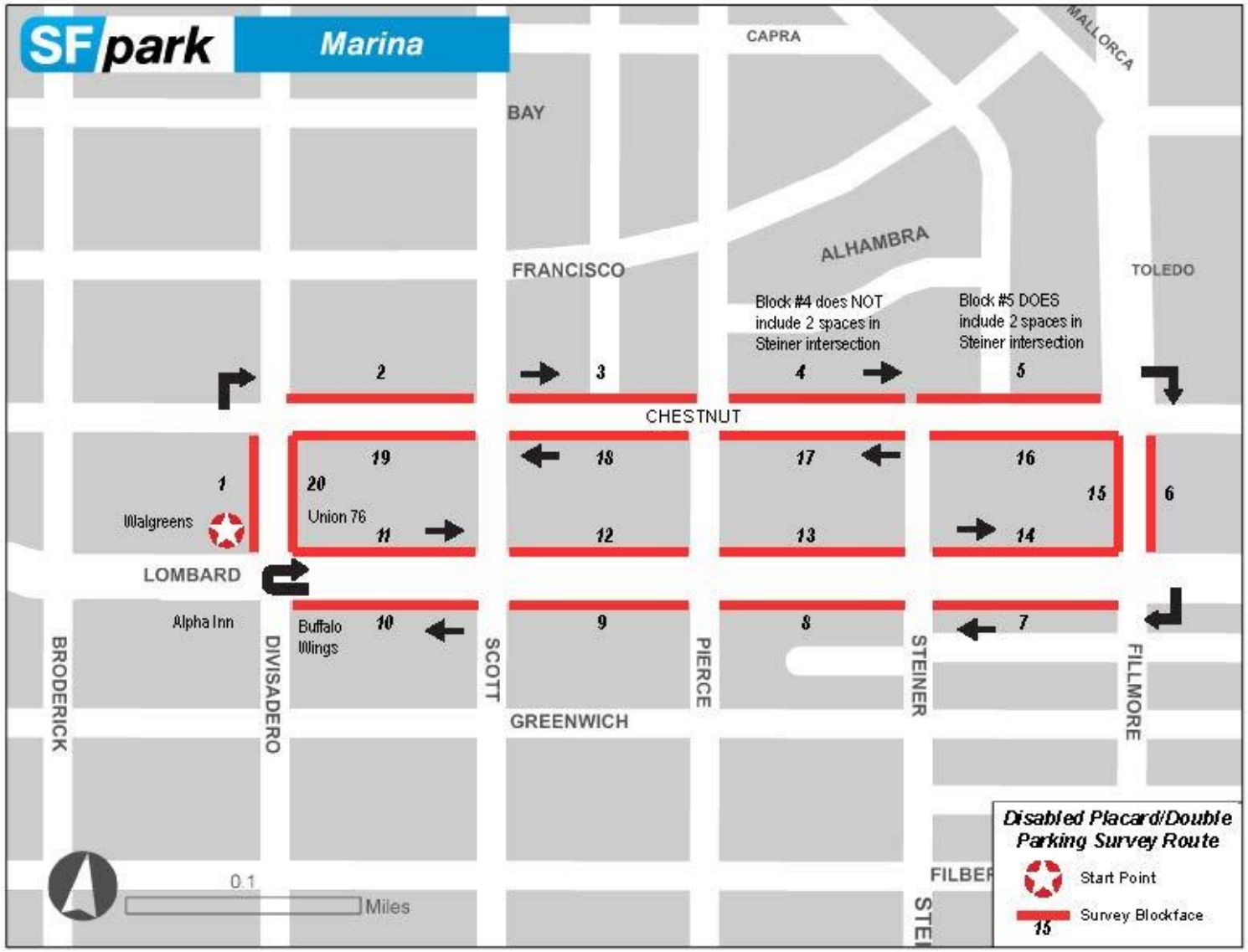


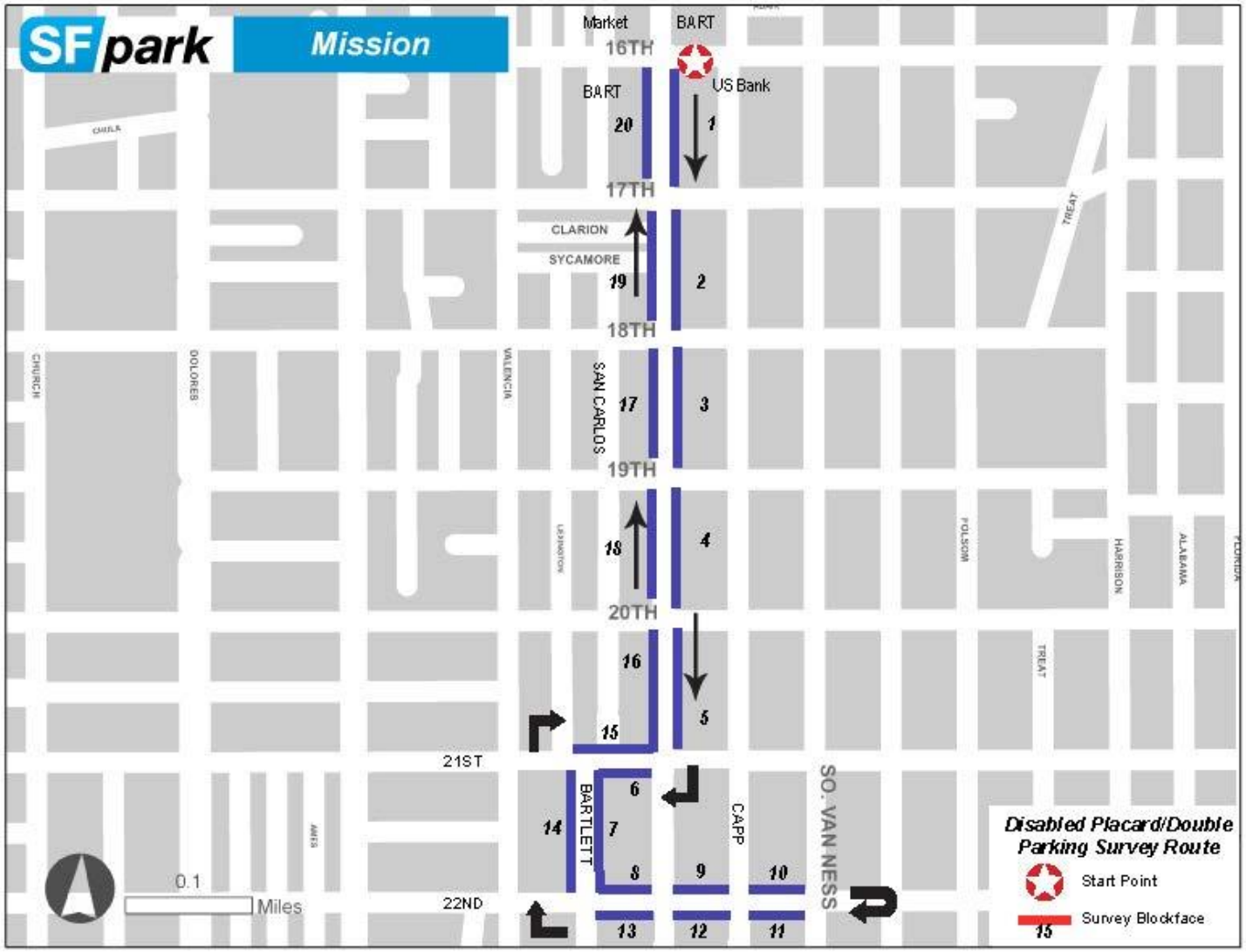

SFpark
Civic Center
GOLDEN GATE
McALLISTER
FULTON
GROVE
HAYES
FELL
OCTAVIA
GOUGH
FRANKLIN
LAGUNA
VAN NESS
POLK
TURK
ELM
Kebab
Cafe Altano
Felt Rugs
SKIP THIS BLOCK
(No Meters)
Block #11 DOES include meter in Fulton intersection
Block #12 does NOT include meter in Fulton intersection
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface
15

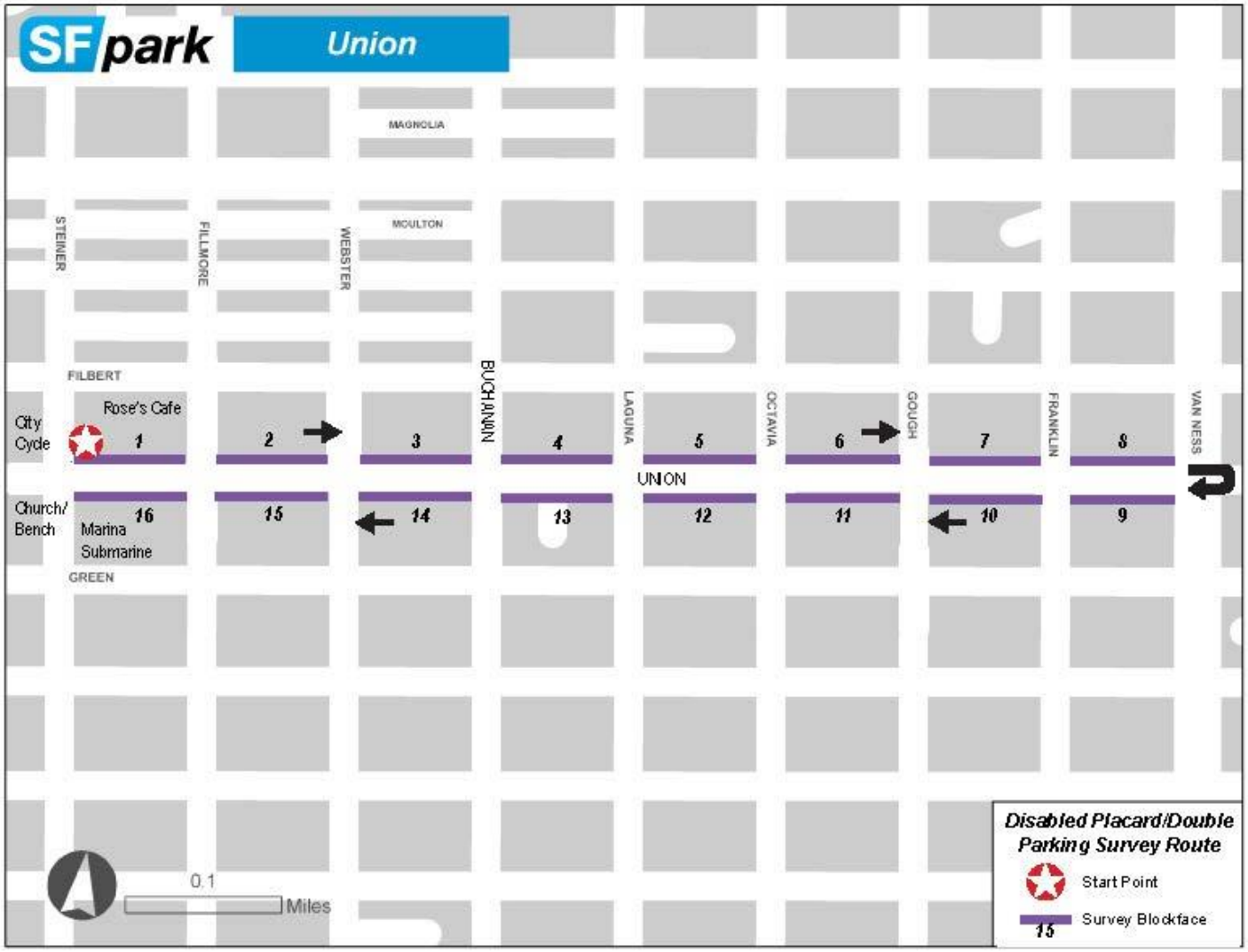

SFpark
Fillmore
Chouquet's
Margaret O'Leary
Vet
Kiehl's
FILLMORE
GEARY
Block #9 ends at Subway
Block #17 starts at Happy Shabu Shabu
0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface


SFpark
Richmond
CALIFORNIA
CALIFORNIA
Brown office building
1
2
3
4
5
6
7
8
9
CLEMENT
PARK PRESIDIO
FUNSTON
26
Archives
12TH
25
11TH
24
10TH
23
9TH
22
8TH
21
7TH
20
6TH
19
5TH
18
17
4TH
10
11
3RD
12
2ND
13
ARGUELLO
GEARY
16
15
14
ANZA
0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface
15


SFpark
South Embarcadero
WELSH
FREELON
ZOE
RITCH
TABER
SOUTH PARK
VARNEY
FEDERA
BRANNAN
6
7
11
10
3RD
4TH
6
12
LUSK
CLYDE
13
CLARENCE
14
STANFORD
9
2ND
8
COLIN P KELLY JR
SFFD
88 Townsend
TOWNSEND
4
3
K&D
2
Paragon
1
KING
4TH
3RD
0 0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface
15


SFpark
Marina
CAPRA
MALLORCA
BAY
ALHAMBRA
FRANCISCO
TOLEDO
Block #4 does NOT include 2 spaces in Steiner intersection
Block #5 DOES include 2 spaces in Steiner intersection
2
3
4
5
CHESTNUT
19
18
17
16
1
20
15
6
Walgreens
Union 76
11
12
13
14
LOMBARD
Alpha Inn
Buffalo Wings
10
9
8
7
BRODERICK
DIVISADERO
SCOTT
PIERCE
STEINER
FILLMORE
GREENWICH
FILBER
STE
0 0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface
15


SFpark
Mission
Market
BART
16TH
BART
US Bank
20
1
17TH
CLARION
SYCAMORE
19
2
18TH
SAN CARLOS
17
3
19TH
18
4
20TH
16
5
15
21ST
6
14
7
8
9
10
BARTLETT
CAPP
SO. VAN NESS
13
12
11
22ND
0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface
15


SFpark
Union
MAGNOLIA
MCULTON
STEINER
FILLMORE
WEBSTER
BUCHANAN
LAGUNA
OCTAVIA
GOUGH
FRANKLIN
VAN NESS
FILBERT
City Cycle
Rose's Cafe
1
2
3
4
5
6
7
8
UNION
Church/ Bench
16
15
14
13
12
11
10
9
Marina Submarine
GREEN
0.1
Miles
Disabled Placard/Double Parking Survey Route
Start Point
Survey Blockface
15