



City and County of San Francisco

San Francisco Public Works · Bureau of Street Use and Mapping

Office of the City and County Surveyor

49 South Van Ness, Avenue, 9th Floor · San Francisco, CA 94103

Monument.Preservation@sfdpw.org



CCSF Monument Preservation Guidelines

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(CCSF BSM) = City and County of San Francisco Bureau of Street Use and Mapping.

Monument Preservation Requirements Regarding BSM Permits

All permits for trenching, excavation, sidewalk replacement or curb replacement may have Land Survey Monuments, (herein referred to as “monuments”) that are directly within the scope or boundary limits of the design and/or construction improvement plans.

All monuments that are located within 20 feet of the design and/or construction improvement plans are required to have Standard Referencing where pre- and post-construction Corner Records shall be filed with the County Surveyor for the City and County of San Francisco (see Figure 4 typical corner Record).

The permittee is required to send construction plans to monument.preservation@sfdpw.org.

The permittee is required to conduct a records search to locate monuments that are within 20 feet of the construction improvement plans.

The permittee is required to conduct field site review to locate monuments that are within 20 feet of the construction improvement plans. (See section, “Typical Survey Monumentation within City and County of San Francisco” and Figures 1, 2 and 3).

When the permittee has finalized the monument count for all monuments that are within 20 feet of the construction plans the permittee must complete the “Monument Referencing” form and receive a notice to proceed from monument.preservation@sfdpw.org before construction can begin.

The permittee is required to notify monument.preservation@sfdpw.org when construction has been completed.

Monument Referencing can be conducted by a licensed Land Surveyor or CCSF BSM.

It is the permittee’s responsibility to notify monument.preservation@sfdpw.org as to whom will perform Monument Referencing.

If Monument Referencing is performed by a licensed Land Surveyor, please send the surveyor’s information to monument.preservation@sfdpw.org.

It is recommended that the permittee should double check with their Licensed Land Surveyor that the pre- and post-construction Corner Records are submitted to Subdivision.Mapping@sfdpw.org.

If CCSF BSM is being requested to perform the Monument Referencing please complete a Monument Referencing application and submit payment by check, payable to “SF Public Works”, address Office of the City and County Surveyor, 49 South Van Ness, Avenue, 9th Floor · San Francisco, CA 94103. No electronic payment is available at this time. See section **“CCSF BSM Standard Monument Referencing Fee: \$4070”** below on page 7.

Monument Preservation and Records Research to Locate Monuments

Below are links that will provide essential research tools to locate monuments.

Link one below, is our “Monumental” website. “Monumental” is a monument index data base of known monuments and uses a five-digit index number, (MID), to identify monuments. It is the starting point to locate property boundary and geodetic monuments within the City and County of San Francisco. All “Monumental” monument locations shown are approximate. Positions shown should be verified in the field to determine if the monument is within the scope, boundary limits, of construction project. *“Monumental” is an index of known monuments and is constantly being updated. It does not contain all monuments within the City and County of San Francisco.*

Link One: <https://bsm.sfdpw.org/subdivision/monumental/Viewer.aspx>

The below two links (two and three) are to be used to locate additional property boundary and geodetic monuments within the City and County of San Francisco.

Link two below is used to locate the Assessors block number.

Link Two: <https://bsm.sfdpw.org/mapviewer/>

Link three below is used to access the main page for Subdivision and Mapping resources including recorded maps, assessors block diagrams, etc. Please use the website’s resources to review additional property boundary monuments that have been recovered or set. The Assessors block number is used in link 3 to locate recorded maps. The record maps are to be reviewed to locate additional property boundary monuments that have been set.

Link Three: <https://bsm.sfdpw.org/subdivision/default.aspx>

Link Four is for Monument Referencing application:

Link Four: https://sfpublicworks.org/sites/default/files/Mon%20Application_FY22-23.pdf

CCSF DPW BSM can support monument research and on-site field reviews. If you elect to have CCSF DPW BSM conduct research, please contact monument.preservation@sfdpw.org to request a proposal for these services.

Example of Procedural Research Steps to follow when Locating Monuments

Check “Monumental” for known monuments at your address and/or construction improvement plans, [SF Public Works Mon-U-Mental \(sfdpw.org\)](https://www.sfpublicworks.org/monumental).

Look up Block Number using [Map Viewer \(sfdpw.org\)](https://www.sfdpw.org/mapviewer)

Under “Map Layers” “Zones” turn on the “Key Map Grid” by checking the box on the left.

Go to your address location and determine your “Block” and “Key Map Grid” number.

“Key Map Grid” number is a three-digit number located approximately in the center of the zoomed view.

Use “Block” number, “Key Map Grid” number and [Department of Public Works \(sfdpw.org\)](https://www.sfdpw.org/departmentofpublicworks) to download Record Map information associated to the project site:

Create a directory or folder on your computer where the name is your four-digit block number.

Download: Assessor Block map.

Record Maps

Historical Block Diagrams

Corner Records

Dedicated, Grade and Monument Maps (under Key Map Grid Number)

Review the downloaded documents for all potential monuments near your construction improvement plans. Tabulate these potential monuments and locations in a spread sheet or word document.

Add any monuments located using the “Monumental” website.

Next, review the downloaded documents with respect to your construction improvement plans to determine if any monuments are within 20 feet. You may find the Assessor Block map useful to tabulate the spatial position of the monuments.

Conduct a field site review to locate any additional monumentation that is not of record or to finalize the monument count.

Contact a private Land Surveyor or submit application to BSM for monument preservation.

Typical Survey Monumentation within City and County of San Francisco

Some monuments are located beneath the ground surface and surrounded by well casings as depicted in Figure 1 below.

Many monuments are located on the ground surface as depicted in Figure 2 below.

When a well casing and lid needs to be reset due to construction it shall be centered with respect to the monument as depicted in Figure 1 (without disturbing the position of the monument).

Survey Monuments should not be reset or relocated by the contractor unless under the direct supervision of a licensed land surveyor or CCSF BSM

Other monuments may exist, including those set by local, state and federal agencies: e.g., CCSF (HPN & HPND), CCSF VD-2013, CCSF Boundary Reference monuments, Cal-Trans, BART, USGS, NGS, U.S. Army, U.S. Navy and private surveyors for subdivisions, et al. These monuments must also be preserved when and where they are located.

There are monuments that are “Not of Record.” “Not of Record” means the monument does not appear on any maps or documentation that have been made public by recordation with the City and County of San Francisco.

An onsite field review is required to determine if such non-record monuments exist. These non-record monuments are “old” original subdivision marks that typically do not appear on any record maps.

Within the City and County of San Francisco not of record monuments typically are “L”, “T” and “+” cuts and lead plugs with brass tacks. These are typically located in curbs and can reside anywhere along property lines extending from street curb to the back of sidewalk.

Many of the survey monuments in existence are not in the online CCSF database “Monumental” or on more traditional City monument maps. Some of these monuments may not be visible or found without additional research by a licensed land surveyor or BSM mapping staff. This does not relieve the permittee or applicant of responsibility for preservation of all survey monuments. When using “Monumental” or “Map viewer”, be aware that any City survey monuments shown are for informational purposes only – positions *and* descriptions of monuments shown are approximate. Per state law, this application does not grant permission to remove, disturb, destroy, or cover any monuments. If any monuments are covered, disturbed, destroyed, or removed, any costs incurred will be in addition to the initial application fee and may vary due to time and methods required. Please refer to Monument Referencing Guidelines for more information.

Requesting BSM Review of a Monument using Photographs

When seeking confirmation as to whether a physical object on the ground is a monument or whether monuments exist at the corners of a particular property or along the property line two photographs can be taken and sent to Monument.Preservation.@sfdpw.org. The photographs are most easily taken with a smart phone or other digital camera. Take the photographs with a high-resolution setting. Be sure to review the photographs to assure they are clean and clear of defects and there is no blurring. See typical monument photographs in Figures 1 and 2 below.

When seeking confirmation as to whether a physical object on the ground is a monument take two photographs where photograph one is 1 to 2 feet above the object. Photograph two is a perspective taken 10 to 15 feet away from the object and having the object in the image. Send pictures and location to Monument.Preservation.@sfdpw.org for review.

When seeking confirmation as to whether a monument or monuments exist at the corners of a particular property or along the property lines, two sets of two photographs can be taken. Each set of two photographs are to be taken at the approximate corners of the property, where two buildings join. If there is a gap between buildings use the fence line as the approximate division line between two properties. Photograph one should be taken 1 to 2 feet at and above the curb. Photograph two should be taken as a perspective, looking 5 to 10 feet away from the curb and towards the curb face, where photograph one was taken, and looking to the back of walk and building corners or the gap between the buildings along the fence line. See example photographs below in Figure 3. Note: one should also review from the curb to back of walk for any additional potential monuments. Send pictures and location to Monument.Preservation.@sfdpw.org for review.

Think “safety” when taking photograph orientation two because this shot usually is taken within an actively traveled street.

CCSF BSM Standard Referencing Fee: \$4070

CCSF BSM monument referencing fee as of July 2020 is \$4070 per monument and covers the field and office-related costs for the standard monument referencing process. The fee is adjusted each year to reflect changes in the relevant Consumer Price Index.

The standard monument referencing process includes the application processing, records research review, pre- and post-construction field referencing and Corner Record Processing. The permittee is still required to conduct field site review to locate monuments that are within 20 feet of the construction improvement plans (see section, “Typical Survey Monumentation within City and County of San Francisco”, page 5 and Figures 1, 2 and 3, pages 11-15).

Before requesting BSM for monument referencing services, the permittee is to conduct a record research and field site review to determine the number of monuments within the scope of the construction improvements. An application can then be submitted to CCSF by email at Monument.Preservation@sfdpw.org. The application will then be reviewed by BSM. An application may require updating through the internal review process. Upon finalization of the application a request for payment will be issued by email.

Submit payment by check, payable to “SF Public Works”, address Office of the City and County Surveyor, 49 South Van Ness, Avenue, 9th Floor · San Francisco, CA 94103. No electronic payment is available at this time.

Monument Preservation Applications submitted to CCSF BSM:

Where a single project is issued a permit for construction improvements, a single application is required.

Where a single project is issued multiple permits during the course of construction improvements, a single application is required.

Where individual multiple projects exist and each project is issued a permit, separate applications are required, one for each project.

All applications will designate those monuments that are found to be within 20 ft of the design plans or construction improvement plans. Each monument designated on the application has an associated CCSF monument preservation fee of \$4070.00.

CCSF accounting must clear and process payment before any Monument Referencing can occur.

Payment accounting often takes longer than two weeks. It is advised that the monument preservation process begin well in advance of the two weeks prior to construction timeline.

BSM will notify the applicant when the monument pre-construction referencing is complete.

Should the monument referencing and the construction schedules coincide or overlap, please provide construction scheduling priority areas to allow strategic coordinated monument referencing to support the construction time lines.

It is the responsibility of the applicant to inform BSM when construction is complete so that the post-construction stage of the referencing may be performed.

CCSF BSM Initial Extended Referencing Fee: \$10,000.00

Where construction has proceeded prior to standard monument referencing having been performed, a comprehensive field survey and office analysis shall be required to determine if the construction activity caused any potential movement of the monument or to reestablish the monument position in the event that the monument was destroyed.

To perform this extended referencing additional fees shall be assessed and are estimated to be \$10,000 or more.

If any monuments are covered, disturbed, destroyed or removed any costs incurred to re-establish the monument will be in addition to the initial application fee and may vary due to time and methods required.

If a monument is removed, the monument well and monument cap shall be delivered to the County Surveyor's Office.

Please direct any concerns or inquiries regarding survey monument referencing or any other monument related issues to: Monument.Preservation@sfdpw.org.

CCSF BSM Monument Referencing Regulations

Survey monuments are essential to establishing and maintaining horizontal and vertical survey control for subdivisions, tracts, boundaries, roads, streets or highways and as a result are protected under California state law under Penal Code §605, Streets and Highways Code §732, 732.5, 1492.5, 1810.5, as well as Business and Professions Code §8725, 8771 and 8773.3.

It is the responsibility of the City and County of San Francisco, Public Works, Bureau of Street Use and Mapping Survey Division (BSM) to preserve these survey monuments and to maintain their exact positions over time.

Excavation permits are to follow Section 4.3 Survey Monuments PW Order 187005, permittees obligations, February 6, 2018.

Due to the potential for movement or disturbance of survey monument during construction, all monuments within 20 feet of any proposed construction must be located and referenced through a field survey and the filing of a Corner Record (see figure 4), or Record of Survey prior to any construction taking place.

This is to allow for optimal means of positional verification or replacement in the event that the monument is either potentially disturbed or removed by the construction.

Referencing can be conducted by a licensed Land Surveyor or the City and County of San Francisco Bureau of Street Use and Mapping, (CCSF BSM).

Figure 1

Some Typical Monuments with Well Casings



Figure 2

Some Typical Surface Monuments



Some Typical Surface Monuments Continued ~

"L" Cut	"T" Cut
	
"L" Cut in Yellow Curb Painting	"+ Cut Curb and "+ Cuts Armored Curb
	

Some Typical Surface Monuments Continued ~

Lead Plug with Brass Tack



Nail and Brass Tag in Lead Plug



Brass Tag and Rivet



Washer and Mag Nail



Figure 3

Photographic Review Request

Photograph One, Looking at Top of Curb




Photograph Two, looking along Property Line, Curb to Building



Figure 4

Typical Corner Record Page 1

CORNER RECORD		Document Number <u>22275</u>
City of <u>SAN FRANCISCO</u>	County of <u>SAN FRANCISCO</u> , California	
Brief Legal Description <u>NORTHEASTERLY LINE OF ASSESSOR BLOCK 4282A, LOT 4 NORTHERLY OF FONTINELLA TER</u>		

	<p style="text-align: center;">CORNER TYPE</p> <p>Government Corner <input type="checkbox"/> Control <input checked="" type="checkbox"/></p> <p>Meander <input type="checkbox"/> Property <input type="checkbox"/></p> <p>Rancho <input type="checkbox"/> Other <input type="checkbox"/></p> <p>Date of Survey <u>AUGUST 05, 2015</u></p>	<p style="text-align: center;">COORDINATES (Optional)</p> <p>N. _____</p> <p>E. _____</p> <p>Zone _____ NAD27 <input type="checkbox"/> NAD83 <input type="checkbox"/></p> <p>NAD83 Epoch _____</p> <p>Elev. _____</p> <p>Vert. Datum: NGVD29 <input type="checkbox"/> NAVD88 <input type="checkbox"/></p> <p>Meas. Units: Metric <input type="checkbox"/> Imperial <input type="checkbox"/></p>
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Corner— Left as found ☒ Found and tagged ☐ Established ☐ Reestablished ☐ Rebuilt ☐

Identification and type of corner found: Evidence used to identify or procedure used to establish or reestablish the corner:
SET REFERENCE POINTS FOR CITY SURVEY MONUMENT 22275. POINTS SET AS SHOWN ON
PAGE 2 OF 2. PRE-CONSTRUCTION

A description of the physical condition of the monument as found and as set or reset:
FOUND 8" DIAMETER WELL MONUMENT IN STREET CONCRETE BLOCK WITH BRASS DISK AND
PUNCHED IN THE MIDDLE STAMPED LS 3936. MONUMENT NAME 22275.

SURVEYOR'S STATEMENT

This Corner Record was prepared by me or under my direction in conformance with the Land Surveyor's Act on AUGUST 31, 2016

Signed *Neil D. King* P.L.S. or R.C.E. No. 8098

COUNTY SURVEYOR'S STATEMENT

This Corner Record was received 9/10/2017



and examined and filed 10/4/2017

Signed *[Signature]* P.L.S. or R.C.E. No. 6914

Title CITY AND COUNTY SURVEYOR

County Surveyor's Comment REFERENCE POINTS SET BY CITY SURVEY CREWS UNDER THE DIRECTION OF THE CITY AND COUNTY SURVEYOR.

RM/AK

Typical Corner Record Page 2

