

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

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Preface to this Draft (will not appear in final report)

This Committee was formed per motion at the May 2020 Chapter meeting to consider and report on issues submitted to it and of its choosing pertaining to surveying, mapping, and city map-checking in San Francisco. The below constitutes the **second draft** report of this Committee, and is very respectfully submitted to you the Chapter members for your consideration and feedback on the issues covered. It is the Committee's hope that this document will serve as a catalyst for discussion of the current and future state of surveying, mapping, and map-checking in San Francisco, leading to mutually acceptable resolution of issues presently outstanding, and a mutually beneficial and productive working relationship among and between private and public sector surveyors and organizations in San Francisco. Your opinions and feedback are kindly requested.

The following changes have been made from the first draft:

- [Additional questions have been added and are indicated in blue.](#)
- The questions have been re-ordered so as to be grouped more logically.
- The Committee Opinions have been titled "Opinion" rather than "Finding"
- [Introduction has been added and is in blue](#)
- [List of abbreviations has been added and is in blue](#)

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Introduction

This Committee was formed at the May 2020 Chapter meeting to consider and report on issues submitted to it and of its choosing pertaining to surveying, mapping, and city map-checking in San Francisco. This report constitutes the results of this effort, and represents the opinion of the Committee on the matters considered.

The Committee members represent a broad cross section of private practice land surveyors all having experience in conducting boundary surveys in San Francisco. As such, it is the Committee's belief that the opinions set forth in this report are appropriately considered as a reference and guide for private and public agency land surveyors, and as representative of the broad-based opinion of the professional land surveying community with direct expertise in San Francisco boundary surveys.

As many of the questions considered are ultimately matters of opinion, it is recognized that disagreements may arise between surveyors from time to time on these and other subjects. It is the Committee's opinion that should differences of opinion arise between private surveyors, or between private surveyors and public agency surveyors, that cannot be resolved by written communication, that these differences should be resolved by a timely meeting between the parties. The Committee believes that establishing and maintaining clear lines of communication between parties is essential to facilitating prompt resolution of such differences of opinion.

It is the Committee's hope that this document will serve as a catalyst for renewed advancement of the practice of surveying and mapping in San Francisco, and help foster a productive working relationship among and between private and public sector surveyors and organizations in San Francisco. It is the Committee's desire that this document be revisited, added to, and revised from time to time as needed by the Chapter so that it can serve as a continued useful reference of benefit to land surveyors in San Francisco into the future.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Table of Contents

1. BSM Technical Bulletin 2016-1 generally
2. BSM Technical Bulletin 2016-1 items
3. BSM requirement to tie to all maps within block
4. BSM requirement to base maps on CCSF-HPN
5. BSM requirement to locate sidelines of rear adjoiners in metes-and-bounds areas
6. BSM requirement to locate and show curb lines on maps
7. BSM required "Survey Completion Note"
8. BSM required "Vertical Subdivision Note"
9. BSM advisory "Western Addition Note"
10. BSM requirement for a linetype legend
11. BSM requirement to label assessor's block numbers of nearby blocks
12. BSM request to "label the parent tract"
13. BSM suggestions on maps generally
14. BSM proposed \$250 incomplete submittal fee for points of disagreement

List of Abbreviations and Definitions

BSM Bureau of Street-Use and Mapping, San Francisco Department of Public Works

CCSF-HPN City and County of San Francisco High Precision Network of 2013

GPS Global Positioning System

Maps As used in this Report, refers to Final Maps, Parcel Maps, and Records of Survey, unless otherwise noted

PLSA Professional Land Surveyors Act (California Business and Professions Code Section 8700 - 8805)

SF CLSA San Francisco Chapter, California Land Surveyors Association

SMA Subdivision Map Act (California Government Code Section 66410 - 66499.38)

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Questions Considered, Discussions and Committee Opinions

1. Question

Is the “Technical Bulletin 2016-1, Minimum Standards for 2016 Mapping Standards for surveying within the City and County of San Francisco” issued by BSM and signed by now-retired City and County Surveyor Bruce Storrs strictly enforceable by BSM.

Discussion

The 2016 Standards were issued by the former City and County Surveyor as a bulletin. This bulletin contains many generally supportable recommendations as well as some that in the Committee’s view are not supportable, based on state code and local code, ordinance or regulation and the local standard practice. This bulletin is not part of the Subdivision Code or Regulations.

Input from private sector surveyors was received and incorporated in this document, and it was generally supported by many in the professional surveying community in San Francisco at the time of its issuance. However, this document was not put forth for review or comment by SF CLSA at the time of its creation, has not been ratified by SF CLSA since its issuance, and has not been reviewed or revised since its issuance.

Opinion

At most this bulletin should be viewed as a guiding document to be used as a general reference, and not used as a strict set of rules to be applied to all surveys. It should only be viewed as supportable or enforceable to the degree that its assertions and requirements are supported by state or city code or regulation, or the local standard of practice.

2. Question

What is the Committee’s opinion of the requirements found within the BSM document entitled “Technical Bulletin 2016-1, Minimum Standards for Surveying within City and County of San Francisco”?

Item 1

Establish a minimum of 2 intersecting monument lines. One of these lines is to be labeled as the basis of survey or basis of bearings and referenced in a basis of

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

[survey/bearings note.](#)

Opinion

This standard is in keeping with the standard of practice in San Francisco and the Committee is therefore generally supportive of it.

Item 2

Each monument line requires a minimum combination of 3 ties to City monuments and/or right of way monument reference points. There may be exceptions to this if 3 ties are not practical, (e.g. in the Outside Lands).

Discussion

In areas where monument lines are established by reference to marks on buildings or similar, not actual street monuments, it is prudent to locate at least 3 marks per line, and this is the standard local practice. However, there are cases where it is not necessary or possible to locate 3 or more marks per line, including cases where many marks have been lost, monument district boundary lines are encountered, few marks exist generally and are far apart, or sufficient marks and supporting evidence are recovered to establish the relevant lines without resort to more 3 or more marks.

Opinion

It is recommended and prudent to locate at least 3 marks per line, but there are cases where this is not necessary, and it should be up to the discretion of the submitting surveyor to determine how many marks are necessary.

The Committee believes the following PLSA citation applies to this question, with regard to Records of Survey as stated, as well as in spirit to subdivision maps and corner records.

PLSA 8766 Record of Survey - Examination

(b) The examination pursuant to this section shall not require the licensed land surveyor or registered civil engineer submitting the record of survey to change the methods or procedures utilized or employed in the performance of the survey, nor shall the examination require a field survey to verify the data shown on the record of survey.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Item 3

Display all found right of way monument reference points and City monuments. Show measured and record distances. At a minimum, show all right of way monument reference points including City monuments immediately adjacent to the subject block. When applicable, maps may contain a note stating to the effect:

- a. Monument marks within the subject block not shown hereon were searched for, not found (sfnf).
- b. Monument marks were not accessible at the time of the survey (along with an explanation of the lack of accessibility).

Opinion

The Committee is generally supportive of the intent of this standard. We interpret this as meaning, and suggest it be re-worded to state:

Display all found monument line reference monuments and marks per city monument maps, for monument lines established for the particular survey, within the subject block.

Item 4

Monument Lines, block lines (right-of-way lines) and property lines are presumed to be 90 degrees unless otherwise evidenced by the original documents creating the property.

Opinion

This standard is in keeping with the standard of practice in San Francisco and the Committee is therefore generally supportive of it.

Item 5

Establish the right of way lines that are referenced in the subject deed and adjoining property deeds. This will generally result in the establishment of at least 3 of the right of way lines of the subject block.

Opinion

This standard is in keeping with the standard of practice in San Francisco and the Committee is therefore generally supportive of it.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Item 6

Show record and measured distance from established monument lines to established right-of-way lines.

Opinion

This standard is in keeping with the standard of practice in San Francisco and the Committee is therefore generally supportive of it.

Item 7

If an historic block diagram exists that contains the surveyed project, it must be referenced on the map. Any dimensions shown on the map that are taken from said historic block diagram and used as evidence to establish any boundary or right-of-way lines must be field verified.

Opinion

The Committee does not support this requirement for several reasons. In particular, it encroaches into the performing surveyor's discretion as to their methods of survey and boundary resolution and mapping, and it is not supported by the standard of practice in San Francisco. This requirement is presently not enforced by BSM as it was suspended after round-table discussions between the surveying community and BSM.

Therefore, the Committee recommends this item be removed from the Minimum Standards.

Item 8

Record information alone is not sufficient to resolve boundary lines for your project

Discussion

This requirement, and comments on redlines citing it, are the source of much confusion. It appears that in practice, BSM requires that some physical evidence be located and shown near most or all established lines on map, commonly including curb lines with reference to "official sidewalk widths" and building corners near block corners, regardless of how much or little record measurement evidence is used to support the lines established, or whether or not the submitting surveyor believes the requested information to be material to the establishment of the lines. This leads to much confusion and disagreement over what is required or appropriate in these cases.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

It is the committee's supposition that this statement was created with the goal of increasing the amount of physical evidence shown on recorded maps, from that required by the previous standard enforced by BSM prior to 2015, which discouraged the showing of evidence of possession, found points of unknown origin, and any evidence not of record generally.

Opinion

The Committee supports the supposed intent of this note as described above, and supports the move of the past several years toward a more complete mapping standard which encourages surveys that "stand on their own". However, the committee takes issue with the inconsistent and heavy-handed application of this general principle to cases where it is not warranted. This statement would be better understood and received if revisited and re-worded to more clearly indicate its intent. The following language is suggested:

Lines established shall be supported on the map by the evidence that was relied upon by the surveyor to establish those lines. A map should show the methods and evidence used, not omit evidence that suggests alternate positions for the lines established, and should be consistent with the purpose of the survey and the local standard of care.

There are many situations in which record information is relied upon heavily for establishment of lines, and is sufficient without resort to supporting evidence, and is presumed to be correct unless proven otherwise. The weight given to various forms of evidence including record information, and the necessity or non-necessity of verifying record information by reference to other evidence including possession, old curbs, etc., is a professional determination that must be made by, and should be left to, the performing surveyor, and should not be made subject to a rigid rule.

Item 9

Graphically show, or describe by note, all primary evidence used to support the resolution of right-of-way lines. This may include, but is not limited to:

- a. Record dimensions between established monument lines and right-of-way lines per city monument maps or subdivision maps.
- b. Found record or not-of-record monuments. Includes points set and shown on any recorded map.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

- c. Building occupation lines / any occupation affecting your resolution.
- d. City curb lines.

Opinion

The Committee is generally supportive of this standard.

Item 10

At a minimum, show all found monuments of record and not-of-record along established right-of-way lines in the area containing the subject property between the midpoint of the block and closest intersecting right-of-way lines located on the survey. If the subject property deed and adjoining property deeds tie to all 4 right of way lines, show all found monuments of record or not of record along the established right-of-way lines.

Discussion

This requirement is not supported by state or city code or regulation or the local standard of practice. It is an arbitrary and rigid standard that is not applicable to many surveys in San Francisco, and does not allow for independence of methods or procedures by the performing surveyor. It is supposed that this requirement was created with the goal of increasing the amount of evidence shown on maps relative to that shown previous to 2015 approximately. The committee agrees with this supposed goal, but believes that this requirement as written is overly strict and unsupportable.

Opinion

This requirement is not supportable as is, and the committee recommends it be removed altogether or replaced with language similar to the below to better express its supposed intent:

Lines established should be supported on the map by the evidence that was relied upon by the surveyor to establish those lines. A map should show the methods and evidence used and not omit evidence that suggests alternate positions for the lines established, consistent with the purpose of the survey.

Item 11

If San Francisco Public Works has set random points with an assigned monument name near the four corners of the surveyed block, locate all of these points and show location on map.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Discussion

It is the Committee's understanding that these random points are currently being set or have been set in many locations throughout the city. It is the Committee's understanding that the purpose of these points is to perpetuate the city monument lines, which are increasingly difficult to recover due to loss of existing reference marks over time.

Opinion

The Committee supports the general goal of perpetuating the monument lines, but takes issue with this mandate on a few points. First, it is the Committee's opinion that this method of perpetuating monument lines has not been thoroughly reviewed by the private surveying community and city surveyors. Second, the Committee notes that this requirement is not currently being adhered to by local surveyors, or enforced by BSM, making it essentially meaningless. Third, the Committee does not believe this mandate, and outsourcing of preservation of monument lines to the private surveying community, is strictly supportable inasmuch as it is not supported by city code or regulation, or supported by the local surveying community.

It is the Committee's opinion that further discussion of this subject is needed, such that broad-based support for a well-considered program of monument line preservation can be reached. At this time, the Committee does not support this requirement, and recommends that at a minimum this item be amended to state that it is recommended and optional, but not required, to tie these points.

Item 12

Tie all boundary lines of the subject property to established right-of-way lines.

Opinion

This standard is in keeping with the standard of practice in San Francisco and the Committee is therefore generally supportive of it.

Item 13

Monument all subject property corners, or offsets thereto, which are adjacent to public streets or rights-of-way. Describe character and location of set monuments.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Opinion

It is the Committee's opinion that this requirement is supportable and reasonable for Final and Parcel maps, and it is usually set forth in the conditions of approval for those projects. For Records of Survey, the standard practice generally is to monument subject property corners along the right-of-way as a general practice and the Committee is in support of this practice. However, it is the Committee's opinion that for Records of Survey, BSM has no authority under state or city code to dictate which lines or corners of a surveyed property be monumented.

The Committee therefore recommends this requirement be amended to state that it is recommended but not required.

Item 14

List on the map the vesting deed or most recent recorded map of subject and adjoining properties using the recording document number or instrument number in parentheses, E.g. (2016-K123456) or (47 P.M. 10). Only where a document number is not available, may a "Book and Page" or "Image and Reel number" be exclusively used, along with the date of recordation.

Opinion

The committee generally supports this requirement as in keeping with standard practice, although points out that the use of parentheses and the particular manner of referencing on the map should be left to the discretion of the surveyor. The Committee does not believe that a date of recordation need be required for "Book and Page" and "Reel and Image" type citations, and does not believe this requirement is supported by state or city code or the standard of practice.

Item 15

Plot the building(s) located on the subject property when the field survey was performed. Tie building corners directly to the property line in areas that are adjacent to public streets or rights-of-way. Be specific about where the measurement was taken. E.g. "set mark on building corner at wood siding 5.0 feet up". Describe the character of shown buildings. E.g. "4 story over basement wood frame building".

Opinion

The committee is generally supportive of this standard.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Item 16

Show all potential gaps or overlaps between the subject property and adjoining properties caused by title issues, block surplus or block shortages. Provide all evidence supporting conclusions, including but not limited to the McEnerney judgments.

Discussion

The committee supposes that this requirement is addressing the longtime practice of identifying and mapping “title gaps” or “gaps of unknown ownership” that are found to exist after a boundary resolution has been performed, usually due to block surpluses in certain parts of the city, peculiar deed configurations and errors, and loss of original land records due to the fire of 1906. However, of late, comments on maps have been received requesting that “potential” gaps or overlaps be shown in cases where the submitting surveyor believes there is no gap or overlap along the relevant line, in their opinion.

Opinion

The treatment of surpluses, shortages, gaps and overlaps in San Francisco is a complex subject beyond the scope of this document. All gaps and overlaps believed to exist, in the opinion of the surveyor, should be shown on the map, of course. However, the Committee takes issue with the use of the word “potential” in this context. This amounts to a request to show an “alternate boundary position”, a practice that the Committee is aware is somewhat common in other areas, but is not in San Francisco, and which is a significant request to make and one with important ramifications from the surveying, mapping, title, and liability perspectives. The identification of a “potential gap” or “potential overlap”, being the same as an “alternate boundary location” is not within the present local standard of practice, is a topic that warrants further discussion, and should be left to the discretion of the submitting surveyor.

Therefore, the Committee believes BSM should cease to make these requests in the general case, and that the word “potential” should be removed from this item on the Minimum Technical Standards.

Item 17

Any exceptions to the above guidelines must be explained when check print of map is submitted.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Opinion

It is the Committee's opinion that this requirement is not necessary, supportable, currently being followed, or currently being enforced. The "Minimum Standards", in the Committee's opinion, can be viewed at most as a guiding document, not a rigidly enforceable set of standards applicable evenly to all surveys. The appropriate test to apply to all submitted maps is whether the map meets applicable state and city code and the local standard of care. It is not appropriate or necessary to require the submitting surveyor to explain in advance every deviation from the "Minimum Standards".

Therefore, the Committee recommends this item be removed from the Minimum Standards.

3. Question

Is it appropriate for BSM to require, in instances at its discretion, that a surveyor locate monuments set by, and show the relationship to lines located by, all recorded maps in the subject block, that establish lines (including street lines) also established by the subject survey and map (commonly stated by BSM as "all maps having common lines of survey")?

Discussion

It has been observed that BSM, in certain instances and at its discretion, requires that a survey and map locate monuments and show the relationship between the subject survey and all recorded maps in the block having lines in common with the subject survey. In practice, in those portions of the city having a grid-like street layout and rectangular lots and block comprised of parcels described by metes and bounds, this commonly amounts to a requirements that any survey in a block tie into, locate the boundaries of, and reconcile the relationship with, all previous recorded maps and surveys in the block. The reason being that since any given survey map presently typically depicts three right of way lines (front, rear, and nearest side of a block), and maps in the other half of a block depict the same front and rear right of way lines, therefore those maps must be tied in, and the right of way at the other, far end of the block established, leading to the requirement to tie in all maps in the other half of the block.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Generally speaking, the standard of practice in these sorts of blocks is, and has been, to locate sufficient controlling evidence in the quadrant of the block containing the subject property, and use that evidence as controlling when resolving the boundaries of the subject property. For purposes of this discussion, a block may be considered as containing four 'quadrants', the quadrants being delineated by lines joining the midpoints of the four street lines bounding a block. Or, more accurately, being separated at the points on each street line where the deeds tying to one end of a block give way to the deeds tying to the other end of a block. In many cases, a surveyor may locate evidence of boundaries in the entire block, including monuments per recorded maps, survey marks of unknown origin, evidence of possession, old curbs, and so on, in case it should be of use during the boundary resolution, or if it is deemed necessary for a particular survey. However, it is that evidence in the quadrant of the block nearest the subject lot that is generally weighted most heavily in the boundary resolution process, and in the event of any conflict in patterns of boundaries in the various quadrants of the block, it is that evidence nearest the subject lot that is generally taken as controlling.

This practice of relying most heavily on that evidence in the subject quadrant of the block is in keeping with the historical methods of surveying in these areas of the city, and allows present day surveyors to follow in the footsteps of their predecessors. The reasons behind this general approach to boundary surveying in San Francisco, and the historical development of established boundary locations in San Francisco are complex subjects and beyond the scope of this document. Suffice it to say, however, that the current practice of surveyors in these areas of the city is in keeping with the methods of their predecessors, allows for accurate retracement of lines and buildings laid out using similar methods, and utilizes the nearest, best evidence of boundaries as most controlling, as is generally accepted good practice in surveying.

It is presumed that the goal of BSM in this requirement is to promote a more comprehensive mapping standard, in which a city block is mapped as a whole, and all maps of survey within it reconciled as to their various boundary resolutions, rather than the current and previous generally used method of defining and mapping only a portion or quadrant of a block. It is presumed that this is a desire prompted by the apparent fact, revealed by a review of maps in most any city block, and of common knowledge of surveyors in San Francisco, that a block may be susceptible of multiple locations depending on which map one looks at. Or, more accurately stated, that within a block in San Francisco, multiple different patterns of boundaries exist, which, if each is plotted

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

independently, would result in a block having multiple overages or shortages, jogs in the street lines, and overlaps, gaps, or discrepancies at the rear corners common to multiple lots. This reality of San Francisco boundaries, which is a unique product of the city's title and boundary history, development and construction, and unique surveying methods, is presumed to have given rise to an understandable desire on the part of BSM to 'nail down' and fix in location, these blocks as a whole.

However, notwithstanding the logical-on-its-face nature of this requirement, and the understandable goals presumably underlying it, the Committee takes issue with this requirement on a few points. First, it amounts to a mandate to implement an entirely new method of boundary location in San Francisco without prior consultation with, feedback from, or support of, the local surveying community. Second, this new method, which forces reconciliation of the multiple patterns of boundaries existing in many blocks, will produce unintended consequences such as entirely novel surpluses, shortages, overlaps, gaps, jogs and the like, having implications on boundary location, title insurance, and the public. Third, this new method flies in the face of the present method, which adheres to the historical method, and will therefore by definition force surveyors to not follow in the footsteps of their predecessors, violating a fundamental tenet of land surveying.

Opinion

For the reasons outlined above, the Committee believes that it is not appropriate for BSM to require, in instances at its discretion, that a surveyor locate monuments set by, and show the relationship to lines located by, all recorded maps in the subject block, that establish lines also established by the subject survey and map.

Ultimately, most surveys in these blocks in San Francisco amount to an attempt to harmonize a multitude of more or less conflicting evidence including recorded maps, deeds, modern and old survey marks, and evidence of possession. This difficult task can typically be completed with satisfactory results for a portion or quadrant of a block - this is the method used currently and historically in this city, and results in definitive and well controlled boundaries for the subject lot and surrounding lots. However, the same cannot be said for a definitive survey of an entire block - a study and definition of the boundaries for an entire city block is a major undertaking, and is not believed to be always necessary for the satisfactory performance of every boundary survey in a block.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

In the final analysis, this requirement touches upon issues of professional practice and standard of care. It amounts to a rigid mandate that is enforced regardless of the particular facts of a particular survey, frequently against the judgment of the surveyor, against the local long-standing practice, without consultation with the local practicing surveyors, without support of the local practicing surveyors, and amounts to a dictate on the chosen methods of the submitting surveyor. The Committee wholeheartedly supports discussion and consideration of the complexities of boundary surveying in San Francisco, including this most difficult of issues - however, the Committee does not support the unannounced introduction of this requirement by BSM, for all the above reasons.

The following statement is believed to apply to this situation:

Lines established should be supported on the map by the evidence that was relied upon by the surveyor to establish those lines. A map should show the methods and evidence used and not omit evidence that suggests alternate positions for the lines established, consistent with the purpose of the survey and the local standard of care.

Also, the below citation in the PLS Act is believed to apply, in letter as stated to Records of Survey, and in spirit to Parcel and Final Maps.

PLSA 8766 Record of Survey - Examination

(b) The examination pursuant to this section shall not require the licensed land surveyor or registered civil engineer submitting the record of survey to change the methods or procedures utilized or employed in the performance of the survey, nor shall the examination require a field survey to verify the data shown on the record of survey.

4. Question

Is it appropriate for BSM to require, as a condition of approval of tentative maps or otherwise, that recorded maps be based upon the 2013 City and County of San Francisco High Precision Network (CCSF-HPN) and Coordinate System?

Discussion

It has been reported that BSM, on some occasions and based upon unknown factors, requires as a condition of approval of tentative maps, that subdivision maps be tied to and based upon the CCSF HPN and coordinate system. This issue has been

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

addressed by the chapter at large by letter to the County Surveyor dated August 18, 2020, and the Committee shares the chapter's expressed concerns with this requirement, outlined here as follows.

These requirements were implemented without outreach, notice, or justification to SF CLSA or local surveyors, are without apparent basis in the subdivision code or regulations, have not been disseminated in any form and are being applied irregularly, based on unknown factors, making it impossible to anticipate or plan for them efficiently.

At the present time CCSF-HPN is not readily accessible to all surveyors due to the sparseness of its monuments, and as advanced GPS techniques may be required to access it, both of which factors increase the cost of connecting to it.

These requirements necessitate additional field and office time be spent solely to satisfy them, the cost of which is borne by the project sponsor, or, failing that, by the individual surveyor, and are being applied to projects already underway, thus forcing existing maps to be altered and existing documents to be re-drafted, causing confusion among users including attorneys, architects, engineers and contractors, increasing cost and the chance of errors.

The best practice for agencies desiring these sorts of requirements is to first conduct outreach to stakeholders, and then implement broadly supported requirements by ordinance. BSM, in contrast, implemented these unilaterally and without notice.

Opinion

For the reasons outlined above, it is the Committee's opinion that it is not appropriate for BSM to require, as a condition of approval of Tentative Maps or otherwise, that recorded maps be based upon the 2013 City and County of San Francisco High Precision Network (CCSF-HPN) and Coordinate System.

5. Question

Is it appropriate for BSM to require dimensioning of lengths of sidelines of rear adjacent lots, and locating of sidelines of rear adjacent lots relative to the end of the block, in a typical rectangular lot and block configuration?

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Discussion - depth of block

The location of the lines of the subject property should be located and dimensioned, and their relationship to adjacent surveys and/or parcels should be shown. The location of the right of way at the rear of the block should be established, if that right of way is called for in the deeds to the subject or adjacent parcels. The purpose is to establish the depth of the block, the depths of the subject and rear adjacent lots, and identify any gaps or overlaps along the common rear lines, if any exist.

Opinion - depth of block

In a rectangular lot and block configuration, the depth of the block from the street on which the subject parcel fronts, through to the street on which the rear adjoiners front, should be established. In this case, the distance from the right of way at the front of the block to the right of way at the rear of the block should be labelled, by whatever method is deemed appropriate to the survey and map by the surveyor. Common and acceptable methods of such labelling include labelling the overall depth of the block, or labelling the depths of the subject and rear adjacent lots, or both. The depth of the rear adjacent lots should be either directly labelled or ascertainable by simple calculation from the face of the map. If there is any discrepancy with the record dimensions, the record and measured dimensions should be shown. It is not appropriate for BSM to require dimensioning of one or more sidelines of rear adjacent lots if the length of those lines is ascertainable from the map by calculation and no discrepancies with record exist, as this is an issue of style rather than technical correctness.

Discussion - sidelines of rear adjoiners, lateral position

The location of the sidelines of the rear adjoiners relative to the end of the block should be established and dimensioned if material to the survey. If not material, the location of those sidelines relative to the end of the block need not be established or dimensioned.

Opinion - sidelines of rear adjoiners, lateral position

The necessity to establish and dimension the sidelines of the rear adjoiners relative to the end of the block is dependent on whether or not the location of those lines is material to the survey. If it is not material, there is no necessity. If it is material, it is necessary.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

6. Question

Is it appropriate for BSM to require curb lines be located and shown on maps, at its discretion?

Discussion

It has been observed that BSM frequently suggests or requires that curb lines be located and shown on maps, and that the distance from the curb line to right of way line be noted and compared to the record dimension per the City Grade Maps.

In San Francisco, curb lines and official sidewalk widths are, generally speaking, not weighted heavily in the boundary resolution process. This is due to a variety of factors, including the availability of more relevant and controlling evidence such historic and modern boundary line markers, historic and modern survey records, city monument lines, building possession lines, and, in many districts, a lack of documented connection between the construction of the curbs and the original survey of the area, if any. In some cases, of course, curb lines are relied upon for a boundary determination, but in most cases they are not considered as material to the boundary resolution, for the above reasons. The utilization or not of curbs is a determination made by the performing surveyor based upon the facts of the particular survey.

Opinion

For the reasons discussed above, it should be left to the discretion of the surveyor to determine the relevance of curbs to the survey. If curbs were relied upon as material to the boundary resolution, they should be shown upon the map. If they were not, they need not be shown.

It is not presently, nor has it been in the past, standard practice to always locate and map curb lines, either for documentation or for boundary resolution support purposes. The committee does not at this time support a change in the standard practice such that curb lines always be shown regardless of their relevance to the boundary resolution.

The committee believes the following statement applies to this topic:

Lines established should be supported on the map by the evidence that was relied upon by the surveyor to establish those lines. A map should show the methods and evidence

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

used, and not omit evidence that suggests alternate positions for the lines established, consistent with the purpose of the survey and the local standard of care.

7. Question

Is it appropriate for BSM to require that all maps include the following statement:

Field Survey Completion:

The field survey for this map was completed on mm/dd/yyyy. All physical details including city and private monumentation shown hereon existed as of the field survey completion date, unless otherwise noted.

Discussion and Opinion

It is stated by BSM that BSM instituted the requirement for this statement, in 2018 approximately, for the purpose of clarifying the time period of field surveys. The Committee supports the spirit of this goal and believes that the time period of field surveys should and indeed must be stated on maps.

However, it is the Committee's opinion that for BSM to mandate this specific statement be included on all maps is problematic in several ways. First, this statement was introduced and made mandatory by BSM without outreach or notice to SF CLSA or the local land surveying community. Second, the two subjects of this statement, being the time period of the field survey and completeness of the information on it, are already both specifically required to be included on maps per the SMA and PLSA, making the statement entirely redundant. Third, the requirement for this statement is not set forth or supported by any local code or regulation, making it unsupportable as a mandatory requirement.

The following sections of the SMA and PLSA are pertinent to this discussion and are explained as follows. Emphasis by underline added.

SMA 66441 (Final Maps)

A statement by the engineer or surveyor responsible for the survey and final map is required. His or her statement shall give the date of the survey, state that the survey and final map were made by him or her or under his or her direction, and that the survey is true and complete as shown. The statement shall also state that all the monuments are of the character and occupy the positions indicated, or that they will be set in those

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

positions on or before a specified later date. The statement shall also state that the monuments are, or will be, sufficient to enable the survey to be retraced

The above section, applicable to Final Maps, specifically requires the same information required by BSM, and requires that this information be set forth in the Surveyor's Statement. The following section, applicable to Final Maps, sets forth the exact form of the Surveyor's Statement. Emphasis by underline added.

SMA 66442.5. (Final Maps)

The following statements shall appear on a final map:

Engineer's or Surveyor's statement:

This map was prepared by me or under my direction and is based upon a field survey in conformance with the requirements of the Subdivision Map Act and local ordinance at the request of (name of person authorizing map) on (date). I hereby state that all the monuments are of the character and occupy the positions indicated or that they will be set in those positions before (date), and that the monuments are, or will be, sufficient to enable the survey to be retraced, and that this final map substantially conforms to the conditionally approved tentative map.

It appears that some surveyors interpret the date in the above statement to mean the date of request of survey, not the date of survey. It is the Committee's opinion that the above two sections, taken together, clearly indicate that the date in the statement is to be the date of survey. This opinion is further supported by the fact that a statement similar to BSM's required statement is not known to be required in any other of the Bay Area or California counties.

The above SMA citations pertain to Final Maps. Regarding Parcel Maps, there is no section equivalent to SMA 66441 above, which sets forth the information that must be contained in the Surveyor's Statement. However, the Surveyor's Statement itself is set forth, as follows. Emphasis by underline added.

SMA 66449 (Parcel Maps)

The following statements shall appear on a parcel map:

Engineer's or Surveyor's statement:

This map was prepared by me or under my direction (and was compiled from record data) (and is based upon a field survey) in conformance with the requirements of the

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Subdivision Map Act and local ordinance at the request of (name of person authorizing map) on (date). I hereby state that this parcel map substantially conforms to the approved or conditionally approved tentative map, if any.

As the above statement is substantially similar to the Final Map statement, it is the Committee's opinion that the date in this statement is also meant to be the date of survey. Also, as all Parcel Maps in San Francisco are required to be based upon a field survey, the below statement must also be incorporated in the Surveyor's Statement on all Parcel Maps, rendering the Surveyor's Statement on Parcel Maps and Final Maps in San Francisco essentially the same. Therefore, it is the Committee's opinion that the SMA required statement for Parcel Maps, as for Final Maps, covers the same subjects covered by BSM's required statement.

SMA 66445(i) (Parcel Maps)

(i) If a field survey was performed, the parcel map shall contain a statement by the engineer or surveyor responsible for the preparation of the map that states that all monuments are of the character and occupy the positions indicated, or that they will be set in those positions on or before a specified date, and that the monuments are, or will be, sufficient to enable the survey to be retraced.

Regarding Records of Survey, the specific form of the Surveyor's Statement is also set forth, as follows.

PLSA 8764.5 (Records of Survey)

Record of survey – required statements Statements shall appear on the map as follows:

SURVEYOR'S STATEMENT

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Professional Land Surveyors' Act at the request of _____ in _____, 20 _____. Name of Person Authorizing Survey (Signed and sealed) _____ L.S. (or R.C.E.) No. _____

As in the case of Final and Parcel Maps, it is the Committee's Opinion that the statement on Records of Survey is clear as to its intent that the date in the statement is to be the date of survey.

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

It is noted that many if not most surveys take place over a period of days, months, or even years. It is recommended and believed to be standard practice that the date in the statement be the date of completion of the survey. In cases where the survey takes place over an extended period of time, an additional note may be placed on the map setting forth the time period of the survey and any other explanatory notes that the performing surveyor believes would aid in the interpretation of the map.

In summary, the Committee's opinion is:

1. The date of survey must be stated in the Surveyor's Statement on Final Maps, Parcel Maps, and Records of Survey, as per the SMA and PLSA.
2. The monuments, lines, and measurements depicted on the map must be true and complete as shown, as per the SMA and PLSA, and this required assertion is made by the Surveyor's Statements required by the SMA and PLSA on Final Maps, Parcel Maps, and Records of Survey.
3. For multi-day surveys, the recommended practice is to put the date of completion of field work in the statement. For unusual or very long surveys, the surveyor may, if they so choose, make additional notes, of a form of their choosing, describing the time period of the survey and any other information they deem helpful to interpretation of the map.
4. The statement currently required by BSM is wholly redundant, is not supported by City code or regulation, and is in the Committee's opinion not appropriate to make a requirement on maps.

8. Question

Is it appropriate for BSM to require the following note be added to airspace or vertical subdivision maps, as is their current practice?

THIS SUBDIVISION OF LAND CONTAINS A VERTICAL SUBDIVISION OF AIRSPACE. AIRSPACE SUBDIVISIONS OFTEN NECESSITATE RECIPROCAL EASEMENT AGREEMENTS SUCH AS BUT NOT LIMITED TO ACCESS, MAINTENANCE, UTILITIES, SUPPORT, ENCROACHMENTS, EMERGENCY INGRESS AND EGRESS, PERMITTED USES, NO BUILD ZONES, ENVIRONMENTAL HAZARDS, ETC. SOME OF THESE REQUIREMENTS MAY HAVE A PUBLIC NATURE TO WHICH THE CITY AND COUNTY OF SAN FRANCISCO IS OR SHOULD BE A BENEFICIARY. USERS OF THIS MAP ARE ADVISED TO CONSULT THEIR TITLE COMPANY AND LEGAL COUNSEL TO DETERMINE WHETHER ADEQUATE

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

PROVISIONS ARE PRESENTLY ON RECORD AND ARE SUFFICIENT AND ENFORCEABLE.

Discussion

The above note was introduced as a mandatory required note on all 3-dimensional airspace subdivision map fairly recently by BSM. It was introduced without prior outreach to the local practicing surveyors or SF CLSA, without explanation as to the reasons for it, and without reference to any code, regulation, or standard-of-care-based reason supporting BSM's authority to require it.

The note itself appears to be essentially a disclaimer or warning regarding possible issues that may arise in connection with airspace subdivisions.

Opinion

It is the Committee's opinion that it is not appropriate for BSM to require that this note be added to all airspace maps. The Committee takes issue with the lack of outreach prior to the introduction of this note and the lack of explanation as to the need for or benefit of it. The Committee believes that it is not within BSM's authority to require this note without it being required by City code or regulation.

The Committee believes that as this note is essentially a blanket disclaimer and warning, it is not directly material to the actual purpose of a subdivision map, which is a legal document for purposes of subdividing land, and does not typically include disclaimers or warnings to future purchasers of real estate. The Committee also questions whether the presumed purpose of the note, to advise potential purchasers of airspace parcels of possible issues with such parcels, is actually well served by this note appearing on airspace maps. The Committee suggests that if BSM wishes to pursue this note or subject further, it conduct outreach to CLSA and the surveying community prior to doing so.

9. Question

Is the comment below, commonly made by BSM to the surveyor on maps in the Western Addition, correct or necessary to be made by BSM?

*"GENERAL NOTE TO MAP PREPARER:
"WESTERN ADDITION BLOCK NO.xxx*

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

BLOCKS EXISTED PRIOR TO THE MONUMENT LINES BEING ESTABLISHED. PLEASE DEMONSTRATE BLOCK DIMENSIONS INDEPENDENT OF MONUMENT LINES. RESOLUTION OF EACH BLOCK IN THE "WESTERN ADDITION" MAY BE CONSIDERED INDEPENDENT OF THE OTHER ADJOINING BLOCKS AND ALSO INDEPENDENT RELATIVE TO THE CITY MONUMENT LINES. A SURVEY OF THE PHYSICAL STRUCTURES OF OCCUPATION MAY BE FOUND TO BE IN AGREEMENT WITH THE RECORD BLOCK DIMENSIONS IF THE SURVEY DOES NOT ATTEMPT TO HOLD THE MONUMENTS LINES. IN CASES WHERE SUCH HARMONY EXISTS, THE BLOCK LINES MAY BE HELD AS EVIDENCED BY THAT PHYSICAL OCCUPATION. HOWEVER, MONUMENT LINES SHOULD IN ALL CASES BE SHOWN WITH BOTH RECORD AND MEASURED TIES LABELED ACCORDINGLY. ALSO NOTE THAT IN ADJUSTING BLOCKS LINES TO BEST FIT THAT WHICH IS EVIDENCED BY OCCUPATION, THERE MAY BE SOME MINOR DEVIATION FROM THOSE STREET WIDTHS INDICATED BY OFFICIAL CITY GRADE MAPS. REGARDLESS OF EFFECT, BOTH RECORD AND MEASURED STREET WIDTHS SHOULD BE SHOWN."

Discussion

The reason for the making of this note is not known to the Committee. This note is not used or given weight by the members of the Committee. The general intent of the note applies to most areas of the city, not just the Western Addition. The portion of the note requiring record and measured street widths is not presently adhered to by members of the committee, is not presently enforced by BSM, is not seen to be followed on maps of others, and is not necessary as part of a survey in the Western Addition.

Opinion

BSM should cease to add this note to maps in the Western Addition or anywhere else, as it is not utilized by surveyors in this committee, or in San Francisco generally, contains requirements that are not necessary, supportable, or enforced, and is not specifically applicable to the Western Addition alone.

10. Question

Is it appropriate for BSM to require a linetype legend on all maps?

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Discussion

The nature of the lines on the map should be made clearly ascertainable from an inspection of the map, either by use of proper and commonly accepted map drafting techniques, or by inclusion of a legend, or both. Commonly used linetypes denoting the subject parcel, other parcels, right of way lines, monument lines, center lines, easement lines, and dimensional lines may be utilized, together with commonly used annotation and map drafting techniques, such that a legend of linetypes is not necessary for interpretation of the map. Lines that are subject to confusion as to their nature should be labelled directly or made clear by appropriate map drafting measures or by utilization of a legend.

Opinion

The inclusion of a linetype legend is not required by State or City code or regulation, or the local standard of practice. The nature of the lines on the map should be made clearly ascertainable from an inspection of the map, either by use of proper and commonly accepted map drafting techniques, or by inclusion of a legend, or both, at the discretion of the surveyor.

11. Question

Is it appropriate for BSM to require assessor's block numbers of blocks other than the subject block be labelled on the map?

Discussion

The labelling of assessor's numbers generally is not known to be required by any State or City code or regulation. The standard local practice is to label the assessor's numbers of the subject block, subject lot, adjacent lots, and the proposed assessor's parcel numbers of any new lots or units.

Opinion

The Committee recommends the assessor's number of the subject block, subject and adjacent lots, and any other lots and blocks shown on the map that the surveyor may desire, be labelled, in keeping with the standard local practice. The manner of labelling and use of abbreviations should be at the discretion of the surveyor, and done in such a way that it is clear that the numbers indicated are assessor's numbers and not subdivision lot and block numbers. The Committee believes that it is not appropriate for

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

BSM to absolutely require labelling of any assessor's block or lot numbers on the map, as this is not known to be required by any State or City code or regulation.

12. Question

Is it appropriate for BSM to request the surveyor to “label the parent tract” (usually referring to historic block number, for example “50 vara block 20”, “western addition block 45”, etc.) on the face of the map, if it is already noted in the title block?

Discussion

It is observed that BSM frequently requests the “parent tract” be labelled on the map portion of a map, regardless of whether it is noted in the title block or not. Frequently, the information being referred to is in fact the historic ‘city block number’ of the subject block, not actually a reference to a ‘parent’ map parcel or conveyance at all. In most cases this historic reference information is referenced in the legal descriptions, on current assessor’s maps, and in various other survey records.

The present and past standard practice is and has been to note this historic reference information on the map as a matter of course, whether or not it is of title or survey significance, either directly in the map area or in the title block of the map.

Opinion

The historic block or parent tract information may not be technically necessary to be depicted on the map in all cases, based upon State or City code or regulation, or the facts specific to the survey. However, the local standard practice is and has been to note this information on the map in all cases in some fashion, according to the preference of the preparer. The committee recommends the continuance of this practice as it adds context and aids in historical research.

However, the committee finds it inappropriate of BSM to specify the precise manner in which this information is depicted, as this constitutes a comment on the style of the map, not its technical correctness, and should be left to the discretion of the preparer.

13. Question

What is the Committee’s opinion regarding BSM making suggestions on map reviews, generally speaking?

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

Discussion and Opinion

It is the Committee's opinion that suggestions should be kept to an absolute minimum and reserved for material and substantive items only. The Committee recommends that in no case should suggestions be made to add information to the map that is not required by the SMA, PLSA, City code or regulation, the local standard of practice, or that pertain to the style of the map rather than its technical or substantive aspects. Suggestions of this type include: requests for assessor's block numbers of adjacent blocks, requests to tie in extraneous monument lines having no bearing on the subject block, and requests to locate and dimension the sidewalk width and compare it to the grade map when it is not material to the survey. An excessive volume of such suggestions renders the weight of meaningful suggestions less and results in a map unduly burdened with red ink, increasing the time and difficulty of addressing the map review comments.

It is the Committee's observation that the number of suggestions and comments on maps has risen greatly over the past several years, and particularly over the past two year approximately, to the detriment of the public-private surveyor relationship, the increased cost of addressing map reviews borne by the client, and to the benefit of no-one. The Committee believes a reduction in unnecessary editorial suggestions and requests on maps would do a great deal toward reversing these negative trends.

14. Question

Is it appropriate for BSM to charge a \$250 "incomplete submittal" fee for "failure to address revision comments" if those comments were addressed by memo instead of complied with by revisions to the map?

Discussion

It has been observed that when differences of opinion have arisen over map review comments, BSM has threatened to charge a \$250 fee for "incomplete submittal", for the reason that the surveyor has not complied with requested map revisions on the map, but has instead addressed the comments by explanation in a memo.

Opinion

In the Committee's opinion, it is not appropriate for BSM to do this. A submittal cannot be fairly deemed incomplete if it addresses all comments, either on the face of

San Francisco Surveying and Mapping Committee

Draft Report 2021-02-04

the map or by memo. Surveying is a professional practice and differences of opinion are inevitable. These differences of opinion, if unable to be resolved by written communication, should be resolved by a meeting or in some other fashion in a professional manner. The use of the threat of a \$250 fee to force compliance with specific map comments, against the professional judgment of the performing surveyor, is unprofessional, unproductive, and unsupportable.