

**AMERICAN SURVEYING & MAPPING INC.**  
*a land surveying and survey coordination company*  
**OVERVIEW**  
*of the*  
**REQUIREMENTS for ALTA/ACSM LAND TITLE SURVEYS**

American Surveying and Mapping, inc. (ASM) coordination service provides ALTA and ALTA like surveys to its clients. Our coordination service manages all aspects of the survey element of a transaction. We provide these management services for clients on their properties throughout the United States and abroad. Our coordination service utilizes many resources. 1. In-house resources 2. Combination of in-house resources with other licensed survey companies 3. Our "National Team" of land survey companies. ASM plays an important role in the survey element of a real estate transaction by offering its clients a single source company to rely on to fill all their ALTA/ACSM land title surveys needs. The benefit of this service is that it allows the client to make one phone call to satisfy their needs without having to go through the tedious process of qualifying, quoting, scheduling and negotiating with many different land surveying companies throughout all fifty states or international. The coordination service also facilitates standardizing the presentation, billing, format, qualifications, document gathering and receiving and communication phase of the land surveying part of a transaction. ASM's goal is to be an extension of its client's operation by providing a central processing center for all of its client's ALTA/ACSM land survey needs. American Surveying and Mapping inc. has created a standard template to be used on all ALTA / ACSM land title surveys. We have created special instructions for all the surveyors that are participating in our national surveyors' team. These instructions together with the standard format allow us to control a very important element on a transaction. The initial ordering of the survey to receiving the final products has been carefully thought out and used to create our process. Below is the current ALTA / ACSM land title survey standards. We have taken a narrative approach in red to explain some of the many parts of our standardized service and format.

**2005 MINIMUM STANDARD DETAIL REQUIREMENTS FOR  
ALTA/ACSM LAND TITLE SURVEYS**  
*as adopted by*  
**American Land Title Association**  
*and*  
**National Society of Professional Surveyors**  
*(a member organization of the American Congress on Surveying and Mapping)*

It is recognized that members of the American Land Title Association (ALTA) have specific needs, peculiar to title insurance matters, which require particular information for acceptance by title insurance companies when said companies are asked to insure title to land without exception as to the many matters which might be discoverable from survey and inspection and not be evidenced by the public records. In the general interest of the public, the surveying profession, title insurers and abstracters, ALTA and the National Society of Professional Surveyors, Inc. (NSPS) jointly promulgate and set forth such details and criteria for standards. It is recognized and understood that local and state standards or standards of care, which surveyors in those respective jurisdictions are bound by, may augment, or even require variations to the standards outlined herein. Where conflicts between the standards outlined herein and any jurisdictional statutes or regulations occur, the more restrictive requirement shall apply. It is also recognized that title insurance companies are entitled to rely on the survey furnished to them to be of an appropriate professional quality, both as to completeness and as to accuracy. It is equally recognized that for the performance of a survey, the surveyor will be provided with appropriate data which can be relied upon in the preparation of the survey.

ASM's service begins by gathering information from the client and providing it to the assigned team of national surveyors. ASM is in constant communication with both the client and surveyor through a well managed process. We keep the client apprised on the progress of the project with our automated status reports. We work with the surveyors to stay on schedule along with tracking the information the surveyors need to create an accurate ALTA/ACSM Land Title Survey. Every ASM client receives a detailed request for information in a professional report. ASM follows the request outlined on "Scope of Service form" to be sure all the request and deadlines are met. The quality control department will review the surveys to assist the clients in obtaining their needs. This review process includes verifying that the legal description on the survey coincides with the one in the title commitment, that the surveyors have addressed all of the schedule "b" items from the title commitment and that the survey is presented on ASM standard format.

Every ASM ALTA/ACSM survey will have the following items identified in a table "ALTA/ACSM Land Title Survey Identification Table" found in the lower left corner of the survey:

- "1A" – "Title Information"
- "1B" – "Title Description"
- "1C" – "Schedule "B" Items"

"2A" – "Surveyor's Certificate"  
 "2B" – "Type of Survey"  
 "3" – "Surveyor's Notes"  
 "4A" – "North Arrow & Scale"  
 "4B" – "Legend & Abbreviations"  
 "5A,3" – "Bearing Basis"  
 "5K" – "Cemetery Note"  
 "8" – "Surveyor's Notes"  
 "11" – "Possible Encroachment List"  
 "2" - "Table A" – "Vicinity Map"  
 "3" - "Table A" – "Flood Information"  
 "4" – "Table A" – "Land Area"  
 "6" – "Table A" – "Zoning Information"  
 "7b" – "Table A" – "Building Area"  
 "7c" – "Table A" – "Building Height"  
 "9" – "Table A": - "Parking Stalls"  
 "10" – "Table A" – "Access to Property"  
 "13" – "Table A" – "Adjoining Owners"  
 "14" – "Table A" – "Intersecting Street"  
 "16" – "Table A" – "Earth Moving Note"  
 "18" – "Table A" – "Dump, Sump or Landfill Note".

For a survey of real property and the plat or map of the survey to be acceptable to a title insurance company for purposes of insuring title to said real property free and clear of survey matters (except those matters disclosed by the survey and indicated on the plat or map), certain specific and pertinent information shall be presented for the distinct and clear understanding between the client (insured), the title insurance company (insurer), and the surveyor (the person professionally responsible for the survey). These requirements are:

1. The client shall request the survey or arrange for the survey to be requested and shall provide a written authorization to proceed with the survey from the person responsible for paying for the survey.

A. For convenience ASM's request for information includes an "Authorization to Proceed" contained in the "Scope of Service" form that is acknowledged by the client. The scope of services in the client's "Authorization to Proceed" is the same as included in the scope of services in the agreement between ASM and the surveyors.

Unless specifically authorized in writing by the insurer, the insurer shall not be responsible for any costs associated with the preparation of the survey. The request shall specify that an "ALTA/ACSM LAND TITLE SURVEY" is required and shall designate which of the optional items listed in Table A are to be incorporated.

B. ASM's client "Scope of Service" template includes a "Table A" optional survey responsibilities and specifications form with ASM's standard options checked off. If additional items are required, then the client simply marks the appropriate boxes. This "Table A" form is also available on ASM's on-line order form.

The request shall set forth the record description of the property to be surveyed or, in the case of an original survey, the record description of the parent parcel that contains the property to be surveyed. Complete copies of the record description of the property (or, in the case of an original survey, the parent parcel), any record easements benefiting the property; the record easements or servitudes and covenants burdening the property ("Record Documents"); documents of record referred to in the Record Documents; and any other documents containing desired appropriate information affecting the property being surveyed and to which the survey shall make reference shall be provided to the surveyor for notation on the plat or map of survey.

C. This available information allows the surveyors to properly identify the subject property and avoid any miscommunication. ASM's request forms and status report procedures track these items from its clients to insure its surveyors have adequate information to produce their land surveys.

D. ASM's surveyors identify information provided on the survey in the following manner:

1. The "Title Information" or title commitment identification information, is located on the top right of the survey drawing and is labeled "1A".
2. The "Title Description" or legal description is directly below the title commitment identification information and is labeled "1B".
3. The "Schedule "B" Items" or survey related items are noted on the lower left side in a box labeled "1C" with each survey related item identified consistent with the exception number circled.
4. The "Surveyor's Certificate" is on the lower right corner and is labeled "2A".
5. The "Type of Survey" is above the "Surveyor's Certificate" and is labeled "2B".
6. The "Surveyor Notes" "3"; "Land Area" "4" and other surveyor notes are below the title description and above the type of survey.
7. The "North Arrow and Scale" "4A" and other property information including "Vicinity Map" "2", "Possible

Encroachment List" "11", "Flood Information" "3", "Legend & Abbreviations" 4B" and "Zoning Information" "6"" are above the Schedule "B" Items.

E. If there are several parcel descriptions that make up subject property the note corresponding to the exception will identify each parcel as it applies.

2. The plat or map of such survey shall bear the name, address, telephone number, and signature of the professional land surveyor who performed the survey, his or her official seal and registration number, the date the survey was completed, the dates of all of the surveyor's revisions and the caption "ALTA/ACSM Land Title Survey" with the certification set forth in paragraph 8.

A. Information pertaining to the name of the licensed surveyor is included in the "Surveyor's Certificate", "2A" in the lower right of the survey.

B. The identification of the "Type of Survey" is identified in a box along the right side of the border and identified as "2B".

3. An "ALTA/ACSM LAND TITLE SURVEY" shall be in accordance with the then-current "Accuracy Standards for Land Title Surveys" ("Accuracy Standards") as adopted, from time to time by the National Society of Professional Surveyors and the American Land Title Association and incorporated herein by reference.

This statement appears in the ASM standard "Surveyors Certificate" as "2A".

4. On the plat or map of an "ALTA/ACSM LAND TITLE SURVEY," the survey boundary shall be drawn to a convenient scale, with that scale clearly indicated. A graphic scale, shown in feet or meters or both, shall be included. A north arrow shall be shown and when practicable, the plat or map of survey shall be oriented so that north is at the top of the drawing. Symbols or abbreviations used shall be identified on the face of the plat or map by use of a legend or other means. If necessary for clarity, supplementary or exaggerated diagrams shall be presented accurately on the plat or map. The plat or map shall be a minimum size of 8½ by 11 inches.

ASM has made provisions in most cases to reduce a typical 24x36 drawing into an 11 x 17 drawing and still maintain legibility. ASM's drafting standards outlines specific text, line widths, sizes and colors. When the larger and more difficult to manage drawings are reduced to 11"x 17" the reduced drawing is very convenient for clients to review and manage. This also allows a more affordable way to produce a color print of the survey with specific items easily identifiable such as easements, encroachments etc.

A. The directional "North Arrow & Scale" of the drawing is situated in a box identified by "4A"

B. The "Legend and Abbreviations" are labeled "4B". These abbreviations and symbols are typical except where a local jurisdiction dictates otherwise.

5. The survey shall be performed on the ground and the plat or map of an "ALTA/ACSM LAND TITLE SURVEY" shall contain, in addition to the required items already specified above, the following applicable information:

(a) All data necessary to indicate the mathematical dimensions and relationships of the boundary represented, with angles given directly or by bearings, and with the length and radius of each curve, together with elements necessary to mathematically define each curve. The point of beginning of the surveyor's description shall be shown as well as the remote point of beginning if different. A bearing base shall refer to some well-fixed line, so that the bearings may be easily re-established. The North arrow shall be referenced to its bearing base and should that bearing base differ from record title, that difference shall be noted.

A. A standard POINT OF BEGINNING and POINT OF COMMENCEMENT symbol is identified as it applies. The points will be labeled exactly as they are referenced in the description.

B. Every call in the legal description will be annotated on the graphic portion of the drawing so when comparing the two the task is now simplified and will save time for the reviewer.

C. The "Bearing Basis" reference is situated in the box labeled "5a, 3". This statement will reference the specific line that the bearings are based on. A record bearing will be referenced or the datum of a different bearing.

(b) When record bearings or angles or distances differ from measured bearings, angles or distances, both the record and measured bearings, angles, and distances shall be clearly indicated. If the record description fails to form a mathematically closed figure, the surveyor shall so indicate.

D. The dimensions are considered to coincide with the record description unless there is an abbreviation note after each dimension along with different measurements. The typical abbreviations are (m) for measured or (c) for calculated (p) for platted.

(c) Measured and record distances from corners of parcels surveyed to the nearest right-of-way lines of streets in

urban or suburban areas, together with recovered lot corners and evidence of lot corners, shall be noted. For streets and highways abutting the property surveyed, the name, the width and location of pavement relative to the nearest boundary line of the surveyed tract, and the width of existing rights of way, where available from the controlling jurisdiction, shall be shown. Observable evidence of access (or lack thereof) to such abutting streets or highways shall be indicated. Observable evidence of private roads shall be so indicated. Streets abutting the premises, which have been described in Record Documents, but not physically opened, shall be shown and so noted.

- (d) The identifying titles of all recorded plats, filed maps, right of way maps, or similar documents which the survey represents, wholly or in part, shall be shown with their appropriate recording data, filing dates and map numbers, and the lot, block, and section numbers or letters of the surveyed premises. For non-platted adjoining land, names, and recording data identifying adjoining owners as they appear of record shall be shown. For platted adjoining land, the recording data of the subdivision plat shall be shown. The survey shall indicate platted setback or building restriction lines which have been recorded in subdivision plats or which appear in Record Documents which have been delivered to the surveyor. Contiguity, gores, and overlaps along the exterior boundaries of the surveyed premises, where ascertainable from field evidence or Record Documents, or interior to those exterior boundaries, shall be clearly indicated or noted. Where only a part of a recorded lot or parcel is included in the survey, the balance of the lot or parcel shall be indicated.
- (e) All evidence of monuments shall be shown and noted to indicate which were found and which were placed. All evidence of monuments found beyond the surveyed premises on which establishment of the corners of the surveyed premises are dependent, and their application related to the survey shall be indicated.
- (f) The character of any and all evidence of possession shall be stated and the location of such evidence carefully given in relation to both the measured boundary lines and those established by the record. An absence of notation on the survey shall be presumptive of no observable evidence of possession.
- (g) The location of all buildings upon the plot or parcel shall be shown and their locations defined by measurements perpendicular to the nearest perimeter boundaries. The precision of these measurements shall be commensurate with the Relative Positional Accuracy of the survey as specified in the current Accuracy Standards for ALTA/ACSM Land Title Surveys. If there are no buildings erected on the property being surveyed, the plat or map shall bear the statement, "No buildings." Proper street numbers shall be shown where available.
- (h) All easements evidenced by Record Documents which have been delivered to the surveyor shall be shown, both those burdening and those benefiting the property surveyed, indicating recording information. If such an easement cannot be located, a note to this effect shall be included. Observable evidence of easements and/or servitudes of all kinds, such as those created by roads; rights-of-way; water courses; drains; telephone, telegraph, or electric lines; water, sewer, oil or gas pipelines on or across the surveyed property and on adjoining properties if they appear to affect the surveyed property, shall be located and noted. If the surveyor has knowledge of any such easements and/or servitudes, not observable at the time the present survey is made, such lack of observable evidence shall be noted. Surface indications, if any, of underground easements and/or servitudes shall also be shown.

E. The graphic location of an easement, servitude or encumbrance referenced in the "Schedule "B" Items" - is also identified by the item number inside of a circle. Without offering a legal opinion the surveyor will note characteristics of the location of the item with one or more of the following:

- (a) "Applies" - the easement or item lies within the subject property
- (b) "Does not affect" - the easement is not lying within the boundaries of the subject property and does serve the subject property.
- (c) "Document not legible" - the copy of the document cannot be read. The primary causes of this are bad copy, illegible original, bad microfiche,
- (d) "Not plot-able" - the item does not have an accurate description as to the location, i.e. it may be an agreement or the document is ambiguous
- (e) "Blanket in nature" - the easement encumbers the entire parcel and maybe also include areas outside the boundaries
- (f) "As shown" - the easement is graphically identified.
- (g) "Document not provided" - the surveyor has not received the document as of the date of the survey.
- (h) "Document not complete" - the document is missing information or pages.

F. the surveyor may address the location of the easement in note form if the easement cannot be plotted.

- (i) The character and location of all walls, buildings, fences, and other visible improvements within five feet of each side of the boundary lines shall be noted. Without expressing a legal opinion, physical evidence of all encroaching structural appurtenances and projections, such as fire escapes, bay windows, windows and doors that open out, flue pipes, stoops, eaves, cornices, areaways, steps, trim, etc., by or on adjoining property or on abutting streets, on any easement or over setback lines shown by Record Documents shall be indicated with the extent of such encroachment or projection. If the client wishes to have additional information with regard to appurtenances such as whether or not such appurtenances are independent, division, or party walls and are

plumb, the client will assume the responsibility of obtaining such permissions as are necessary for the surveyor to enter upon the properties to make such determinations.

- (j) Driveways, alleys and other ways of access on or crossing the property must be shown. Where there is evidence of use by other than the occupants of the property, the surveyor must so indicate on the plat or map. Where driveways or alleys on adjoining properties encroach, in whole or in part, on the property being surveyed, the surveyor must so indicate on the plat or map with appropriate measurements.

**G. The areas of access to a public roadway are specifically identified with the text (ACCESS).**

- (k) As accurately as the evidence permits, the location of cemeteries and burial grounds (i) disclosed in the Record Documents provided by client or (ii) observed in the process of performing the field work for the survey, shall be shown.

- (l) Ponds, lakes, springs, or rivers bordering on or running through the premises being surveyed shall be shown.

6. As a minimum requirement, the surveyor shall furnish two sets of prints of the plat or map of survey to the title insurance company or the client. If the plat or map of survey consists of more than one sheet, the sheets shall be numbered, the total number of sheets indicated and match lines be shown on each sheet. The prints shall be on durable and dimensionally stable material of a quality standard acceptable to the title insurance company. The record title description of the surveyed tract, or the description provided by the client, and any new description prepared by the surveyor must appear on the face of the plat or map or otherwise accompany the survey. When, in the opinion of the surveyor, the results of the survey differ significantly from the record, or if a fundamental decision related to the boundary resolution is not clearly reflected on the plat or map, the surveyor may explain this information with notes on the face of the plat or map or in accompanying attachments. If the relative positional accuracy of the survey exceeds that allowable, the surveyor shall explain the site conditions that resulted in that outcome with a note on the face of the map or plat.

ASM provides eight (12) copies of the final signed and sealed survey as a standard quantity. If more are required by the client, there is a provision in the ASM agreement with the surveyor that allow for additional copies. In addition 11x 17 copies can be provided either as part of the final survey or during the review process along with a pdf file of the drawing. American Surveying and Mapping, Inc. compile all of the survey drawings from our team of national surveyors and distribute the drawings to the parties identified for receiving. All surveys are produced utilizing our standard format. The survey drawings are then folded in an orderly manner with pertinent information clearly displayed. The drawings are then cataloged by the client's project identification shown on the surveyor. A distribution check list is provided upon request and is included in the final invoice. There is a provision in the ASM agreement that allows for additional copies upon request.

7. Water boundaries necessarily are subject to change due to erosion or accretion by tidal action or the flow of rivers and streams. A realignment of water bodies may also occur due to many reasons such as deliberate cutting and filling of bordering lands or by avulsion. Recorded surveys of natural water boundaries are not relied upon by title insurers for location of title.

When a property to be surveyed for title insurance purposes contains a natural water boundary, the surveyor shall measure the location of the boundary according to appropriate surveying methods and note on the plat or map the date of the measurement and the caveat that the boundary is subject to change due to natural causes and that it may or may not represent the actual location of the limit of title. When the surveyor is aware of changes in such boundaries, the extent of those changes shall be identified.

8. When the surveyor has met all of the minimum standard detail requirements for an ALTA/ACSM Land Title Survey, the following certification shall be made on the plat:

**To (name of client), (name of lender, if known), (name of title insurance company, if known), (name of others as instructed by client):**

**This is to certify that this map or plat and the survey on which it is based were made in accordance with the "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA and NSPS in 2005, and includes Items \_\_\_\_\_ of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion, as a land surveyor registered in the State of \_\_\_\_\_, the Relative Positional Accuracy of this survey does not exceed that which is specified therein.**

Date: \_\_\_\_\_ (signed) \_\_\_\_\_ (seal)  
Registration No.

NOTE: If, as otherwise allowed in the Accuracy Standards, the Relative Positional Accuracy exceeds that which is

specified therein, the following certification shall be made on the plat:

To (name of client), (name of lender, if known), (name of title insurance company, if known), (name of others as instructed by client):

This is to certify that this map or plat and the survey on which it is based were made in accordance with the "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA and NSPS in 2005, and includes Items \_\_\_\_\_ of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion, as a land surveyor registered in the State of \_\_\_\_\_, the maximum Relative Positional Accuracy is \_\_\_\_\_ feet.

Date: \_\_\_\_\_ (signed) \_\_\_\_\_ (seal) \_\_\_\_\_  
Registration No. \_\_\_\_\_

*The 2005 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys are effective January 1, 2006. As of that date, all previous versions of the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys are superseded by these 2005 standards.*

*Adopted by the American Land Title Association on October 5, 2005.  
Adopted by the Board of Directors, National Society of Professional Surveyors on October 24, 2005.  
American Land Title Association, 1828 L St., N.W., Suite 705, Washington, D.C. 20036.  
National Society of Professional Surveyors, Inc., 6 Montgomery Village Avenue, Suite 403, Gaithersburg, MD 20879*

## TABLE A

### OPTIONAL SURVEY RESPONSIBILITIES AND SPECIFICATIONS

**NOTE:** The items of Table A must be negotiated between the surveyor and client. It may be necessary for the surveyor to qualify or expand upon the description of these items, e.g., in reference to Item 6, there may be a need for an interpretation of a restriction. The surveyor cannot make a certification on the basis of an interpretation or opinion of another party. Items 16, 17 and 18 are only for use on projects for the U.S. Department of Housing and Urban Development (HUD).

If checked, the following optional items are to be included in the ALTA/ACSM LAND TITLE SURVEY, except as otherwise negotiated:

1.  Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by an existing monument or witness to the corner.  
  
*This item is subject to local jurisdictions that have specific laws for setting monuments such as California and Washington. The settings of monuments in these states may require a plat submittal, review and approval process. For the purposes of the survey being produced, ASM will discuss with the client what other options may exist that could be timelier and less costly. All found monuments are clearly referenced on the survey.*
2.  Vicinity map showing the property surveyed in reference to nearby highway(s) or major street intersection(s).  
  
*The purpose of this map is typically to show the location of the property from a birds eye view. This portion of the drawing is typically not to scale but allows easier identification as to the physical location of the property. This will be identified in the box labeled "2"- "Vicinity Map"*
3.  Flood zone designation (with proper annotation based on federal Flood Insurance Rate Maps or the state or local equivalent, by scaled map location and graphic plotting only.)  
  
*This will be identified in the box labeled "3"- "Flood Information": This information is required to be obtained from reasonable sources; this information should coincide with the Federal Emergency Management Agency (FEMA) web site and or local government. Some states do not participate in the Federal Flood Insurance program however the local jurisdiction may have information as to flooding designations. A note will be shown on the survey that identifies the source and date of the information used to establish the flood zone. Here is an example of a note used:*  
  
*"I have examined the Flood Insurance Rate Map, map number 12097c0085 F dated June 6<sup>th</sup>, 2001 and based on graphically plotting the property on the map or viewing the information on the Federal Emergency Management Agency web site it appears the subject property lies in Zone "X" "area of minimal flooding".*
4.  Gross land area (and other areas if specified by the client).  
  
*In many cases the legal descriptions of record include the area of the property. Sometimes the area calculation may not be subtracting "less out parcels" or "right of way takings" or the legal description may be comprised of several parcel descriptions and some may have the area calculation included and some may not. There is a specific box identified on the survey as "4" - " Land Area" that includes all of the fee simple lands or lease hold property as it applies included in Schedule A of the title commitment.*
5.  Contours and the datum of the elevations.  
  
*Usually contours are not required on surveys for transaction purposes. One need for contours is for a topographic survey. This type of survey is used for design purposes. If a survey is requested for design purposes we recommend that a specific scope be established. This is usually determined by discussing the project with the client and the design engineer.*
6.  List setback, height, and floor space area restrictions disclosed by applicable zoning or building codes (beyond those required under paragraph 5d of these standards). If none, so state. The source of such information must be disclosed. See "Note" above.  
  
*This information is shown in a box labeled "6" – "Zoning Information" the information is obtained by contacting the local governing agency and displayed into the easy to read box. Ties from buildings and other improvements are clearly labeled on the drawing.*

7.  (a) Exterior dimensions of all buildings at ground level
- (b) Square footage of:
- (1) exterior footprint of all buildings at ground level
- The specific "Building Area" information is annotated by a "7b" in a box and situated usually within the building area of the survey drawing*
- (2) gross floor area of all buildings; or
- (3) other areas to be defined by the client
- (c) Measured height of all buildings above grade at a defined location. If no defined location is provided, the point of measurement shall be shown.
- This specific "Building Height" information is annotated by a "7c" in a box and situated usually within the building area of the survey drawing.*
8.  Substantial, visible improvements (in addition to buildings) such as billboards, signs, parking structures, swimming pools, etc.
9.  Parking areas and, if striped, the striping and the type (e.g. handicapped, motorcycle, regular, etc.) and number of parking spaces.
- The graphic portion of the survey delineates parking spaces as required in addition the tabulation of the quantity of spaces is identified in a box on the survey labeled "9"- "Parking Stalls" a count of stalls are also shown on the graphic portion on the drawing on a group basis.*
10.  Indication of access to a public way on land such as curb cuts and driveways, and to and from waters adjoining the surveyed tract, such as boat slips, launches, piers and docks. The graphic portion of the survey shows features to identify access.
- Main sources of vehicular access to a public road way are identified by "10" – "Access" The number 10 is surrounded with a box*
11. Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by:
- (a) Observed evidence
- (b) Observed evidence together with evidence from plans obtained from utility companies or provided by client, and markings by utility companies and other appropriate sources (with reference as to the source of information)
- railroad tracks and sidings;
  - manholes, catch basins, valve vaults or other surface indications of subterranean uses;
  - wires and cables (including their function, if readily identifiable) crossing the surveyed premises, all poles on or within ten feet of the surveyed premises, and the dimensions of all crossmembers or overhangs affecting the surveyed premises; and
  - utility company installations on the surveyed premises.
12.  Governmental Agency survey-related requirements as specified by the client.
13.  Names of adjoining owners of platted lands.
14.  The distance to the nearest intersecting street as designated by the client
15.  Rectified orthophotography, photogrammetric mapping, laser scanning and other similar products, tools or technologies may be utilized as the basis for the location of certain features (excluding boundaries) where ground measurements are not otherwise necessary to locate those features to an appropriate and acceptable accuracy relative to a nearby boundary. The surveyor shall (a) discuss the ramifications of such methodologies (e.g. the potential accuracy and completeness of the data gathered thereby) with the title company, lender and client prior to the performance of the survey and, (b) place a note on the face of the survey explaining the source, date, relative accuracy and other relevant qualifications of any such data.
16.  Observable evidence of earth moving work, building construction or building additions within recent months.

*The surveyors performing the field survey will note any reasonable evidence of construction on the subject property. This information is in the box identified as "16"- "Earth Moving Note" and will state the surveyor's findings.*

17. \_\_\_\_\_ Any changes in street right of way lines either completed or proposed, and available from the controlling jurisdiction. Observable evidence of recent street or sidewalk construction or repairs.

18.   x   Observable evidence of site use as a solid waste dump, sump or sanitary landfill.

*While the surveyors are performing the field survey they will note any reasonable evidence of construction on the subject property. The information situated in the box identified as "18" – "Dump Sump or Landfill Note" will state the surveyor's findings*

19. \_\_\_\_\_

*Many times the client has additional requirements to facilitate certain needs. These types of request are negotiated and clearly defined on a per task basis.*

## **Accuracy Standards for ALTA/ACSM Land Title Surveys**

### **Introduction**

These Accuracy Standards address Relative Positional Accuracies for measurements that

control land boundaries on ALTA/ACSM Land Title Surveys.

In order to meet these standards, the surveyor must assure and certify that the Relative Positional Accuracies resulting from the measurements made on the survey do not exceed that which is allowable.

If the size or configuration of the property to be surveyed, or the relief, vegetation or improvements on the property will result in survey measurements for which the allowable Relative Positional Accuracies will be exceeded, the surveyor must alternatively certify as to the Relative Positional Accuracy that was otherwise achieved on the survey.

**Definition:**

“Relative Positional Accuracy” means the value expressed in feet or meters that represents the uncertainty due to random errors in measurements in the location of any point on a survey relative to any other point on the same survey at the 95 percent confidence level.

**Background**

The lines and corners on any property survey have uncertainty in location which is the result of (1) availability and condition of reference monuments, (2) occupation or possession lines as they may differ from record lines, (3) clarity or ambiguity of the record descriptions or plats of the surveyed tracts and its adjoiners and (4) Relative Positional Accuracy.

The first three sources of uncertainty must be weighed as evidence in the determination of where, in the professional surveyor’s opinion, the boundary lines and corners should be placed. Relative Positional Accuracy is related to how accurately the surveyor is able to monument or report those positions.

Of these four sources of uncertainty, only Relative Positional Accuracy is controllable, although due to the inherent error in any measurement, it cannot be eliminated. The first three can be estimated based on evidence; Relative Positional Accuracy can be estimated using statistical means.

The surveyor shall, to the extent necessary to achieve the standard contained herein, (1) compensate or correct for systematic errors, including those associated with instrument calibration, (2) select the appropriate equipment and methods, and use trained personnel and (3) use appropriate error propagation and other measurement design theory to select the proper instruments, field procedures, geometric layouts and computational procedures to control random errors.

If radial survey methods, GPS or other acceptable technologies or procedures are used to locate or establish points on the survey, the surveyor shall apply appropriate procedures in order to assure that the allowable Relative Positional Accuracy of such points is not exceeded.

**Computation of Relative Positional Accuracy**

Relative Positional Accuracy may be tested by: (1) comparing the relative location of points in a survey as measured by an independent survey of higher accuracy or (2) the results of a minimally constrained, correctly weighted least square adjustment of the survey.

**Allowable Relative Positional Accuracy for Measurements Controlling Land Boundaries on ALTA/ACSM Land Title Surveys**

0.07 feet (or 20 mm) + 50 ppm
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