

Survey Reports

Compiled
by

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Survey reports should be an important part of documenting surveying services. Survey reports provide a flexible format to provide a complete, comprehensive, and clear narrative of the surveyor's opinion. The report provides a methodical method to document the background information and the analysis performed. The report also provides a narrative of the services performed, limitations, problems, concerns, and recommendations. This workshop will discuss the use, preparation, and focus of the survey report.



Speaker: Knud E. Hermansen is an attorney, professional engineer, and professional land surveyor licensed in several states. His education includes a Ph.D. in Civil Engineering from the Pennsylvania State University and a J.D. (Doctorate in Law) from West Virginia University. Currently, Knud is a Professor at the University of Maine and operates a consulting firm offering surveying, engineering, and legal services. Professional membership includes the National Lawyers Association, American Congress on Surveying and Mapping, American Society of Civil Engineers, and several state survey societies and bar associations. He is the author or co-author of *Boundary Principles and Procedures for Pennsylvania* and several other articles and books.

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Survey Reports

Purpose & Use:

- provides more detail & information
- coerces surveyor to do a better job with analysis and justification
- forces organization
- provides a ready source of information for others
- provides an organized archival source for the surveyor

Contents:

- firm/client/project
- purpose
- specifications/standards
- survey or site related information (title concerns, wetlands, etc.)
- record location
- azimuth
- declinations
- tolerances & calculations
- conduct of the survey/actions taken
- comments on reliability
- problems encountered
- analysis
- results
- concerns
- recommendations
- revised parcel description

Practical Exercise

Client's Chain of Records

1870 Deed (675-21) - ...to a maple; thence South 23 degrees East, 100 rods to a post and stones; thence...

1910 Deed (1321-412) - ... to a maple stump; thence South 25 degrees East, 100 rods 4 links to stones; thence...

1967 Deed (8342-101) - ... to a pin, formerly a maple; thence South 28° 30' East, 1660.3 feet to stones at a stream; thence...

Neighbor's Chain of Records

1868 Deed (674-65) - ... to a marked oak and stone pile; thence along the stream, North 22 ½ degrees West, 101 rods to a marked maple; thence ...

1953 Deed (6743-762) - ... to a marked oak and stones; thence North 22 ½ degrees West, 101 rods to a pipe in a stump; thence...

Field Information



A

Report of Survey

for

[Client's Name]

[Address 1]

[Town, State Zip]

for

Property

located at

[Address]

Town of __, County of __, State of __

File No. __

Edition __

___ 200__

Copy ___ of __

© 200__ [Surveyor or Survey Firm]

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Appendices

- 1. Raw Field Data
- 2. Relevant Computations (e.g. solar observations, intersections, etc.)
- 3. Unrecorded plans
- 4. Record search checklist containing grantor, grantee, dates, type of records, volume, page number, etc.
- 5. Letters or other important correspondence
- 6. Time sheets
- 7. Contract
- 8. Sample letter to adjoiner
- 9. Tax parcel map & right of way maps

I. Limitations on Surveying Services

Surveying services adhere to reasonable practice and minimum mandatory standards. Custom surveying services such as the ALTA/ACSM Land Title Survey were not provided.

The following services or opinions are not part of the services provided.

- Title:** No attempt was made to review, disclose title problems, or come to an opinion on the title or marketability of the title. Any appearance of a title opinion is unintentional. All title questions should be referred to an attorney.
- Research:** Reasonable and ordinary research procedures and survey standards were employed in researching the public records pertinent to the property. Research was limited to properly indexed public records found in the _ courthouse between the present time and 200_. Research focused on boundary location information. A forward search (adverse to the owner) was not conducted. Private records were not examined unless otherwise noted in this report or on the plat. As a consequence, important information may not have been revealed that could affect the location of the boundaries and title to the property.
- Wetlands:** Surveying services did not involve the identification or location of wetlands. Wetlands may not always be detectable to the layperson or surveyor. Employment of a qualified wetlands scientist is advisable before erecting any improvements. There are national and state regulations governing improvements or work within wetland areas. Fines and criminal prosecution may be imposed for working in wetlands without the proper permits.
- Flood Plain:** Surveying services did not involve locating the flood plain boundaries. For improvements in the immediate area of the 100-year flood plain, a more precise determination of the flood plain boundary will be required. Improvements within the flood plain are restricted and if done may cause a mortgage to be denied or significantly increase the cost of insuring improvements on the property.
- Water Bodies:** The presence of water bodies on or near the property may impose more restrictive zoning constrictions on the property (such as frontage, setback, and timber removal) and limit development options. Great Ponds and navigable streams are imposed with a public easement below the normal high water line. The public may access great ponds by crossing private, uncultivated property on foot.

Agricultural Lands:	The presence of designated agricultural or woodlands near or on the property may limit or restrict development on the property as the result of special tax exemptions or designations that are on the property or nearby property.
Public Road Easements:	No attempt was made to determine the right of way width to public road easements on or near the property. Public road easements are often poorly indexed, missing, or difficult to identify. A width of three rods is often shown but the actual width may be more or less. Additional research to determine the width of the public road can be undertaken for a fee.
Government Regulations:	The compliance with or adherence to government regulations has not been investigated as part of surveying services. Government regulations may include proper subdivision approval, zoning compliance, and protection of natural resources. The failure to comply with government regulations may make the title unmarketable.
Septic Field:	The law requires that a licensed evaluator investigate the property in order to prepare the property for the installation of an on-site septic system if one is not already present. A licensed evaluator should be employed to investigate an existing system when buying the property. An illegal or malfunctioning system may result in fines and environmental harm. A licensed evaluator should be consulted for additional information.
Underground Utilities:	Surveying services did not include the investigation or search for underground utilities. Before excavating on the property, 1-888-Digsafe should be contacted to identify, locate, and avoid costly damage to underground utilities that may be present.
Occupation Lines:	Rights or title may align with occupation lines rather than the record boundaries when the occupation lines differ from the record boundaries. An attorney should be consulted to obtain an opinion on the probability of title conforming to the occupation line rather than the record boundary.
Vernal Pools:	No attempt was made to identify vernal pools. The presence of vernal pools on the property may hinder or severely restrict development of the property. Vernal pools may be difficult to identify. The presence of a vernal pool includes a significant area around the vernal pool that must also be protected.
Illegal Subdivision	Services did not include an analysis to determine if an illegal

Cemeteries

subdivision has occurred. An illegal subdivision may be cause for fines, denial of building permits, and other sanctions.

No attempt was made to locate cemeteries or burial sites on the property. The presence of a cemetery on the property would entail an implied easement to access the cemetery from a public road. Burial of Native Americans on the property would curtail the use of the property.

Endangered or Protected Species

The presence on the property of endangered or protected species was not determined. The presence of endangered or protected species or their habitat may curtail the development of the property.

An opinion on the location of the record boundary is provided. Lost records, missing monuments, and obscure evidence often affects the certainty of the opinion. There can be no guarantee.

II. Definitions

Corner Identification: Corners are identified in this report and on the plat by a number (e.g., Corner 1).

Boundary Identification: Boundaries are identified in this report by citing the numbers at each end of the boundary (e.g., Boundary 2-3).

III. Administrative Information

Client's Name:

Address:

Telephone No.:

E-mail Address:

Parcel Address:

Record Owners:

Record Reference: Deed Book __, page __

Tax Parcel Reference: __ - __

Type of Survey:

Standards Exceptions: The following exceptions were taken to the minimum standards of practice found at <http://www.maine.gov/sos/cec/rules/02/chaps02.htm>

Date of Survey: __, 200__

Location of Survey: The property is located __ feet __ly of __[feature].

Party Chief:

Surveyor Responsible: The surveyor responsible for the opinion(s) expressed in this report is __

Equipment Used

Distribution: A copy of this report has been distributed to the following persons:

Copy 1 of _

Copy _ of _

Contacts: Notification of the survey was given to: __

Requests for information were made to: __

Special Actions Taken:

Survey Procedures: ☐ Static GPS ☐ Kinematic GPS ☐ Traverse, Open

☐ Radial Survey ☐ Other _____

Adjustment of Data: ☐ Least Squares ☐ Compass ☐ Transit ☐ None

Field Book/Data File #

Basis of Azimuth: ☐ 20__ Magnetic ☐ True North ☐ Other _____

IV. General Site Information

Visible Improvements on the Property: In working on or near the boundary, the following improvements were of such size or visibility that they are noted as follows:

Buildings:

Road:

Septic Field:

Pond:

Fences:

Walls:

Springhouse:

Bridge:

Cemetery:

Possession of the Residence at Time of Survey: At the time of the survey, the residence on the property was in the possession of __, who **is or is not** listed as the record owner of the property.

Visible Utilities on the Property:

Overhead Power Lines:

Utility Poles:

Manholes:

Grates:

Underground Utilities Warning Signs:

Visible or Logical Vehicular Access to the Property: Access to the property appears to be by __. An attorney should be consulted to determine if the access is legal or constitutes an overburdening of the easement.

Name of Nearest Apparent Public Road: __

Name of Water Bodies on or Near Property: __

V. Parcel Information

In General:

Relevant Parcel Records:

Parcel	Recording Date	Grantor	Grantee	Record	Book	Page	Area

Tax Parcel _: The survey was conducted [around or along boundary _ to _]. The parcel was substantially created in _. Its present configuration is described in a conveyance from _ to _ as described in Deed Book _, page _.

Tax Parcel _: The survey was conducted [around or along a common boundary with tax parcel _]. The parcel was substantially created in _. Its present configuration is described in a conveyance from _ to _ as described in Deed Book _, page _.

Road: _ Road was formerly known as _. It was created around _ and described in deed book _, page _. The road width was described as _.

VI. Encumbrances & Restrictions - Location

Zoning: The property is zoned __. The zoning has the following dimensional restrictions

Front:

Side:

Back:

Minimum Street Frontage:

Minimum Riparian Frontage:

Minimum Lot Size:

Other:

Easements: Easements may exist on the property and not be revealed by the limited research or survey of the property. Once created by deed, reservation, or use, easements may burden the property regardless of further mention in recent records. Easements may arise by implication. Obvious and visible evidence of easement has been taken into account, along with the disclosure of easements in the most recent records examined for boundary information.

Covenants: Covenants and the source documents for the covenants are the following:

VII. Potential Overlaps, Encroachments, and Gaps

During the course of the survey and search for boundary information, the following possible overlaps, gaps, and ambiguities were noted along or near the boundaries were discovered. In many cases overlaps, gaps and encroachments were caused by vague information, lost or misplaced records, and inadvertent errors in past conveyances and surveys.

or

At this time no survey problems were discovered that would appear to result in the loss or restriction of the reasonable enjoyment of the property and/or residence.

Possession Line: Along boundary __-__ there exist a __ that departs from a straight line between the corners by as much as __ feet. Along boundary __-__ there exist a __ that is approximately parallel to a straight line between the corners by approximately __ feet. The __ appears to have been erected approximately __ years ago according to __ [tree borings, parol testimony, etc.] You or your neighbor may have ownership rights to the occupation line based on long continued possession or acts that occurred in conjunction with the erection of __ or occupation to it. Occupation that does not conform with the deed or record boundary should be discussed with an attorney.

Uncalled for Monuments: Near corner __ a __ was discovered (see plan for measurements). Uncalled for monuments may represent a reasonable but conflicting opinion of the corner or boundary location.

VII. Boundaries & Corners

Corner X: The corner was created in _ and described in deed book _, page _ as a _. Subsequent records cite the corner monument as a _ (deed book _, page _). Adjoining records call for the corner to be marked by a _ as cited in deed book _, page _. A diligent search of the area revealed a _, that can be described as _ [size, shape, color, markings, texture, etc.]. The position of the original corner was reestablished by _ [procedure]. A _ was set to mark the corner at the completion of the surveying services. A _ was established as a witness at a course of _ from the corner.

Boundary X-X: The boundary was created in _ and described in deed book _, page _ as _[bearing & distance]. Subsequent records cite the boundary to be __ [bearing & distance] (see deed book _, page _). Adjoining records call for the boundary to be _ [bearing & distance] as cited in deed book _, page _. Along the approximate location of the boundary _ was found. A comparison of the record and retracement measurements is shown in the following table:

<u>Direction</u>	<u>Distance</u>	<u>Reference</u>
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There is _[not] reasonable correlation between record and retracement measurements. [The differences between record and retracement measurements are attributable to the change in magnetic declination, lack of precision in the early measurements and equipment, and the skill of the early surveyors.]

IX. Revised Description

Caption: That tract of land located _ [from feature] in the town of _, county of _, state of Maine, more particularly described as follows:

Body:

All bearings are based on _. All monuments set are _ containing a metallic cap showing the surveyor's name, license number, and corner number.

The above description was prepared from a survey, plan, and report for _ dated _ by _, P.L.S.

X. Conclusion

The above analysis and results are a reasonable opinion based on a defensible solution to a complicated situation. Although this is an opinion that can be supported by “logic and information that a surveyor of ordinary prudence and care would use under similar circumstances,” it does not resolve the fact that uncertainty in the position of the original boundaries will continue to exist. As a consequence, another surveyor exercising ordinary prudence using the same information may and could very well arrive at a different conclusion and location of the boundaries (especially in regard to boundary _). Caution should be exercised in placing improvements near the boundary.

This document contains _ pages

Dated this the ____ day of _____ 200_

If this seal is not embossed, this document is not an original.
If the document is not original, it should be presumed to
contain unauthorized alterations and should not be relied
upon.

seal

[printed name of signature]
[license number]