CHAPTER 3
GUIDELINES

INTRODUCTION

The "Guidelines" chapter provides general field and office procedures commonly used by professional land surveyors. Essays on subdivision design and on client relationships have been placed in this chapter as these aspects of a surveyor's role allow for great variation, creativity and individual approaches. The generalizations discussed should allow each surveyor to make his own interpretation of the unique problems he encounters.

In this Fourth Edition, the Section Line Easement information has been replaced by version of a paper presented at the 28th Annual Alaska Surveying and Mapping Conference entitled Highway Rights of Way in Alaska. This paper incorporates discussion of section line easements along with RS 2477 trails, Public Land Order, (P.L.O.), rights of way and other subjects relevant to the research and analysis of highway rights of way in Alaska. Due to the integral relationship between many boundary surveys, highway rights of way and other forms of access, this paper has been added along with a paper on easements by prescription.

Another welcome addition is a paper on the Alaska Native Claims Settlement Act.

Also included herein are a few check lists and informational items. With the help of our members, this chapter could be greatly expanded. Any suggestions should be forwarded to the Standards of Practice Committee.

SUBDIVISION PLANNING

Traditionally, one of the major areas of expertise for the professional land surveyor has been in the role of subdivision planning. We might also interject that this role has been sadly abused by many practitioners to the extent that our abilities in this field have been challenged by some. This has even led to the loss of some planning functions to other design professionals in several locations in the United States.

There is probably no more satisfying reward to the subdivision planner than to see a particular plan developed, improved, and inhabited by families who are happy with, and proud of their surrounding neighborhood. Before this can be done, there are many facets which must be reviewed by the designer with explicit answers to the questions raised. The designer must meet the needs of the public in both an economic and social manner. How people live and function and relate to each other must be addressed with each plan. We must be aware of the environmental consequences of a particular project and public ramifications of any plan which may fail due to landslides, foundation failures, erosion problems, etc.

What is stressed herein is that subdivision planning has become a multi-disciplined profession. That is to say that we have gradually been forced into a broader involvement in the design process. A proper subdivision plan may now require a combined effort between a physical planner, soils engineer, landscape architect, urban designer, economist, engineer and surveyor. In some cases it may also take research and input from an archaeologist, anthropologist, and architect. If we prepare ourselves, educate ourselves, and make ourselves aware of the items involved, we will remain a valuable part of a planning team. Unless we recognize this need to keep up with and be influential to the process, we must expect that in the future, the surveyor's role will be only subservient to others in the planning process.

With the above synopsis of the planning field, we have reprinted excerpts from the November, 1979 issue of the American Congress on Surveying and Mapping Bulletin, which contained an extensive article pertaining to subdivision planning. We have taken the liberty to reprint only the most pertinent parts of the article and suggest that everyone in the business of subdivision planning obtain the entire article for his reference library. We consider the following to be some basic rules and principles to consider.

(The following is from the ACSM Bulletin.)

The first principle of good subdivision design is that the design must provide for certain external factors of community-wide concern which affect the proposed subdivision. Provision should be made in the design for the proper extension of major thorough-fares, for the dedication of needed school and park sites, for the extension of utility trunk lines, and for the preservation of major drainage channels and of related floodlands. The proper consideration of these factors in the subdivision design requires the existence of both comprehensive community and comprehensive watershed plans; the lack of such plans can be a severe handicap to good subdivision design. Consideration should also be given in the design to the relation of the subdivision to other

external factors, such as local, community, and regional shopping centers; place of employment; educational and recreational facilities; and public transportation.

The second principle of good subdivision design is that the design must be properly related to proposed and existing land uses. The layout of a subdivision is inseparable to the use to which the land is to be put. Moreover, adjacent land uses must be considered in the design. Some, such as parks, parkways, certain types of institutional uses, and bodies of surface water, may be definite assets to be utilized in the design to create value. Others, such as cemeteries, railroads, power transmission lines, poorly subdivided and unsightly strip commercial developments, may be detriments and require special design techniques.

Areas of natural beauty, such as fine stands of trees and high points offering exceptional vistas, should be conserved by the design. Low areas subject to flooding or areas of bedrock outcrop should not be utilized for residential use.

The third principle of good subdivision design is proper attention to internal detailing. This includes attention to the proper layout of streets, blocks, lots, and adjustment of the design to the topography and soil capabilities of the site. It is this third principle that dictates, among other considerations, careful attention to drainage in subdivision design.

Lot Layout

The primary purpose of land subdivision is the production of building sites, and ideally every lot should provide a good site. In every subdivision, however, there are areas wherein the lots can be comparatively more valuable than others due to the proximity of such features as existing tree growth, a park or parkway, a natural watercourse, or a storm water detention or retention area. Considerable skill is required to produce comparable value in the less attractive areas of the same subdivision.

In general, all lots within a given subdivision should have approximately the same area. Minimum lot areas and frontages are specified by local zoning. Lots should generally be more or less rectangular in shape, and side lot lines should be perpendicular and radial to the street right-of-way line. Corner lots should be somewhat wider than interior lots in order to permit adequate building setback lines to be obeyed on two sides.

With respect to drainage, lots should generally drain either entirely toward the street or both toward the street and the back lot line. In the latter case, lateral drainage along the rear lot lines will be required, necessitating careful attention to grading layout, particularly in flat areas, and the provision of drainage, as well as utility easements along the rear lot lines. Topography may occasionally require side lot line drainage easements.

PROFESSIONAL SURVEYOR-CLIENT RELATIONSHIPS

Surveyor-client relationships must be based on a habitual exercise of care.

Before entering the project contract, the surveyor must be prepared to explain the limits as well as the capabilities of his proposed performance. A written statement of project activities should be offered the client, and before offering a price, the surveyor must be well-informed of his prospective costs and the project demands. If the contract cannot be performed at the price offered in a professional manner, the surveyor will still be liable for the client's damages or the cost of completion by another.

In Alaska, a surveyor is protected from the unscrupulous client not only by the contract, which may be sued on to recover payment, but by the Mechanic's Lien Law if the survey is for the improvement of real property. However, the effective protection of the surveyor's (and his employees) financial interest demands strict compliance with the notice and filing requirements of the law, regardless of the seeming improbability of filing a lien. Therefore, at the time a contract is agreed to, the surveyor should have the property owner sign an "Acknowledgement of Right to Lien." This acknowledgement contains much the same information as a Notice of Right to Lien, i.e., a legal description of the property, the owner's name, the names and addresses of the surveyor and the person with whom he contracted, a general description of the services provided, a statement that the surveyor may be entitled to record a Claim of Lien, and a statement that unless provisions have been made for payment of the claim, the owner may be liable for payment, even if the owner has paid the prime contractor or another party.

The Acknowledgement and Notice of Right to Lien should be filed and recorded any time after performance has begun, but no later than ten days after the contract is complete. A notice must be sent to the construction lender, if any, as well as to the property owner.

On completion of the contract, the surveyor should formally notify his client, and prepare an itemized billing (if that was required by the contract) or other detailed statement of performance. This statement should not be mere puffery, but it can be helpful in forestalling client objections to the project's costs.

If the client has not made payment within 90 days of cessation of work on the project or contract completion, the surveyor must file and record a Claim of Lien. It is essential a Claim of Lien be recorded within 90 days of cessation of work or contract completion or the surveyor will be unable to avail himself of this relatively quick and efficient means of recovering overdue payment.

In all client dealings, it is important to maintain a professional stance, All telephone conversations should be confirmed by memo or letter. Demand for payment should be by letter, never by personal confrontation. The surveyor should never promise or threaten more than he can perform. Adherence to these general principles will result in a clearer understanding of the surveyor's activities, prompt payment, and a more rapid settlement of claims.

Editor's Note

The preceding essay on surveyor-client relationships provides suggestions which the surveyor may or may not wish to follow in conducting the business aspect of his profession. It should not be construed as ASPLS policy.

CHECK LIST FOR PROJECT RESEARCH

1. Clarify with your client the exact specifications for the job. Depending on the size of the job, you may wish to obtain a signed survey proposal.

2. Consider filing the forms necessary for a mechanic's lien.

3. Research your field notes, plats, and records for information relative to the project.

4. Check government field notes and plats.

5. Obtain government field notes and plats.

6. Plan your course of action.

7. Re-confirm particulars with your client.

CALIBRATION BASE LINES IN ALASKA

BASELINE DESIGNATION	AREA	QUAD	PAGE
Anchorage	Anchorage	N611493	103
Campbell Airstrip	Anchorage	N611493	104
Fairbanks (destroyed?)	Fairbanks	N641474	105
F.W. Williams	Kenai	N601512	107
Juneau	Juneau	N581343	1O8A

CALIBRATION BASE LINES GENERAL INFORMATION

ACCESSIBILITY: The calibration base lines are accessible to the public. At some sites, access is controlled by local authorities, such as at airports, reservoirs, etc.

TESTING CAPABILITIES AND ACCURACY: The calibration base lines are primarily intended for the use of the local land surveyors to provide a means to detect constant and scale (i.e. proportional to distance) errors in Electronic Distance Measuring Instruments (EDMI). Most calibration base lines could be used for testing any instrument or method where the results are primarily intended to determine a scalar. Nominal accuracies for the base lines approach 1 P.P.M. for distances ranging to 1400 meters. The first section (150 meters) is measured using Invar/LO-VAR tapes. Nominal accuracy for this section is 0.2 mm.

PUBLISHED RESULTS: An adjusted horizontal distance and the mark-to-mark distance is listed between each of the base line stations. The horizontal distance is the distance at the mean elevation between two stations, and the mark-to-mark distance is the spatial chord distance between the station marks. Although the differential elevations are sufficiently accurate to reduce the measured distances, the elevations may or may not be integrated into the national vertical control network. The published elevations of the base line stations therefore may not be referenced to the North American Vertical Datum of 1929.

INFORMATION: The National Geodetic Survey, through cooperative agreements establishes the EDMI calibration base line and publishes the adjusted data. Copies of the results are available from The Director, National Geodetic Information Center, N/CGl74, National Oceanic and Atmospheric Administration, Rockville, Maryland 20852. For details on technical specification, contact NGS Operations Branch, NOS, N/CGl6, Rockville, Maryland 20852. The name of the cooperative organization is given in the base line description followed by the individual or office to contact for further information.