Survey Cost Analysis

NEW JERSEY SOCIETY OF PROFESSIONAL LAND SURVEYORS

presents

A SEMINAR BY
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Survey Cost Analysis

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Outline

1. Introduction & Overview
2. Legal Responsibilities
   - Consumer Bill of Rights
   - Practice Guidelines
   - Misconduct
3. Cost Analysis
4. Group Project
5. Summary/Q & A
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New Jersey Administrative Code:
Title 13, Chapter 40

Subchapter 1.1  Sealing Documents
Subchapter 3  Misconduct
Subchapter 5  Preparation of Land Surveys
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New Jersey Administrative Code:
Title 13, Chapter 40

Subchapter 7  Site Plans & Subdivisions

Subchapter 8  Maintenance of Records
Sealing of Documents

Subchapter 11  Continuing Competency
Consumer Bill of Rights

*All consumers of services offered by licensed professionals have the legal right to:*

- Receive competent professional services.

- Verify the credentials of licensed professionals and to know the names and titles of licensed professionals who provide service.
• Receive clear explanations of the services being offered or provided and how much they cost.

• Refuse any services offered.

• Know what client records will be maintained and how to obtain copies; personally identifiable information normally cannot be revealed without the consumer’s consent.
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Professional Misconduct

• Failing to return or provide copies of records on request.
• Practicing under the influence of alcohol or drugs.
• Being sexually or physically abusive.
• Practicing beyond the scope of the profession.
• Performing unnecessary work or unauthorized services.
• Charging for work not done.
• Stealing from clients or committing insurance fraud.
• Engaging in acts of incompetence or negligence.
NEW YORK STATE
LAND SURVEYING PRACTICE
GUIDELINES
Type & Purpose of Survey

Each surveyor should confer with the client to determine the purpose of any surveying service. The specific purpose of a survey may determine the category of services needed, the information required and the work to be done.

Receive clear explanations of the services being offered or provided and how much they cost.
You have to *know* your costs to properly *bill* your costs.
How often do you do a cost analysis?
VALUE & SERVICE

Work to the needs of the client rather than the services available
Evaluate using **SWOT Analysis**

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBJECTIVES</td>
<td>THREATS</td>
</tr>
</tbody>
</table>

Areas of Cost

Direct Field
*Those items that are or fit in the truck for the project*

Direct Office
*Those items that are directly associated with a project*

Overhead
*All the other stuff*
Choose your weapons wisely !!!
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FIELD COST ANALYSIS

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* * *
* * *
* * *
* * *
* * *
* * *
* * *

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OFFICE COST ANALYSIS

*   *   *   *
*   *   *   *
*   *   *   *
*   *   *   *
*   *   *   *
*   *   *   *
*   *   *   *
*   *   *   *
Billable Days Per Year

Total days = 260

Less holidays 10 days
Less vacation 10 days
Less sickness 5 days
Less weather 6 days
Less maintenance 4 days
Other purposes 5 days

TOTAL NET DAYS 220
Billing Calculation

Total Expenses: $830,000
Profit @ 14.5% $120,000
Gross Billing $950,000

$830,000/220 days = $3,773/day Cost
$950,000/220 days = $4,318/day ($540/Hr)
Gross Billing Required
Payroll Costs

(6 person firm – administrator not billable)

<table>
<thead>
<tr>
<th>Position</th>
<th>Hours/Rate</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Party Chief</td>
<td>$25/Hr</td>
<td>$52,000</td>
</tr>
<tr>
<td>Instrument Person</td>
<td>$18/Hr</td>
<td>$37,440</td>
</tr>
<tr>
<td>CAD Operator</td>
<td>$20/Hr</td>
<td>$41,600</td>
</tr>
<tr>
<td>Survey Manager</td>
<td>$30/Hr</td>
<td>$62,400</td>
</tr>
<tr>
<td>Principal</td>
<td>$55/Hr</td>
<td>$114,400</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$307,840</strong></td>
</tr>
</tbody>
</table>
Multiplier Calculation

Gross Billing desired $950,000 =
Billable Payroll $307,840

3.09
Multiplier Calculation

Total Business Days \[= \frac{260}{1.1818} \]

Billable Days 220

\[3.09 \times 1.1818 = 3.65\]
### Survey Cost Analysis

#### Hourly Rates

<table>
<thead>
<tr>
<th>Role</th>
<th>Hourly Rate</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Party Chief</td>
<td>$25/Hr</td>
<td>$91.25</td>
</tr>
<tr>
<td>Instrument Person</td>
<td>$18/Hr</td>
<td>$65.70</td>
</tr>
<tr>
<td>CAD Operator</td>
<td>$20/Hr</td>
<td>$73.00</td>
</tr>
<tr>
<td>Survey Manager</td>
<td>$30/Hr</td>
<td>$109.50</td>
</tr>
<tr>
<td>Principal</td>
<td>$55/Hr</td>
<td>$200.75</td>
</tr>
</tbody>
</table>
How is most of your billing done?

Hourly
By the item
Lump sum
How often do you bill?

Weekly
Bi-weekly
Monthly
At the end of the task
Analysis 1

You have been asked to provide a residential lot survey, including topography, for a 1 acre tract adjacent to a recorded subdivision map. The rear portion of the lot is heavily wooded with deciduous undergrowth. There is no specific deed for the tract in question, as it is the remainder of a large parcel which had numerous subdivisions over an extended period of time.

Concrete monuments are requested at the property corners (6). There are freshwater wetlands on the site. The site is 15 miles from your office in another county. The month is July.
You have been asked to provide a boundary survey in January for a 212 acre tract, which is 30 miles from your office. The site is forested with 30 year old trees, but has some logging roads throughout the parcel. There’s a difference in elevation of 60 feet across the tract. There are 36 corners, which are to be set. Road frontage is 2,000 feet, and 1,000 feet of the rear boundary is along the center of a river. There are no recorded subdivision maps within 1 mile of the parcel.
You have been asked to provide an ALTA/ACSM Survey on a 56 acre industrial site, which fronts on a heavily traveled state highway. The tract is 95% developed with parking, trucking areas, buildings, and significant overhead and underground utilities. There is a common access with an adjoining property. There are 16 property corners and virtually no trees on the site. In addition to the statutory requirements, the usual items are required from Schedule A, including setting of the property corners.
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Agencies you apply to:

Building Department
Corp of Engineers
Dept. of Agriculture
Environmental Agencies

Health Department
Planning Offices
DOT
Agency Cost Analysis

Always use agency checklists when preparing proposals.

1. Note differences in **Scope**
2. Note differences in **Detail**
3. Note differences in **Packaging**

*All present significant cost differences*
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**Pick any two**

- PRICE
- TIME
- QUALITY
A survey shall be deemed to be complete when the survey plat has been dated sealed, signed, and the surveyor has been paid.
Seminars and in-house staff instruction available through

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Communication & Education Consultant

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