

TEXAS STATE BOARD OF REGISTRATION FOR PUBLIC SURVEYORS

Staff Report
to the
Sunset Advisory Commission
February 20, 1978

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INTRODUCTION

This report is submitted pursuant to Section 1.06, Subsection (3) of the Texas Sunset Act and contains a review of the operations of the Texas State Board of Registration for Public Surveyors. Termination of the Texas State Board of Registration for Public Surveyors has been scheduled for September 1, 1979 unless it is continued by law.

The material contained in the report is divided into three major sections: Background, Review of Operations and Conclusions. The Background section contains a brief history of legislative intent and a discussion of the original need for the Texas State Board of Registration for Public Surveyors. The Review of Operations section contains a review of the operation of the agency, and uses the self-evaluation report submitted by the agency as the basis of review unless noted. The information contained in the self-evaluation report was verified, and additional data were obtained through interviews and review of agency files and other data sources. The Conclusions section summarizes the import of material developed in the individual criteria, from the standpoint of whether or not Sunset criteria are being met, and develops approaches relative to these findings.

This report is designed to provide an objective view of agency operations, based on the evaluation techniques utilized to date. Together with pertinent information obtained from public hearings, a factual base for the final recommendations to the Legislature will be provided.

BACKGROUND

Historical Developments

The practice of surveying existed as early as ancient Egypt. Permanent residences and the recognition of property ownership encouraged the development of one of man's earliest efforts to order his environment. The elementary plane surveying used by the Egyptians, Greeks and Romans was primarily confined to the establishment of boundaries and the construction of large public buildings. The earliest instruments of surveyors were derived from the associated areas of astrology and astronomy. The presence of surveying in Europe can be documented as early as the medieval period and it flourished during the revival of scientific knowledge associated with the Renaissance.

The English settlers brought surveying to the United States where in the 18th century the first state and national boundaries were established. In the 19th century, the construction of canals and railroads and the selling of new lands created a heavy demand for the services of surveyors.

Development of Surveying in Texas Prior to 1919. The earliest surveys of the area that now comprises Texas were derived from grants by the Crown of Spain and later, grants by the Republic of Mexico. Most of the land granted at this time was under impressario contracts such as the one deeded to the Stephen F. Austin Colony. Approximately 26 million acres were deeded in this period.

The Republic of Texas, in order to encourage immigration to and of the area, first granted lands by use of headright certificates authorized by the 1836 Constitution. The land certificates that were granted during this period of the Republic and the early days of statehood were often granted without regard for consistency or systemization. In addition, there was a lack of statutory law concerning the location of these lands and title to them. As a result of these deficiencies, land grants of varying shapes and sizes were made. The owner and the

surveyor were only required to believe that they were locating a particular grant on heretofore unsurveyed public domain. As settlement progressed, land values began to appreciate, and upon closer examination many conflicts and separations were discovered between surveys.

In an effort to define and record the legal title to land holdings in Texas, a land system was established that required all land grants to be patented and filed in the General Land Office. This patent served as legal evidence that the state had relinquished all claims to the tract of land owned by the individual. In order to preserve and define boundaries, surveyors were required to mark the corners and boundaries of each grant and file a description of those markers in the field notes filed in the Land Office.

The state originally was divided into land districts with a district surveyor designated for each. As counties were organized within original land districts, district surveyors were replaced by county surveyors duly elected or appointed. By 1880, all counties were established but it soon became apparent that at certain times counties might be without the services of a county surveyor. It became necessary for the Land Commissioner, when requested, to provide officially designated state surveyors to perform the functions of a county surveyor. This arrangement continued until the creation of the Board of Examiners of State Land Surveyors in 1919.

Regulation of Surveying Since 1919. The Act of 1919 provided for a Board of Examiners to examine the qualifications of surveyors and to issue licenses authorizing surveyors to perform the duties of a county surveyor on a statewide basis. This Act appears to have been the culmination of the efforts by individual surveyors seeking to require all surveyors to be licensed. The published comments of a surveyor associated with the passage of this act suggest the impetus for

licensing was the result of a desire to establish requirements rigid enough to accord the occupation of surveying proper recognition and dignity as well as to protect the public from those unqualified individuals posing as surveyors. The General Land Office stood to benefit from this Act by the elimination of the need for state surveyors to be employed by the Land Commissioner. At the same time, the Act provided citizens with a larger number of individuals who could survey statewide and perform the functions of a county surveyor. Article 5280 V.C.T.S. lists the following responsibilities of county surveyors:

- 1) Authorization to file and record field notes and plats of all surveys made in this county as well as any other documents the law requires to be recorded.
- 2) Issue Certificates of Fact and certify the correctness of copies of any document or record or entry shown by the records of a county surveyor.

A shift in the definition of the duties of licensed land surveyors occurred in 1941. Legislation enacted at that time redesignated the Board of Examiners as the Board of Examiners of State Land Surveyors. Surveyors licensed under this law still were authorized to conduct the same surveys County Surveyors were authorized to do, but now their responsibilities were extended to include filing field notes on surveys of public lands rather than areas of unpatented land. This evolution in authority reflects the history of public lands in the state. The Congress of 1839 awarded each county three leagues of land for school purposes with additional land set aside for counties not yet organized. The Constitution of 1836 provided that one-half of the unappropriated public domain be set aside to support public education. In 1900, the Legislature granted the remainder of any unappropriated public domain to the permanent school fund. In 1939, the Legislature also deeded to the permanent school fund the mineral estate in riverbeds, channels and all areas

within the Tidewater limits. House Bill No. 9, passed by the Legislature in 1939, allowed a patentee or his heirs to purchase excess acreage in a patented survey with the proceeds paid to the permanent school fund. Such excess acreage could only be documented through a resurvey of the land granted under the original patent.

Legislative changes proposed at this time would have more radically redefined the duties and responsibilities of licensed land surveyors by extending the scope of regulated surveying activities to include surveys of subdivision of land tracts, the relocation of establishment of any property lines, boundaries, rights-of-way, easements or elevations. The regulation of these types of surveying came under the jurisdiction of the Board of Registration of Public Surveyors in 1955. With the advent of the regulation of the surveying of subdivided land tracts in 1955, state licensed land surveyors were no longer the only surveyors publicly identified and regulated by the state and became a specialized part of surveying. This transition was confirmed by the changes enacted in H.B. 901 by the Sixty-fifth Legislature requiring all licensed state land surveyors to be registered public surveyors prior to licensing.

Surveyors and Engineers. Over a period of several hundred years, two types of surveyors have practiced -- the scientific surveyor such as the geodesist whose education usually included college level mathematics, astronomy and physics and the practical surveyor working in construction and related activities. It was practical surveyors who surveyed the boundaries of new land grants in areas such as Texas. The results were surveys where accuracy was not always a primary consideration. The sanction of surveys such as these was unfortunate since the boundary lines established form the basis of the present system of boundaries of private land ownership. The lack of enforceable standards in field surveys led to an

increasing rift between university trained surveyors and practical surveyors. Entry into practical surveying was achieved through apprenticeship to a practicing surveyor whose instruction was limited to acceptable current practice.

Engineers, rather than bridging the gap, chose to consider surveying as a trade rather than a profession. Thus, when engineering registration began in various states, surveying was often not covered.

The surveyor responded to this situation by trying to upgrade surveying standards. Surveyors tried to divorce surveying from engineering, disregarding the similarity of measurement systems used by both and instead emphasized the knowledge of local customs, history, rules, and regulations and boundary laws encountered by surveyors. Engineers, on the other hand, deemphasized formal training in surveying while continuing to engage in surveying activities.

There have been subsequent efforts on the part of individuals who believe that the rift between engineers and surveyors is disadvantageous to both and that the field of surveying is becoming so complex that the strong formal engineering educational curriculum should be merged with the field requirements of surveying. This view was incorporated in a Study of the Status of Surveying and Mapping sponsored by the American Society of Civil Engineers from 1954-1957.

This study of methods of regulation indicated that the adoption of a Model Law in the 1930's, which required that anyone not specifically licensed be prohibited from engaging in property line determination, exerted a great deal of influence on the nature of regulation of surveying.

Proponents of defining surveying as a branch of engineering point to the fact that surveys form the basis of every engineering project and their methods and tools are sometimes indistinguishable.

The study concluded with the following recommendations: 1) the present outdated practice of educating land surveyors through an apprentice system be abolished, 2) formal education on the professional phases of surveying be included in engineering curriculums, 3) similar training at junior colleges, technical institutes and educational extension programs be offered and 4) statutory provisions be modified to reflect the redefinition of surveyors.

The professional association of Texas surveyors indicated strong disapproval of such a redefinition. A national poll taken at that time (1957) shows 49 percent of the engineers and surveyors responding disagreed with the committee and felt surveying was separate and distinct from engineering. In contrast, 72 percent of the respondents from Texas disagreed with the committee's report.

House Bill 394, adopted by the legislature, established a separate and distinct board to regulate most surveying outside the control and jurisdiction of either the Licensed State Land Surveyor's Act or the Professional Engineers' Act. Public surveyors estimated that 75 percent of the surveying activity within the state at that time fell under the jurisdiction of the Board of Registration of Public Surveyors. In the 22 years since the addition of a third Board with some jurisdiction over surveying activities, the types of surveying regulated by each board has remained unchanged, suggesting that the issues addressed in 1957 by the American Society of Civil Engineers are pertinent today.

Evolution of the Board of Registration of Public Surveyors

Definitions

The original definition of public surveying consists of the determination by means of survey, of the location or relocation of land boundaries and land boundary corners; the calculation of area and the preparation of field note description of

surveyed land; the preparation of maps showing boundaries and areas of the subdivision of tracts of land into smaller tracts; the preparation of official plats or maps of said land . . .

The Act was amended to read that public surveying means the practice of determining the boundaries or the topography of real property or of delineating of routes, spaces, or sites in real property for public or private use by using relevant elements of law, research, measurement, analyses, computation, mapping, and descriptive writing. Public surveying includes the practice for compensation of land, boundary, or property surveying or other similar professional practice.

Exemptions

County surveyors acting in an official capacity in counties over 25,000 were no longer exempted from registration as a public surveyor. Prior to this change, all county surveyors were exempt from the provisions of this Act. Other exemptions included in the original Act remain unchanged including Registered Professional Engineers, any officer of a political subdivision surveying in an official capacity, and the deputy or assistants of any exempted individual or any Public Surveyor registered under this Act.

Board Administration

The Board

The Registered Public Surveyor's Act of 1955 created a six-member board with the following qualifications: 1) U.S. citizenship, 2) state resident, 3) 10 years of experience and 4) good moral character. The members were to be appointed to six-year overlapping terms by the Governor with the advice and consent of the Senate. Any member was subject to dismissal by the Governor for official misconduct, gross inefficiency, or moral unfitness. No changes in the composition of the Board were effected by amendments enacted in 1977.

Power and Duties of the Board

The Board was originally empowered to administer the act and adopt any rules and regulations deemed necessary. The Board was directed to elect a chairman from one of its members and to require four members to constitute a quorum.

The Board is further directed to hold at least two regular meetings a year in addition to any special meetings deemed necessary. An Executive Secretary and any staff necessary to carry out the objectives of the Board were authorized with their salaries to be determined by the Board.

Board members were to receive per diem of \$10 with no other expenses authorized. Finally, the Board was directed to publish and mail to all registrants a roster each July showing public surveyors currently registered.

Changes relevant to the powers and duties of the Board enacted in 1973 include delegating to the Board the authority not only to make and enforce rules and regulations, but also to establish standards of conduct and ethics for public surveyors in keeping with the purposes and intent of this Act. After 1977, violation of any rule or regulation of the Board was considered sufficient grounds for suspension or revocation of registration. The Board was also granted injunctive powers in 1973 with legal counsel to be provided by the Attorney General's Office.

During the Sixty-first Legislature, the Act was amended to increase per diem of the Board members to \$25. In 1973, a change in the statute permitted reimbursement for all other legitimate expenses incurred in the performance of Board duties.

Licensing

Qualifications for Registration

The original qualifications for licensing allowed individuals residing in Texas

and engaged in the practice of public surveying for five years immediately preceding the effective date of this Act, who exhibit moral and educational fitness to the Board, to continue in practice. Applicants applying under this provision must file within one year after the effective date of the Act.

All persons who could demonstrate to the Board's satisfaction that they have at least eight years experience, two years of which were in responsible charge, could be licensed under the Act. Applicants applying under this section had the option to substitute two years of college engineering courses for two years of the required experience.

A third licensing option allowed applicants to take and pass an oral and written examination designed to reflect the knowledge and ability of the applicant. Any individual licensed under this provision must provide evidence of six years of land surveying experience, although a B.S. in Civil Engineering would be considered as equal to four years of experience.

Changes in qualifications enacted by the Sixty-third Legislature require applicants to be at least 21 years old, to be of good moral character and reputation and to have satisfied one of the enumerated experience requirements, depending on the highest level of education attained. An applicant with a B.S. degree in civil engineering was required to have at least two years of land surveying experience in responsible charge. An individual with a bachelors degree in another discipline with at least 32 semester hours credit in civil engineering, land surveying, mathematics, forestry, physical sciences or land law was required to produce evidence of four years land surveying experience in responsible charge. A candidate with 32 semester hours in land surveying related courses was required to have six years land surveying experience, five of which were in responsible charge. An applicant with a high school diploma needed to document six years experience in responsible

charge.

Application Process

The registration process outlined in the law required an applicant to file a written application accompanied by a registration fee not to exceed \$20. The statute directs the Board to issue each successful applicant a permanent registration number to be used on all official documents.

The information required on the prescribed application form to be furnished by the Board, included descriptions of the applicant's education and a detailed summary of work experience as well as references from five registered surveyors. A candidate failing the examination was allowed to apply for reexamination after six months without the payment of additional fee.

The only subsequent amendments affecting the application process reflect changes in fees. In 1973, the Sixty-third legislature amended this Act to raise the application fee ceiling to \$50. The amended law now required applicants who did not pass the first reexamination to file a new application to take the exam again, and pay an additional examination fee of \$50. The 1977 amendments enacted by the Sixty-fifth Legislature deleted a specific fee associated with examinations with a fee ceiling set at \$100.

Renewal Process

Certificates of Registration were valid for only one year with the Board required to provide notice of expiration at least one month in advance of the renewal date in December. Provisions for penalties for late renewal, as well as a renewal fee of \$10, were also mentioned in the original act. If a registered surveyor fails to renew his license for more than one year, the applicant must reapply for registration under provisions already enumerated. All plats, field notes and reports prepared by the registrant or under his direction shall be stamped with

an authorized seal which contains the registrant's name and number and the legend "Registered Public Surveyor."

Changes effected in 1977 allowed the renewal process to be staggered. The ceiling on renewal fees was set at \$50.

An additional function in the licensing process was also added in 1977 permitting the Board to issue a Certificate of Registration on a reciprocal basis to persons who possess the following qualifications: 1) has passed a written examination of the same or higher standards in another state and holds a current registration, 2) meets relevant requirements of this Act and rules and regulations of the Board, 3) passes a written examination of at least four hours and 4) pays a fee not to exceed \$50. The provision gives the Board the option to require applicants who have not passed a written examination elsewhere to pass other examinations in addition to meeting the ones enumerated above.

Enforcement

Powers and Procedures

The Board, since its creation, has possessed the power to revoke the Certificate of Registration of any registrant guilty of the following offenses: 1) fraud in obtaining registration, 2) any gross negligence, incompetency or misconduct in the practice of surveying. The law was amended in 1977 to extend this power to surveyors guilty of a violation of a rule or regulation of the Board or any provision of the Act. The Registration Act of 1955 establishes the procedures for enforcement starting with the submission of three copies of sworn statements by any state resident to be further verified by a person familiar with the facts. If the

Board decides to take action, the accused must be given 30 days notice of a hearing. The accused may be represented by counsel, but the provisions allow the Board to proceed in the absence of the accused. The revocation proceedings may be recorded at the request of the accused registrant as long as he bears the cost. When the Board reaches a decision, it is directed to forward a certified copy of the findings to the surveyor in question. An appeal of such decisions may be filed in the District Court in the home county of the surveyor. The only issues to be addressed in such appeals is whether the individual is guilty as determined by the Board.

The Board may also reissue a Certificate of Registration to anyone whose original certificate was revoked with the consent of at least four board members.

Any certificate revoked, lost, stolen, or mutilated may be reissued at a cost of \$3.

The Sixty-fifth Legislature enacted only two other changes affecting the enforcement provisions of the law. The first allows the Board to employ persons to gather evidence for use in enforcement proceedings and the second requires any appeal to be filed only in the Travis County District Court.

Violations and Penalties

Penalties of not less than \$100 nor more than \$500 or confinement in jail for three months or less for each day of a violation may be assessed any individual guilty of the offenses listed below:

- 1) practicing public surveying without registration;
- 2) using the seal of another registered surveyor;

- 3) any individual giving false evidence to the Board in obtaining his own registration or any other applicant's registration; and
- 4) any person violating any provision of this Act.

The Attorney General is directed to act as legal advisor of the Board and Board members are charged with aiding in enforcement of the Act.

Changes in this provision by the Sixty-fifth Legislature include larger fines, (\$200-\$1,000), and the addition of a provision enjoining the Board to invite the person to show cause why a criminal action should not be initiated.

Registered Public Surveyor's Fund

The original statute directed that all revenues of the Board should be deposited in the State Treasury in a special fund known as the Registered Public Surveyor's Fund". After August 31, 1957, all expenditures connected with this Act were to be set out in the General Appropriation Bill and at the beginning of each biennium all moneys appropriated but not spent were to revert to the General Revenue Fund. The law, as amended in 1977, no longer has provisions for reversion to the General Revenue Fund of unappropriated funds.

COMPARATIVE ANALYSIS

To determine the pattern of regulation of the occupation of surveying within the United States, a survey of the 50 states was conducted to determine how this has been addressed in other states.

The need to regulate the occupation of surveying is currently expressed through licensing requirements imposed by all of the 50 states surveyed. From the standpoint of organizational patterns, five states, including Texas, meet this expressed need through an independent board or commission whose members are appointed by the chief executive. In 45 states, excluding Texas, the function is carried out through licensing in conjunction with engineers.

In those states which utilize independent boards and commissions, two require that appointees be confirmed by the Legislature; and membership in 36 states is limited to persons who are licensed members of the occupation. In Texas, appointees are confirmed by the Legislature and membership limited to persons who are licensed members of the occupation. Ten percent of the states, as does Texas, utilize independent governing bodies limiting the responsibilities of the membership to that of policy-making as distinguished from the role of full-time administrators.

A majority of the states including Texas indicate that the revenue sources of the regulatory body, regardless of organizational form, were derived from fees collected. Only 20 of 43 states, indicated that these bodies were not solely supported by fees and charges of the agency.

Forty-five of the states, regulating the occupation of surveying administer national examinations. The other states develop and administer their own exam. Texas does not use a national examination. In 29 states, licensees are required to renew their licenses annually. Texas licenses for a one year. Enforcement activities in 39 states, including Texas, involve investigation of complaints from consumers and others engaged in the occupation of surveying. Hearings are conducted inside the regulating agency in 33 states. In Texas, hearings are conducted by the Board.

States which regulate the occupation of surveying indicated the necessity of performing the basic functions of administration, testing, license issuance, and enforcement. These basic functions also constitute the primary elements of the operations of the Board of Public Surveyors and are examined in light of specific criteria required in the Texas Sunset Act in the material which follows.

REVIEW OF OPERATIONS

Criterion 1

The efficiency with which the agency or advisory committee operates.

The review under this criterion centered on financial data and other records of the agency. This information was analyzed to determine if funds available to the agency had been utilized in a reasonable manner to achieve the purposes for which the agency was created and to determine if areas existed in which greater efficiency of operations could be achieved.

Administrative Support Procedures

The original law creating the Board authorized the Board to hire a full-time Executive Secretary and additional staff considered necessary to administer the provisions of the Act. The Board presently employs an Executive Secretary and an additional employee classified as a Clerk III. Additional part-time clerical staff is also employed at various times during the year.

Many of the administrative functions carried out by the agency personnel are addressed in the statute. The first step in the registration process begins when an applicant calls or writes to acquire information about qualifications or to request an application to be mailed.

The applicant is then mailed information which consists of an application blank, reference forms, a handout on application procedures, information on the most recent statutory changes affecting licensing requirements, information on the examination and a bibliography on land surveying in Texas.

Each application requested is assigned a number and filed. Between September 1975 and August 1976, 207 applications were mailed and 259 were sent in fiscal year 1977. As of February 1978, 141 applications have been mailed.

Presently, it appears that roughly one-half of the inquiries by individuals initially interested in registration result in an application being filed. The percentage of individuals expressing interest in registration who actually become registered is approximately 30 percent.

When applications are returned they must be complete and accompanied by a certified payment. For these payments and all other funds received, a receipt is written and remittance list is typed for deposit to the Treasury. The application deadline for the August examination is June 15, and the deadline for the February examination is December 15. All applicants approved by the Board for examination are notified by letter concerning their acceptance. They are notified at a later date of the date, time and place for the examination. Examinations are always held in Austin, and require two full days.

Applicants who are rejected by the Board are notified by certified mail that they did not qualify. No specific reasons for refusal are supplied in this letter. Discussions with agency personnel indicate that rejections do not result in a significant number of inquiries seeking additional information. Those that do seek information may request reconsideration of their application at the next Board meeting. Those applicants whose applications were held pending more information may be called for an interview or supply the additional information in a notarized affidavit.

The Board is responsible for preparation of the examination with the staff responsible for reproduction of the examination, arranging test facilities and other clerical support. Applicants who pass all parts of the examination are notified first concerning their scores with information about the registration fee. Upon receipt of the registration fee the certificate and registration card and the registration number are forwarded to the registrant with instructions to have an authorized seal made

and to return an imprint of the seal to the Board. This procedure is completed with all applicable internal files being updated. Those applicants who fail are notified of their grade and given information on reapplying.

The other major process staff personnel assume responsibility for is renewals. Over the course of the entire year the staff maintains pertinent address changes, keeping the Board of Control's data processing roster current with their own files. The Board of Control prints addressed renewal cards for all registered surveyors. Agency personnel indicated that over the course of the renewal process approximately 100 letters are sent to request various corrections to be made on renewal cards. Printed pocket cards are returned to the applicant with a receipt. Though applicants are required to pay fees with certified funds, registrants may pay by personal check. The first renewal notice is sent November 1, with another notice mailed between May and June and a registered letter is sent in December if payment has not been received.

The work flow through the year shows that January and July are spent preparing for the two examinations given annually and February and August are spent notifying applicants of the results, completing registration for all new applicants, and updating files to reflect the results of examination and licensing activities. September to December are directed toward accomplishing the renewal process with the only other remaining mandated function, the publication of the roster, occurring between March and July.

Costs Associated with Staff Support

Table 1, presented below, provides a more detailed tabulation of various Board expenses as a percentage of total expenditures for fiscal year 1977.

Table 1

<u>Nature of Expenses</u>	<u>Amount</u>	<u>Percent of Total</u>
<u>Personnel Costs</u>		
Salaries	\$26,030.00	59.89
Benefits	3,676.83	8.45
Total	<u>\$29,706.83</u>	<u>68.34</u>
<u>Operating Costs</u>		
Printing, Office Supplies, Reproduction	2,755.48	6.33
Rental, Office Space	1,652.00	3.80
Postage	1,281.50	2.94
Telephone, Telegraph	1,235.05	2.84
Cost of Audit	658.86	1.50
Other Operating Expenses	265.51	.61
Total	<u>7,848.40</u>	<u>18.02</u>

As Table 1 indicates, salaries and associated personnel costs constitute the largest single expense to the Board. A historical analysis reveals that since 1957, personnel costs, as a percentage of total expenditures ranged from a high of 75.37 percent in 1961 to a low of 59.73 percent in 1959, averaging approximately 68 percent. In terms of absolute dollars, personnel expenses climbed an average of 11.35 percent annually from 1957 through 1977, while total expenditures increased a average of 10.55 percent.

In contrast, personnel costs in a larger regulatory agency, the Board of Registration for Professional Engineers, averaged 48 percent in 1977.

Costs Associated with Board Activities

Authorized per diem and travel expenses for the Board were \$5,908.35 or 13.6 percent of the total expenses associated with administration of the statute.

When per diem and travel expenses for 1976 and 1977 were apportioned among the six board members of the Board of Registration for Public Surveyors the average total expenses incurred by each board member were \$1,240 and \$984, respectively. Altogether the Board was paid per diem for 121 days in 1976 and for 88 days in 1977. Information available on the Board of Registration for Professional

Engineers with eight board members shows the average expenses incurred by each Board member in 1977 were \$964 and per diem was paid for 38 days. Since the number of licensees regulated by the Engineers Board is disproportionately larger (31,000 vs 1,300) and contains two more members, the variance in Board activities reflected by the costs between these two boards cannot be explained in light of the similarity in responsibilities.

Table 2 presented below summarizes revenues and expenditures of "The Registered Public Surveyors Fund," as indicated in the Comptroller's Annual Reports, for fiscal years 1968-1977. This table is a result of efforts to determine the surpluses and apparent cash position of this agency as well as a projection of anticipated revenues and expenditures for fiscal years 1978-1983. Since no part of the expense of administering this Act shall ever be charged against the General Revenue Fund of Texas, the projections include an increase in fees to cover projected costs.

Table 3, also presented at this point is structured to illustrate the relationships between revenues from renewals, applications, registration fees, total revenues, cumulative cash surpluses and statutory changes related to fee increases.

Table 1 provides ample indication of the magnitude of cost increases since 1968.

Between 1968 and 1977 total expenditures increased 275 percent. When total expenditures are analyzed in terms of component costs and weighted the following increases were realized: 1) operating costs increased 37 percent, 2) board expenditures increased 50 percent, and 3) personnel costs increased 187 percent.

Table 2

Revenues and Expenditures of the Registered Public Surveyors Fund

Fiscal Year	Revenue Lic & Fees	Total Revenue(A)	Expenditures	% Increase Expenditures	Cumulative Surplus/Def.
1968	\$14,069	\$12,471	\$11,127		\$7,648
1969	21,092	19,944	13,070	17.4 %	14,522
1970	21,003	19,308	17,034	30.3	16,796
1971	21,868	20,089	17,621	3.4	19,264
1972	23,917	21,910	19,036	8.0	22,138
1973	19,568	17,554	26,401	38.7	13,291
1974	35,701	33,725	34,025	28.9	12,991
1975	35,874	34,222	33,611	(2.2)	13,603
1976	38,796	37,145	40,915	21.7	9,833
1977	41,421	39,111	41,744	2.0	7,200
Projected					
1978	46,750	44,413	51,135	22.5	478
1979	62,250(B)	59,138	51,135		8,481
1980	62,250	59,138	62,644	22.5	4,977
1981	75,750(C)	71,962	62,644		14,297
1982	75,750	71,962	76,735	22.5	9,524
1983	75,750	71,962	76,735		4,751

(A) Reduced by transfer for services (Rent) through Revenue

(B) Assumes an increase in Certificate Renewal fees to \$35.00 on 1350 renewals

(C) Assumes an increase in certificate renewals fees to \$45.00 on 1350 renewals

TABLE 3

Revenues

Year	Estimated Registrants	Revenues Renewals	Application & Registration Fee	Total Revenues	Cumulative Surplus	Nature of Fee Change
1958	1,157	\$11,000	\$1,440	\$ 13,014.00	\$ 7,356.00	fees in effect: \$20 application \$10 renewal
1959	1,186	11,505	2,460	14,603.00	8,188.00	
1960	1,257	11,914	4,520	16,554.93	10,860.19	
1961	1,280	12,694	1,340	14,156.17	11,830.76	
1962	1,291	13,436	860	14,380.72	11,531.38	
1963	1,283	13,020	1,080	14,559.11	10,985.00	
1964	1,189	12,982	960	14,257.75	9,510.44	
1965	1,279	13,134	1,220	14,588.93	8,215.34	
1966	1,234	12,741	1,440	14,429.73	6,471.54	
1967	1,247	13,038	1,420	14,702.32	5,948.85	renewal fee ceiling raised to \$25.00
1968	1,303	13,086	980	14,381.16	7,095.23	
1969	1,308	19,731	1,360	21,580.29	13,301.78	Renewal fee raised to \$15
1970	1,320	19,263	1,740	21,003.00	15,775.72	
1971	1,321	19,820	1,420	21,927.00	19,264.00	
1972	1,324	19,816	1,740	21,562.50	18,028.75	
1973	1,365	20,329	1,620	21,961.50	11,482.71	1) renewal raised to \$25. 2) application fee ceiling set at \$50. 3) required to reapply at \$50 after 2nd exam.
1974	1,371	33,681	2,080	35,801.50	11,084.92	
1975	1,353	32,844	2,290	35,754.50	10,980.71	
1976	-	33,219		38,910.00	9,833.00	
1977	1,328	33,507	6,050	49,867.43	6,403.85	

Analysis of Table 3 shows that when the regulated group has increased only 15 percent, increases in revenues can only be achieved by increases in fees. Renewal fees which contribute the majority of revenues received, were increased in 1968 when the Board had \$7,095 in surplus funds. Fees were increased in 1973 when the Board retained \$11,482 in surplus funds at the end of the fiscal year. The necessity of fee increases at that point appears subject to question, given the amount of surplus accumulated. The Board chose not to increase fees during fiscal year 1977 and as a result the Board's accumulated surplus is projected to drop to approximately \$478. In light of the timing of revenues, the possibility of serious problems in the management of liabilities by this agency during fiscal year 1978 appears to be great. The evidence available suggests serious deficiencies in decision making by the Board. A more careful monitoring of fund status and the employment of more effective funds flow projections are needed in the operation of this Board. A review of the costs of regulation and the number of individuals regulated of several similar agencies in Table 4 suggests that there are cost benefits associated with increasing size built into the structure of regulatory agencies.

TABLE 4

Costs of Administration of Occupational Regulation per License
Fiscal Year 1977

Agency	Number Regulated	Total Budget	License
Board of Registration of Professional Engineers	31,181	\$ 450,688	\$ 14.45
Board of Architects	5,039	137,345	27.26
Board of Registration For Public Surveyors	1,328	41,744	31.43
Board of Registration for Landscape Architects	960	50,622	52.73

* From Comptroller's 1977 Annual Report

In an agency as small as the Board of Registration for Public Surveyors, personnel costs constitute such a large part of the budget that any efforts aimed at significant cost reductions are limited. In the case of Public Surveyors, recent statutory changes which permit the employment of staggered renewals and the publication of the roster on a biennial basis, if implemented, might reduce expenses connected with temporary clerical help and an annual roster. But, if all such measures were taken, only a six percent reduction in expenditures is expected to result.

Since Table 4 has identified the Board of Registration for Professional Engineers as an agency where positive cost benefits associated with size exist, and this Board is able to derive unit costs associated with the regulation of engineers, a calculation of the incremental costs associated with regulating an additional 1,300 registrants was made, based on 1977 costs.

TABLE 5

Program	Cost Per License	Cost of Regulation of 1,300 Additional Registrants
Administration	\$ 3.71	\$ 4,823
Applications and Examinations	7.84	10,192
Enforcement and Compliance	2.97	3,861
Roster	3.31	4,303
Total	<u>\$17.83</u>	<u>\$14,242.93</u>

* From Budget Request submitted for 1978-1979.

Projections of costs and expenditures shown in Table 2 were based on the premise of a stable population of public surveyors through 1983. Table 6, presented below, suggests that this premise may not hold true.

A comparison of the age distribution of public surveyors in 1961 and 1977 clearly illustrates the potential for a decline in the number of active public surveyors. The most significant change during this period was the increase of surveyors 52 years and older. In 1961, 59 percent of all public surveyors were under 52 years old; in 1977 only 43 percent were less than 52 years old. Increased attrition due to retirement or death in the next decade seems likely. The result of such attrition would be fee increases exceeding those projected in Table 2.

TABLE 6

A Comparison of Age Distribution of Registered Surveyors, 1961 and 1977

	1961	1977	% Increase or Decrease
Surveyors Age 72 plus	5%	7%	+2%
Surveyors Age 62-72	9%	22%	+13%
Surveyors Age 52-62	27%	28%	+1%
Surveyors Age 42-52	28%	23%	-5%
Surveyors Age 32-42	28%	16%	-12%
Surveyors Age 24-32	3%	4%	+1%

Summary

The review of this agency in terms of efficiency pointed out several trends and relationships not always readily apparent. Analysis of the Board's operating budget showed that salaries and associated personnel costs in an agency this size constitute the largest single expense to this agency. This fact makes the possibility of effecting significantly greater cost efficiencies extremely limited.

A comparison of Board associated costs with those of a larger agency indicate that Board costs appear high in relationship to the number of licensees regulated and the similarity of responsibilities mandated by law.

Analysis of the record of revenues and expenditures illustrates the inability of this agency with a virtually stable population of licensees to generate income except through fee increases. The fact that a profile of the registrants indicates an aging population likely to decline makes this relationship even more significant.

Further analysis indicates that there are significant savings to be achieved by merging the regulation of a smaller agency with a larger one with more cost effective operations. These savings would be proportionately larger in light of projected rising personnel costs.

Evaluation of the Board's management of revenues and costs reflects a pattern of untimely decision making.

Whether this situation is due to the absence of critical information or the lack of expertise in funds management or other unidentified factors is not known. What is known is that the need to make optimal management decisions has risen in direct proportion to the costs of regulation.

Criterion 2

An identification of the objectives intended for the agency or advisory committee and the problem or need which the agency or advisory committee was intended to address, the extent to which the objectives have been achieved and any activities of the agency in addition to those granted by statute and the authority for these activities.

The review under this criterion centered on an identification of the agency's statutory objectives as they related to the perceived need and the extent to which agency methods used can reasonably be expected to achieve those objectives. Statutes were reviewed to determine if objectives described in the self-evaluation report presented an accurate reflection of statutory duties. Agency viewpoints were sought to provide additional clarification; and appropriate files on applicants registrants and complaints, as well as rosters, were reviewed to collect and verify selected data presented under this criterion.

The evaluation of agency objectives is structured around major functional activities of a regulatory agency: licensing and enforcement.

The Licensing Function. In reviewing the Board's files and operations, historical information concerning the Board's licensing activities was readily available, so an approximate historical record was reconstructed from rosters published between 1956 and 1977. The results are presented below:

The Number of Active Registered Public Surveyors 1956-1977

1956-930	1967-1247
1957-1108	1968-1303
1958-1157	1969-1308
1959-1186	1970-1320
1960-1257	1971-1321
1961-1280	1972-1324
1962-1291	1973-1365
1963-1283	1974-1371
1964-1189	1975-1353
1965-1279	1976-no roster published
1966-1234	1977-1328

As of the roster publication date in 1977, 1930 individuals had been registered by the Board since its creation. In 1977, the roster showed 627 or 47 percent of the individuals listed as registered through examination. The remaining surveyors were registered between 1955 and 1960 and for the most part registered on the basis of five to eight years experience in surveying. The number of new registrants since 1960 has averaged 30 per year.

Some of the figures shown above are at variance with the figures indicated in the self-evaluation report, especially those concerning new licenses and renewals. A recalculated workload measure report concerning the number of licenses and renewals, based on the rosters, suggests that the number of new licenses and renewals should be as follows:

Fiscal Year	Reported	Recalculated
1975	1720	1391
1976	1700	1370
1977	1500	1360

It appears that greater accuracy could be obtained if information concerning the following activities could be collected: 1) the number of applications reviewed, 2) the number of applications approved for examination, 3) the number of examinations administered, 4) the number of new licenses issued, 5) the number of renewals issued, 6) the number of complaints received and 7) the number of complaints acted upon. Such changes would not only result in more accurate reporting, but agency activities would be more complete and trends such as declining membership would be more quickly identified.

The written examination conducted by the Board has been the primary instrument of selection since 1960. The examination is designed by Board members and consists of four parts which test knowledge of the legal aspects of surveying, the fundamentals of surveying, as well as sections covering the computational and analytical aspects of surveying. The examination is given twice a year, in Austin, and lasts 16 hours.

The first phase of the examination is an oral interview given during the first morning of the examination. No standard questions are asked. A published description of this part of the examination indicated that the purpose of the oral interview is to evaluate the applicant's personality and to make an unbiased evaluation of the applicant's esthetic and ethical traits. Immediately after the

interview the Board members evaluate the applicant separately with all of the oral grades averaged and recorded. Although the oral grade is not used to determine the final grade in any way, the agency indicated that the written grade average was very similar to the oral interview average. An analysis of the average grades of recent applicants indicated that in 22 instances the oral grade averaged 6.8 points higher than the average of all four written parts and in 11 cases, the oral grade averaged 10.5 points less than the written grade. The average of all written scores was 65.11 and the average oral grade was 63.61. When the scores on the oral exam are correlated with the scores on the written examination, the oral examination score is shown to be the sole predictor of scores on the written examinations. When average scores for the written examination were correlated with the educational and experience qualifications, the results indicated that neither education level nor years of experience predicts success on the written examination.

A grade of 70 percent or greater on each of the four parts of the written examination is necessary to pass, and anyone who scores at least 75 on any section is not required to repeat it at subsequent sittings. A sample of candidates in the examination for the first time indicates the following average scores for the four parts: 1) Legal (74.52%), 2) Fundamentals of Surveying (57.65%), 3) Computational (56.58%) and 4) Analytical (56.45%). Scores for candidates repeating sections improved somewhat with scores for each section averaging 80.7, 65.9, 58.31 and 64.7, respectively.

A review of the files showed 479 individuals whose files were closed due to failure to pass the examination and 206 applicants who were not qualified to take the examination. The agency reports that 301 (27%) of all applicants approved for

the examination passed all four sections the first time. Since these figures indicate that historically 55% of those applicants approved for the examination eventually pass, the remaining 28% must retake various sections of the exam at least twice.

The Enforcement Function. Enforcement provisions of the Surveyors Act do not provide for any inspection activities. The burden of identifying violations rests with the public and other registered public surveyors. The incidence of violations is low, compared with other agencies operating with similar enforcement provisions. The 1976 volume of complaints per 1,000 licensees or registrants for four agencies showed Registered Surveyors to be the lowest (7.69 per 1,000); Landscape Architects and Irrigators (170), Board of Registration of Professional Engineers (21), Board of Architectural Examiners (10.6). Only two revocations have occurred since the Board's inception.

While it may be conceded that the volume of complaints cannot be subjected to absolute standards, certain questions arise concerning the volume of complaints, given the historically high percentage of practicing public surveyors registered under "grandfather clauses." If the comparatively low number of complaints and revocations since 1955 reflects the actual occurrence of violations; then the full nature and extent of abuses which resulted in the passage of this law seem unclear. If the number of complaints does not reflect the actual incidence of violations, or if the difficulties mentioned in the Self-evaluation Report (e.g. questions concerning the availability of counsel, improperly prepared complaints or limited funds) prevent a full response to complaints received, then the ability for an agency with similar restraints of size, personnel, or funds to engage in significant or comprehensive enforcement efforts must be reassessed.

Summary

The objective of the licensing function is to provide the public with qualified land surveyors. The use of a minimum qualifications and a testing procedure has been employed by the Board to provide an objective standard with which the incompetent can be distinguished from the competent.

Analysis of this Board's licensing activities shows that after 22 years of operation, over half of the currently practicing registered surveyors were licensed without examination. The remaining 47 percent have been subjected to an examination which does not select for either education or experience.

Education and experience should have an effect on an applicant's scores, although the analysis would indicate that they do not.

The procedures employed in the administration of the examination appear to contribute to the oral examination being the sole predictor of test scores. A halo effect occurred when the same Board members designed the test, conducted an oral interview, and graded the written examination without employing any procedures to insure that biases incorporated in the design of the examination or gathered from the oral interview do not become further accentuated in the grading of the examination. The net result of such deficiencies in examination procedures and test results prevent this examination from serving as an objective standard which discriminates between competence and incompetence.

Criterion 3

An assessment of less restrictive or other alternative methods of performing any regulation that the agency performs which could adequately protect the public.

The review under this criterion centered on analyses of the agency's regulatory functions in terms of 1) changes over time in the restrictive nature of agency functions, as seen in the agency's statutory history; 2) significant effects of this regulation on the public and the industry; and 3) alternative methods of performing the agency's regulatory tasks. These analyses were obtained through the agency's self-evaluation report, literature concerning occupational licensing, and surveys of similar licensing functions in other states.

Evolution of Agency Functions

In order to assist in a determination of the net effect of statutory changes associated with the Board of Registration of Public Surveyors, the following table was constructed.

	60th Legislature 1967	61st Legislature 1969	63rd Legislature 1973	65th Legislature 1977
Definitions				1) Definition of Public Surveying Rephrased.
Exemptions				2) County Surveyors in counties greater than 25,000 no longer exempt
Board Administration				
The Board		No Change		
Powers and Duties of the Board		1) Per Diem increased from \$10 to \$25.	1) Empowered to establish standards of conduct and ethics. 2) Board granted injunctive powers. 3) In addition to Per Diem all legitimate expenses incurred by the Board reimbursed.	1) Board may revoke license for violation of Board rules and regulations in addition to violations of statutes. 2) Rosters to be published in odd-numbered years rather than annually.
Licensing		1) Renewal fee ceiling increased to \$25.	1) Applicants required to be 21 yrs. of age. 2) Of good character and reputation. 3) Satisfied one of several experience requirements. 4) Application fee not to exceed \$50. 5) After the first re-examination a new application must be filed with an additional \$50 examination fee.	1) Examination fee instituted ceiling set at \$100. 2) Option to employ staggered renewals instituted. 3) Provisions for reciprocity established. 4) Renewal fee ceiling increased to \$50.
Enforcement				1) Board may employ persons to gather evidence. 2) Appeals to be filed only in Travis County District Court. 3) Board may invite applicant to show cause before instituting criminal action. 4) Fines increased.

The rank ordering of the incidence of statutory changes listed below provides an indication of the emphasis and direction taken in statutory changes enacted.

Licensing	9
The Board	6
Enforcement.	4
Exemptions	1
Definition.	1

The most apparent changes have resulted in an increase in the Board's authority, and increased fees for all licensing functions. A trend in terms of qualifications could not so easily be identified since they became more restrictive in terms of minimum age and moral character requirements but they became more flexible in terms of education and experience requirements. The most recent change implementing a procedure for reciprocal registration is seen as a move towards less restrictive regulation.

Significant Effects of Regulation

The review of Criteria 1 and 2 as well as the material presented here, document strategies of regulation that have placed a consistent emphasis on standards related to entry into the occupation; in contrast to relatively less effort expended to effect an active enforcement effort. If economic dislocations result from such an emphasis, they can not be readily ascertained.

Alternative Methods of Regulation

All 50 states in the Union have acted to license land surveyors, but this licensing function does not, in most cases, rest with an agency responsible only for the licensing and regulation of land surveyors. Only five states regulate surveyors separately; Delaware, Nebraska, Tennessee, Texas, and West Virginia. Thirty-seven

states license surveyors in conjunction with engineers and six states regulate and license land surveyors along with engineers and architects. In two states licensing of surveyors is associated with an agency responsible for licensing and registration of technical occupations.

The Board of Registration of Public Surveyors currently administers a test designed by the Board which is unique to Texas. Texas is only one of five states to rely exclusively on a local test. These states include Texas, Tennessee, Nebraska, New Hampshire, and West Virginia. All other states recognize, to some degree, the national land surveyors exam administered by the National Council of Engineering Examiners. The lack of interest in this method of licensing in Texas appears founded in the belief that the land use patterns in Texas are unique enough, especially as a result of the retention of public lands and the recognition of Spanish and Mexican land grants, to render the use of a national examination inappropriate.

The Board's self-evaluation report calls attention to concern for Attorney General's opinions presently in force and the need for legislation to review and eliminate loopholes in the law in order to protect the public. The Attorney General's opinion questioned concerns WW-900 issued August 9, 1960. The subject of this opinion and three others is whether Registered Professional Engineers can legally engage in land surveying. The first opinion, WW-115, issued August 14, 1957, upheld the exemption of registered professional engineers in section 3 (c) of the Registered Public Surveyors Act of 1955. The second opinion, WW-428, issued May 9, 1958, reaffirmed this position. A third opinion, WW569, issued March 9, 1959, overruled Attorney General Opinions Nos. WW-428 and WW-115 and held that the exemption of registered professional engineers was not expressed in the caption of the bill as required by Section 35, Article III of the Texas Constitution and was therefore unconstitutional.

The final opinion on this question was issued August 9, 1960. Attorney General's Opinion No. WW-900 overruled all contrary opinions on the subject and noted that the practice of engineering encompasses several fields, including civil engineering and surveying in which all engineering principles are applied. WW-900 stated that it was the clear intention of the Legislature that registered professional engineers, when acting within their profession are not to be affected by the provisions of the Registered Surveyors Act.

Summary

The Board of Registration of Public Surveyors, has, since its inception, possessed the usual array of discretionary powers associated with occupational regulation. The statutory changes as well as the Attorney General's Opinions seem to validate some of the issues addressed in the background concerning the nature of occupational rivalries between engineers and surveyors. The one element not evident in this recurring jurisdictional dispute is the apparent lack of effort on the part of Boards regulating surveyors and engineers to take steps to resolve the dispute through increased coordination and communication rather than through increased efforts to strengthen artificial occupational divisions that are in reality overlapping or indeterminate.

Criterion 4

The extent to which the jurisdiction of the agency and the programs administered by the agency overlap or duplicate those of other agencies and the extent to which the programs administered by the agency can be consolidated with the programs of other state agencies.

The review of this criterion was directed at evaluating the agency's definition of its target population. The existence of other similar populations was explored and the extent of any overlap and duplication of services offered was analyzed. When applicable, the review also dealt with any efforts to establish coordinative relationships between agencies serving similar target groups and to minimize any duplication of services. This information was collected through discussions with agency personnel, review of statutes and rules, and the identification of other agencies with the potential ability to offer these same services.

Regulatory Jurisdiction. The Board of Registration of Public Surveyors regulates all surveying which is not performed by licensed state land surveyors, registered professional engineers, county surveyors in counties under 25,000 and officers of a political subdivision of the state when performing official duties of a surveyor, and the deputy or assistant of any of the individuals exempted as well as assistants of any public surveyor.

Overlapping Functions. All regulatory agencies share, to a striking degree, similarity of delegated powers, and as a result there is also a corresponding similarity in functional activities. Thus, the Board of Registration of Public Surveyors could be compared with the Board of Examiners of Licensed State Land

Comparative Regulatory Functions

					Agency Functions
X			X		establish qualification standards independently
	X			X	qualification standards suggested by national organization
X		X	X		develop written examinations
	X	X		X	utilize national exams
X	X	X	X	X	process exam applications
X	X	X	X	X	evaluate qualifications for examination
				X	prepare and send candidate ID cards
X	X	X	X	X	collect and process exam fees
					administer exams annually
	X		X	X	administer exams semi-annually
		X			administer exams on multiple occasions
	X	X		X	administer multiple exams
	X	X		X	national exam grading procedure
X		X	X	X	agency exam grading procedure
X	X	X	X	X	record and report grades
X	X	X	X	X	prepare and distribute certificates of registration
X	X	X	X	X	process annual license renewal
X	X	X	X	X	collect renewal fees
X	X	X	X	X	mail notification of delinquency
	X	X	X		reciprocal registration processed independently
	X			X	reciprocal registration processed thru national org.
	X	X	X	X	collect reciprocal registration fees
X	X	X	X	X	receive and investigate complaints
	X				field investigation capability
	X	X	X	X	issue warnings
X	X	X	X	X	consult legal counsel reference violations
	X		X	X	invoke injunctive powers
X	X	X	X	X	arrange agendas for Board meetings
X	X	X	X	X	administer Board meetings
X	X		X	X	prepare roster
X			X	X	distribute roster
	X			X	coordinate activities with educational institutions

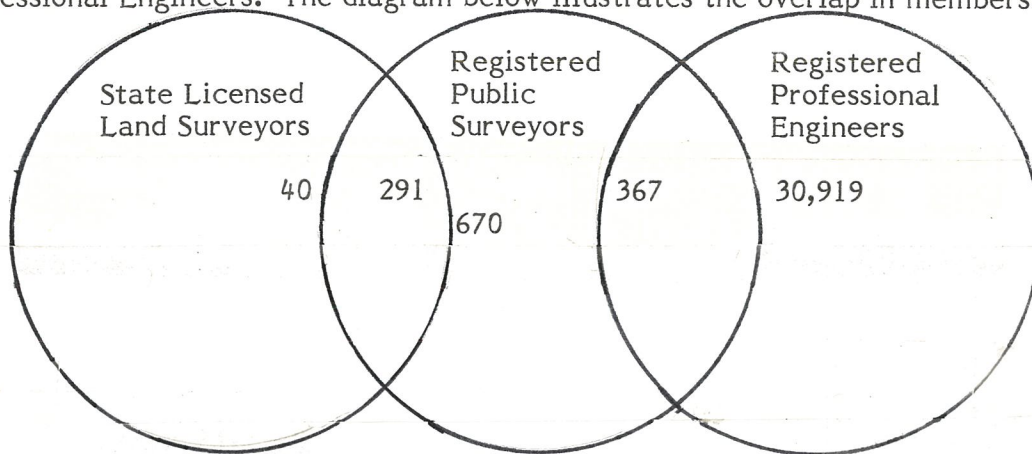
Surveyors, the Board of Landscape Architects, the Board of Registration for Professional Engineers and the Board of Architectural Examiners, not only on the basis of shared functional activities, but also in terms of common professional orientation.

Despite the fact that these agencies vary widely in terms of staffing and number of registrants; organization and regulatory activities are quite similar. Each Board is composed of practicing professional members, paralleled by a corresponding professional society which provides input into the regulatory system. With the exception of both boards regulating surveyors, the operations of these agencies are characterized by licensing responsibilities which are linked in some way with national regulatory associations influencing qualification standards, examination procedures and reciprocal licensing arrangements. The scope of enforcement capabilities and the extent to which they are utilized varies considerably between agencies.

There are three agencies licensing some aspect of surveying activities within the State: The Board of Registration of Public Surveyors, the Board of Examiners of Licensed State Land Surveyors, and the Board of Registration for Professional Engineers. There are no visible formal or informal mechanisms of communication of coordination between these agencies. The Boards apparently justify their separate existence on the premise that their jurisdictions and target populations in practice are as separate and distinct as are the operations of the Boards.

Further investigation, as well comparison of published rosters, revealed that this assumption is not justified. There exists a significant overlap in surveyors regulated by the Board of Registration for Public Surveyors, the Board of Examiners of Licensed State Land Surveyors and the Board of Registration for

Professional Engineers. The diagram below illustrates the overlap in membership.



The end result of such a large overlap in individuals regulated is that only 670 of the registered public surveyors are licensed and regulated solely by the Board of Registration of Public Surveyors.

Summary

The responses in the Self-evaluation Report indicate limited recognition of the potential target population, that the agency impacts on and the extent of duplication of functional activities presently occurring. It appears that surveyors feel that such duplication is necessary and even essential to preserve the integrity of surveying as an occupation, distinct and separate from engineering. Though this occupational distinction has been preserved in at least 37 states, it is through regulation under a consolidated board representing branches of engineering, surveying and, in some states, architects as well.

Criterion 5

Whether the agency has recommended to the legislature statutory changes calculated to be of benefit to the public rather than to an occupation, business, or institution the agency regulates.

The review under this criterion centered on statutory changes which affect the operations of the agency. In the period covering the last three legislative sessions, the review focused on both proposed and adopted changes in the law; prior to that period, the staff review was limited to only adopted changes. In analyzing these changes, the approach was taken that a statutory modification must be of clear benefit to the state's citizens to be considered to be in the interest of the public.

Using the chart tracing the statutory evolution presented in Criterion 3, the discussion of the effects of these legislative changes centers around amendments adopted by the Sixtieth, Sixty-first, Sixty-third and Sixty-fifth Legislatures.

Analysis of Recommendations

Exemptions. County surveyors in counties greater than 25,000 were declared no longer exempt from the registration under this law. This change is apparently a result of efforts to redress the circumstances which have never required county surveyors to be licensed or even technically qualified to fill this elected or appointive position. This change resulted in two county surveyors being included among those taking the examination in February 1978.

Board Administration. Two trends may be noted in the amendments affecting the Board: increased compensation and increased authority. In 1969, per diem was increased from \$10 to \$25, and in 1973, the Board was authorized to receive reimbursement for necessary expenses. The result of such a change boosted

expenses associated with the Board from an annual average of \$1,104 to \$3,771.57 with Board expenses for fiscal year 1977 totalling \$5,908.

Amendments granting the Board injunctive powers and the power to establish standards of conduct and ethics gave the Board increased authority in 1969. The Act was amended again in 1977 to allow the Board to revoke the licenses for violations of Board rules. These changes associated with rule promulgation by the Board may be viewed as an important increase in Board authority since it allows the Board broad discretionary power to establish rules and standards governing the practice of an occupation.

Licensing. Statutory changes affecting the licensing function are directed at amendments raising the ceiling on fees already authorized, designating new fees, providing for reciprocity and strengthening qualification requirements. The net result of such fee changes shows that renewals basically contribute the majority of revenues, but there appears to be a greater emphasis on increasing the fee structure associated with the examination and application process, making the price of entering the profession proportionately higher than the fees for those licensed surveyors already in practice. The frequency of fee increases emphasizes the point that with a stable and declining population, a regulatory agency is totally dependent on an ever increasing fee structure to meet rising costs.

Statutory requirements, other than those affecting fee structures in 1973, were aimed at revising qualification requirements. The entry requirements were made more restrictive by the additional requirement that applicants be at least 21 years of age and of good moral character. The question has been raised as to whether qualifications, other than those relating to training, experience, or demonstrated competence, have any direct bearing on an individual's competency.

The necessity of the minimum age requirement seems difficult to justify since it would have been almost impossible to satisfy any of the education and experience requirements and be less than 24 years old. The general trend in licensing has been to extend the amount of education required, so that many applicants today are required to be college graduates. The requirements for registration as a public surveyor have not followed that trend. The original law allows licensing only under the grandfather provisions or with eight years of experience considered satisfactory by the Board. A B.S. in civil engineering could be substituted for four years of that experience. Amendments in 1973 permitted four education-experience combinations to meet the Board's qualifications. The fact that a large number of candidates presently applying, qualify under the provision for high school graduation and six years experience suggests that the tradition of apprenticeship training experience rather than university training for land surveyors apparently still exists. The rift between university-trained surveyors and engineers and practical surveyors does not appear to have been closed in the intervening 20 years.

The extension of reciprocity privilege is seen as an action conducive to lowering interstate barriers and making it easier for individuals in licensed occupations to relocate across state lines. In order to evaluate the stringency of requirements for reciprocity, the provisions in the 1977 amendment were compared with provisions for reciprocity proposed in the 1941 model law which would have extended the jurisdiction of the Board of Examiners of Licensed State Land Surveyors to the types of surveying now under the jurisdiction of the Board of Registration of Public Surveyors. Under the model Act, the applicant was required to pass an oral examination, but the Board did not require a written examination when the license presented was acquired by an examination judged by the Board to

be of comparable quality or when the applicant's professional accomplishments merited licensing without examination. In contrast, the present Surveyors Act requires an examination of at least four hours.

The two provisions which were enacted in 1977, which might be declared in the public interest, include the publication of the roster in odd-numbered years rather than annually, and the option to implement staggered renewals. Both of the changes, if utilized, should result in increasing economies of operation.

Enforcement. The first amendments to the Surveyors Act of 1955 occurred in the Sixty-fifth legislature when the Board was authorized to employ persons to gather evidence for investigations. Changes increasing penalties as well as changes in enforcement procedures were also effected in 1977. None of these changes appear to be as far reaching as the delegation of injunctive powers to the Board which were discussed earlier.

Summary

Only in three instances could the statutory changes enacted result in modifications to the clear benefit of the state's citizens. The sum of the changes enacted point to increased Board authority, increased fees, especially those associated with entrance into the occupation, and increasingly restrictive qualification requirements. In some cases, the apparent disuse of these additional powers and the inappropriateness of some of the qualification requirements makes the necessity of such changes questionable.

Criterion 6

The promptness and effectiveness with which the agency disposes of complaints concerning persons affected by the agency.

The review under this criterion centered on: 1) an identification of the type and frequency of complaints received by the agency, 2) the adequacy of administrative procedures used to process these complaints, and 3) the appropriateness and patterns of actions taken to address the complaints. Information for the review was obtained through interviewing agency staff, examining complaint files, and analyzing data presented in the agency's self-evaluation report.

The Texas Board of Public Surveyors has "the authority and power to make and enforce all rules and regulations necessary to the performance of their duties." For enforcement of the Act, the Board has developed effective procedures for the receipt and disposition of complaints involving violations of the Registration Law.

Complaint Processing

Complaint processes can be divided most easily into two distinct groups: complaints against registered surveyors and complaints against unlicensed individuals.

Complaints against Licensees alleging any infractions of the Registration Law or any rule or regulation of the Board may be made by any person or group. The complaint must be presented to the Board in writing with supporting evidence. If a hearing is warranted, the Board then furnishes the licensee with a copy of the complaint materials at least 30 days before the hearing. If a hearing is unwarranted, or if there is insufficient evidence to proceed, the complainant is so

notified and the issue is dropped.

Complaints alleging violation of the Registered Public Surveyors Act by unlicensed individuals are handled in a similar fashion. Upon receipt of the complaint, the Executive Director investigates the charge and either dismisses it for lack of evidence, corresponds with the person charged and requests assurances that violations cease, or refers the matter to the Board for hearing.

Complaint Analysis

An analysis of information taken from the agency's complaint file indicates that the majority of complaints concern the practice of surveying by unlicensed individuals. Many of the complaints dealt with surveying by professional engineers who, by law, may survey without a surveyor's license. These alleged violations may be merely the result of an ignorance of the law on the part of the complainant. While comparatively few of the complaints dealt with incompetence, per se, the underlying cause of many complaints against unlicensed individuals appeared to be incompetence.

The major problem the agency has found in dealing with complaints has been the difficulty in obtaining evidence against individuals and in inadequate evidence being sent in with complaints. This is particularly evident in the case of unlicensed individuals. While the agency has no investigative staff, the agency states that registered surveyors are very cooperative in policing their profession. This statement would seem to be borne out by the fact that many of the complaints found in the file came from licensed surveyors.

In the case of violations by unlicensed persons, the Board may apply to a court of competent jurisdiction to restrain an individual from violating the provisions of the Registered Public Surveyors Act. In this respect, the Board may

be represented by the Attorney General's Office, the District Attorney, or County Attorney.

A survey of the complaint files indicates that of the 37 show cause letters issued by the Board, only three resulted in injunctions being filed. During the period covered by fiscal years, 1975-1977, there was one revocation of license, one court proceeding, and five warnings were issued.

Enforcement Procedures

The Texas Board of Public Surveyors is authorized to enforce the provisions of the Statute through formal hearings and injunctive power (Sec. 5).

The Board may hold hearings to investigate complaints of malpractice or misconduct by registered surveyors. Notices of such hearings are filed with the Texas Register Division of the Office of the Secretary of State. The Board has the power to issue reprimand, to suspend or revoke the certification of any registered surveyor after due process in the case of gross incompetency, fraud or deceit in obtaining a certificate, or any violation of the Statute or rules and regulations. Any ruling of the Board may be appealed to the District Court of Travis County.

Complaint Records

The Board is required to maintain a current file of all complaints and dispositions of violations. A selective inspection of the complaint files indicated that the agency generally handles complaint processing in a thorough and equitable fashion. Information is efficiently filed and easily accessible. Correspondence is generally precise, courteous and timely. Although there are lengthy delays in the processing of certain types of complaints, these delays are generally attributable to particular circumstances such as difficulty in obtaining evidence or insufficient information in the complaint rather than to an inefficiency on the part of the

agency. There are seldom excessive backlogs in complaint processing, and the agency's records seem adequate.

Summary

The agency has developed effective procedures for the receipt and disposition of complaints. Most complaints are those registered against unlicensed individuals. The Board maintains and exercises its authority to censure or revoke the registration of architects found guilty of malpractice or misconduct. Likewise, the Board may apply injunctive power to restrain the activities of unlicensed individuals. The agency maintains adequate records of complaints and administers complaints processing in an efficient manner.

Criterion 7

The extent to which the agency has encouraged participation by the public in making its rules and decisions as opposed to participation solely by those it regulates, and the extent to which the public participation has resulted in rules compatible with the objectives of the agency.

The review under this criterion began with a determination of the statutory requirements regarding public participation both in the agency's enabling law and general statutes. The agency's procedures were reviewed to determine compliance with these statutes. The agency files and self-evaluation report were reviewed to determine the nature and extent of public participation and any results which might be attributed to public participation.

Public Participation

Interviews of agency personnel and documented evidence indicate that there has been no specific effort on behalf of the Board to inform the general public of the agency's purposes and functions. There is no budget allocation for media advertising and, consequently, there has been none. The agency has conducted no seminars, conferences or training sessions which might have been available to the public. The agency distributes no consumer-oriented materials designed to inform the public of its operations. The only publications of the agency are the annual Roster of registered surveyors which includes the current rules and regulations of the Board.

The Board's response to issues addressed by this Criterion was to indicate that the public does not fully utilize the roster as a resource to identify qualified public surveyors. Distribution of the roster is currently limited to those copies mailed to registrants and the copies (150) distributed to the Secretary of State's Office.

Copies of the roster are also provided in response to requests from the public at a cost of \$1.50. Review of correspondence indicates the annual volume of copies sent in response to such requests to be less than 50. No initiatives on the part of the Board to publicize the availability of these rosters was encountered.

The agency reports that there is very little interest in the operations of the agency on behalf of the general public and that there are very seldom requests for general information. As a result, there is negligible participation by the general public in open meetings held by the Board, and little participation by licensees unless specifically involved in hearings.

There are no advisory bodies to the Board through which interests of the general public could be focused and current requirements for Board membership do not provide for representation of the public.

There are no statutory requirements for notification of the public regarding Board meetings or rule changes, other than through compliance with the Open Meetings Act. In this regard, the agency provides formal notification of scheduled Board meetings through the Texas Register Division of the Office of the Secretary of State.

Participation by the public and registrants in the activities of this agency probably could not be increased given current resources.

Summary

The most significant interface of the Board with the public appears to occur in the disposition of complaints and in any requests for information directed to the Board.

Criterion 8

The extent to which the agency has complied with applicable requirements of an agency of the United States or of this state regarding equality of employment opportunity and the rights and privacy of individuals.

The review under this criterion centered on an identification of agency Equal Employment Opportunity reporting requirements and policies regarding the rights and privacy of individuals. Federal and state statutes were reviewed; agency policies and procedures were documented; and appropriate agency files were inspected to determine the adequacy of records maintained to verify the data presented under this criterion. The Governor's Office of Personnel and Equal Employment Opportunity was consulted. The general procedures regarding personnel actions and protection of the rights and privacy of individuals were examined through interviews and review of files.

Affirmative Action

The Texas Board of Registration of Public Surveyors has filed an Affirmative Action Plan with the Governor's Equal Employment Opportunity Office, covering the period January 1, 1974 - December 31, 1974. The plan has not been updated since 1974; however, representatives of the Governor's EEO office report that this is characteristic of a small agency with a low rate of turnover in personnel.

The agency's affirmative action plan covers the elements of plan development, communication and administration, as well as recruitment, selection and training of new employees. The objective of the plan is to provide a mechanism for the recruitment of minority applicants, with specific actions to utilize selective advertising media in the event of a staff opening. The plan appears to be adequate given the size and history of the agency's employment patterns.

Staff Composition

Agency staff consists of an executive director and one full-time support staff employee, with appropriated funding for seasonal and part-time help. The State Auditor's Classification Office reports that no full-time personnel turnover has taken place since 1972. Shown below is the breakdown of agency personnel by category:

Executive Director	Full-time	1	Female	White
Clerk III	Full-time	1	Female	White

Criterion 9

The extent to which the agency issues and enforces rules relating to potential conflict of interests of its employees.

The review under this criterion centered on an identification of documented agency practices and procedures regarding the filing of individual financial statements and affidavits with the Office of the Secretary of State. The provisions of the statute (Article 6252-9b, V.A.C.S.) were reviewed and agency interpretations of the nature and intent of the provisions of the Act were sought. Records maintained by the agency and the Secretary of State under the authority of the legislation concerned with conflict of interest were reviewed to determine the extent of agency compliance with the letter and intent of the Act and to verify the accuracy of the data presented under this criterion. In addition, inquiries were directed to selected areas where conflicts of interest might exist that could not be discerned through review of official documents.

Administrative Procedures

The agency does not enforce a formal set of rules governing potential conflict of interests and has only limited informal procedures. New employees and Board members receive no orientation as to the following: 1) H.B. 753, 1951, providing for the accounting and responsibility for and use of state-owned property; 2) Section 4 of the current General Appropriations Act relating to political aid and legislative influence and 3) Article 6252-9b, Standards of Conduct of State Officers and Employees.

Financial Statement

In compliance with Article 6252-9b, Section 3, the executive director of the agency has filed with the Secretary of State a financial statement. This financial statement is current and appears to satisfy legal requirements. Based on the information filed, there is no indication of any potential conflict of interest.

Affidavits

The Attorney General's Opinion No. H255, 1974 clarifies the obligation of an agency such as the the Board of Registration for Public Surveyors as to Article 6252-9b, Section 5.

The unsalaried, appointed members of a board or state agency, not named as a "major state agency" in this article are not required to file a financial statement but are required to file an affidavit showing any involvement in regulated activities. The person appointed to act as chief executive or administrative person in such an agency is required to file the financial statement.

A check of the statements filed in the Secretary of State's Office shows that only one Board member has filed an affidavit. No improprieties are apparent from an inspection of the affidavit.

The agency conducts no regular periodic review of compliance, but the small size of the staff and the negligible turnover rate of full-time personnel, suggest that informal administrative arrangements for staff members are adequate under the existing organizational structure. However, formal procedures should be instituted for the orientation of Board members as to their duties and responsibilities pertaining to conflict of interest statutes.

Criterion 10

The extent to which the agency complies with the Open Records Act and the Open Meetings Act.

Examination of elements under this criterion were separated into components dealing with responsibilities for making agency documents available to the public under open records requirements and responsibilities for public notification of proposed agency actions. Under the area of open records, statutes were reviewed in relation to written or unwritten policies used by the agency. Where written policies did not exist, interviews were conducted to determine actual compliance. Materials contained in the self-evaluation report were verified and open records decisions reviewed. Open meetings compliance was verified through review of agency written and unwritten policies to determine if they accurately reflected statutory requirements. Interviews with agency personnel were conducted in instances where written policies were lacking or information contained in minutes of meetings was incomplete or unclear. Records in the Office of the Secretary of State were reviewed on a selected basis to determine compliance with posting and informational requirements.

Open Records

For the most part, the agency's records are complete and well organized. The agency indicates that all information on operations is made available to the public in accordance with the Open Records Act. While the agency reports that it has never denied a formal and legitimate request for information; it does scrutinize requests as to purpose.

Agency records are available to any applicant who wishes to examine his own file on record with the agency. The agency has received no known complaints

for refusing to provide requested information.

Open Meetings

The Board of Registration of Public Surveyors is required by statute to hold at least two meetings each year. The Board usually meets four to five times a year. Regular meetings are usually held in August and February when the Board administers the exams. These meetings are usually held in Austin. The agency indicated that there has been no complaint about the fixed location of Board meetings and that the logistics involved in holding the examination in another city are too great. The agency reports that all Board meetings are open meetings and that there has been only one case of a closed executive session in the history of the Board. An inspection of the minutes of the Board meetings revealed no information which indicates that activities of the Board are in conflict with the requirements of the Open Meetings Act.

While no specific records are kept by the agency of public attendance at Board meetings, the agency reports little public interest in Board proceedings. Attendance at meetings usually consists of Board members, staff, and those parties specifically involved in Board hearings and other activities. These individuals are identified in the minutes of Board meetings.

In cases where Board meetings include formal hearings, an Assistant Attorney General attends as counsel to the Board. A court reporter may be requested by the individual involved if he assumes the expense of such services. All hearings are conducted in accordance with the Texas Administrative Procedures Act.

Notification Procedures

The only formal procedure for advance public notification regarding

scheduled Board meetings is through the Texas Register Division of the Secretary of State. All such notifications by the agency have been made in advance of the required 10-day limit.

There is no media advertising by the agency nor advance mail notification of registrants nor is any required by the statute. The agency does not budget specific appropriations for these activities.

Summary

The Board of Registration of Public Surveyors appears to maintain an adequate system of record-keeping which is open to legitimate inspection, yet which safeguards confidential information. However, the agency should review all pertinent statutes to insure that any procedures used to implement the Open Records Act meet the spirit as well as the letter of the law.

Openness of public meetings implies both notification and accessibility. The procedures utilized by the Board for advance notification of public meetings fulfil statutory requirements. Many of the Board's public meetings, however, may not be easily accessible to the public and the regulated profession.

Criterion 11

The impact in terms of federal intervention or the loss of federal funds if the agency is abolished.

There are no federal standards imposed on states as regards to standards or practices concerned with surveying, thus no federal funds are involved in the administration of this Act.

CONCLUSIONS

Prior to the establishment of the Board of Registration of Public Surveyors in 1955, only three constitutional or statutory provisions addressed the practice of surveying within the State. The Constitution made provision for the office of County Surveyor, but it did not specify any minimum qualifications. In 1919, the Board of Examiners of Licensed State Land Surveyors was created to allow surveyors, whose qualifications were to be determined by examination, to perform the functions of a county surveyor statewide. There are indications that the public came to accept this license as certification of general competence in all phases of surveying. In 1937, engineering surveying came under the jurisdiction of the Board of Registration for Professional Engineers. The Registered Public Surveyor's Act of 1955 was the culmination on the part of Texas surveyors and the newly organized Texas Surveyors Association to enact legislation designed to protect the public by certifying the competence of land surveyors and by recognizing boundary surveying as a unique occupation, separate from related activities such as engineering surveying.

The review contained in this report has centered on the areas of licensing and enforcement to assess the result of the exercise of these powers on the objectives originally conceived under the statute. The evaluation of the Board of Registration of Public Surveyors raises serious doubts as to whether the licensing objective defined by the Legislature in 1955 has been achieved.

The response of land surveyors to the creation of the Board was immediate. During the first year of operation, the Board registered 975 individuals and rejected 60 others. Most of these surveyors were registered under Section 6a of the Act which contained the grandfather clause. Though the inclusion of this clause was considered essential to the enactment of the licensing legislation, the effects of

this clause are still evident in 1978. Of the 1,328 public surveyors registered in 1977, 53 percent of the currently practicing public surveyors were registered under provisions of the Act which did not require an examination. Thus, 17 years after licensing by examination became mandatory, more than half of the practicing licensees were still not registered by examination. The statutory provision for a licensing examination is based on the premise that it will serve as an objective standard. However, the effectiveness of the examination process has been further diminished by questionable procedures utilized in the design, administration and evaluation of the examination.

The number of new licenses issued since 1960 indicates a net growth in the number of practicing public surveyors of only five percent as compared with a net growth of 35 percent before licensing by examination became mandatory. The loss of membership due to the factor of age will not be offset by the number of new individuals licensed each year. This situation will result in fewer opportunities for aspirants for registration to acquire the minimum experience required by law and in fewer surveyors to serve the needs of a state experiencing rapid economic growth. As indicated earlier, the review of the Board of Registration of Public Surveyors raises doubts that the licensing objective originally defined by the Legislature in 1955, has or can be achieved, given the set of circumstances under which the agency currently operates.

However, should the legislature decide to continue the regulation of land surveyors, several steps should be taken to strengthen the achievement of stated objectives:

THE LEGISLATURE SHOULD CONSIDER MERGING THE FUNCTIONS
OF THE BOARD OF REGISTRATION OF PUBLIC SURVEYORS WITH
THOSE OF OTHER SIMILAR LICENSING AGENCIES

By merging the regulation of public surveyors with the regulation of related occupations, certain results would occur which could improve the effectiveness of the licensing and regulation of public surveyors. Such a reorganization could result in the more efficient allocation of the state's resources by eliminating significant duplication of administrative procedures associated with the registration of public surveyors. Consolidation would also contribute to minimizing the fiscal and management problems associated with agencies of this size. At the same time, the combination of resources effected by consolidation of regulation would also result in proportionately greater resources becoming available to address problems associated with the achievement of enforcement objectives. A consolidation would also contribute to more coordination and consistency in the regulation of all surveying activities within the state.

Additionally, other steps could be taken to strengthen the achievement of objectives, regardless of the organizational form through which the function is carried out:

THE BOARD COULD EMPLOY A QUALIFIED INDIVIDUAL TO ADDRESS PROBLEMS ASSOCIATED WITH THE DESIGN, ADMINISTRATION AND GRADING OF THE EXAMINATION.

This step is necessary to ensure that any licensing examination given by the Board does serve as a fair and objective standard to determine competent surveyors from incompetent ones. At the same time, the oral interview used by the Board could be assessed to determine if it has actually served to bias the grades received on the written exam. If retained, the subjective nature of the interview could be modified to cover areas clearly defined and appropriate to the purposes for which it is used.

ADMINISTRATIVE PROCEDURES SHOULD BE FORMALIZED AND STRENGTHENED TO IMPROVE THE QUALITY OF INFORMATION USED FOR DECISION-MAKING AND THE REVIEW OF REGULATORY ACTIVITIES.

There appear to be multiple problems in the administration of this agency due to the absence or underutilization of critical information. Areas of concern include the management of assets and liabilities as well as information on agency activities, both current and past.