

1990 CALIFORNIA PROFESSIONAL  
LAND SURVEYOR EXAMINATION

Candidate ID Number \_\_\_\_\_

SECTION B - 138 POINTS OF 295 TOTAL POINTS

FOUR HOURS ALLOWED TO COMPLETE THIS SECTION

Examination Overview

The 1990 California Professional Land Surveyor examination is given in two four-hour periods on the same day. Section A was the first section of this two-part examination; Section B consists of the following:

1,739.1 pts  
min

Test Problem No.	Subject Matter	Point Value	Pages	FOR OFFICE USE ONLY
B1	Subdivision	36 Points 63	20	
B2	Legal	10 Points 17	-	
B3	Public Lands	16 Points 28	15	
B4	Lot Line Adjustment/Legal	32 Points 56	22	
B5	Construction Staking	24 Points 42	43	
B6	Record of Survey	20 Points 35	30	

The scope of this exam relates to the principles and practice of land surveying in the various areas of practice. You will be graded on the answers specifically required and also on your method of obtaining these answers as demonstrated in your solution.

There are no trick questions; rather the questions have been designed to realistically reflect the actual conditions and practice of Land Surveying. The assignment of points to each question is not based on the time required to complete an answer. Instead, points have been assigned on the basis of the relative importance of each question to basic land surveying competence.

TURN THIS PAGE OVER FOR SPECIFIC EXAMINATION INSTRUCTIONS

# PROBLEM B1

36 Points

Sheet 1 of 1

## PROBLEM STATEMENT

You have been asked to survey and monument Lot 3 of the XYZ Subdivision in Rainbow County, California shown below. Lot A of the ABC Subdivision was conveyed in August 1933. Lot B of the ABC Subdivision was conveyed to a different party in June 1936.

## PROBLEM REQUIREMENTS

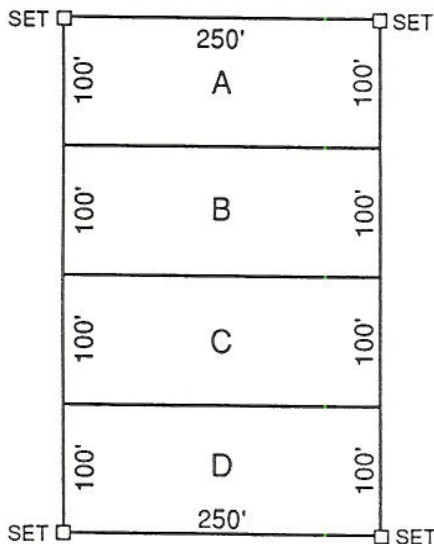
1. Given only the information shown on the plats below, indicate the lengths of the sides w, x, y, and z of Lot 3 on your field survey.
2. Using only the information given in the Problem Statement above and in the plats shown below, write a legal description for Lot B.
3. What type of document(s) will you be required by law to prepare?

24 Points  
(6 points each)

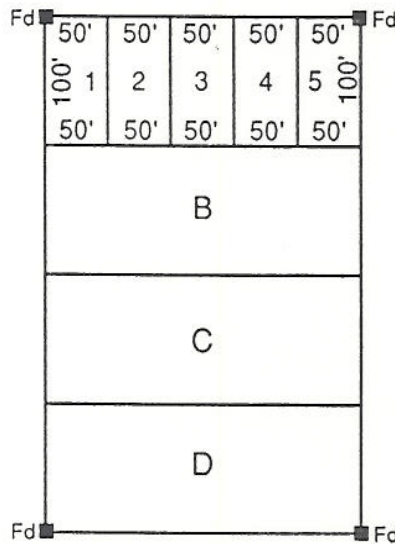
6 Points

6 Points

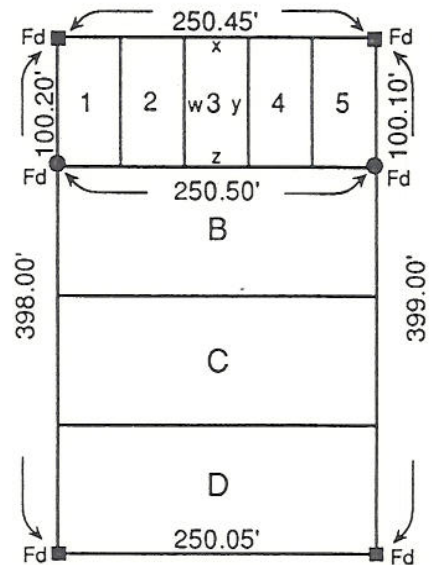
ABC SUBDIVISION  
Filed in Book 3  
of Maps at Page 25  
in July 1932



XYZ SUBDIVISION  
Filed in Book 7  
of Maps at Page 73  
in May 1946  
(a Division of Lot A  
of ABC Subdivision)



YOUR  
FIELD SURVEY  
Prepared in  
April 1990



### LEGEND

- = SET 3" X 3" REDWOOD POST WITH NAIL
- = FOUND 3" X 3" REDWOOD POST WITH NAIL (ORIGINAL)
- = FOUND 1" IRON PIPE (ORIGIN UNKNOWN)

## PROBLEM B2

10 Points

Sheet 1 of 2

### PROBLEM STATEMENT

Your city has decided to implement a computer-based Land Information System (LIS) that is designed to collect, store, manipulate, and retrieve data. These data focus primarily on land parcels and their associated records within your city's legal jurisdiction and administrative boundaries. This LIS will be available for use beginning June 1, 1995.

The City Surveyor has recommended the use of the California State Plane Coordinate System for the city LIS and has asked you to research the appropriate sections of the California Code and respond to the statements listed below.

### PROBLEM REQUIREMENTS

1. Complete the following sentences by filling in the blanks on this sheet.

a. There are two defined California Coordinate Systems. Their abbreviations are \_\_\_\_\_ and \_\_\_\_\_, and they are defined in \_\_\_\_\_ of the \_\_\_\_\_. **1 Point**

b. The City Surveyor is concerned about field survey data measurement specifications and accuracy classification standards. Your research has determined that Section \_\_\_\_\_ addresses his concerns. **1 Point**

c. The California Coordinate System has two systems of distances expressed in: \_\_\_\_\_ and \_\_\_\_\_ of a \_\_\_\_\_ and \_\_\_\_\_ and \_\_\_\_\_ of a \_\_\_\_\_. **1 Point**

d. The City Surveyor wants all parcel boundary measurements submitted after June 1, 1995 to comply with Section \_\_\_\_\_. This section states that 1st and 2nd order accuracy standards and measurement specifications are defined by the \_\_\_\_\_. If compliance with the above is claimed, this section will also require additional \_\_\_\_\_ data showing \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and a \_\_\_\_\_. **1 Point**



**PROBLEM REQUIREMENTS (continued)**

2. For the following problem requirements, circle the appropriate legal status of the situations described and cite the section number of the applicable California Government Code.

- a. Local title companies will be contributing data to the new LIS. In return, they are requiring that all parcel data and all attributes associated with each parcel be delivered with only California Coordinates.

Legal: Yes / No. Section No. \_\_\_\_\_.

**1 Point**

- b. The Recorder's Office has requested the same data format as that requested by the title companies and the Recorder believes that data will be sufficient for constructive notice in the recording process.

Legal: Yes / No. Section No. \_\_\_\_\_.

**1 Point**

- c. The Planning Director agrees with the Recorder and also believes that the very first California Coordinates for a parcel should be held fixed and as the final boundary of the parcel.

Legal: Yes / No. Section No. \_\_\_\_\_.

**1 Point**

- d. The City Surveyor plans to accept data formatted in either of the California Coordinate Systems up to June 1, 1995.

Legal: Yes / No. Section No. \_\_\_\_\_.

**1 Point**

3. The following is a general knowledge question. **Circle** correct answers or **fill in** the blanks as appropriate.

The geodetic projection used for the newest California Coordinate System is best described as follows:

- a. Clarkes' Spheroid / Geodetic Reference System of \_\_\_\_\_, which is :

**1 Point**

- b. South / North oriented and Geocentered / NonGeocentered.

**1 Point**

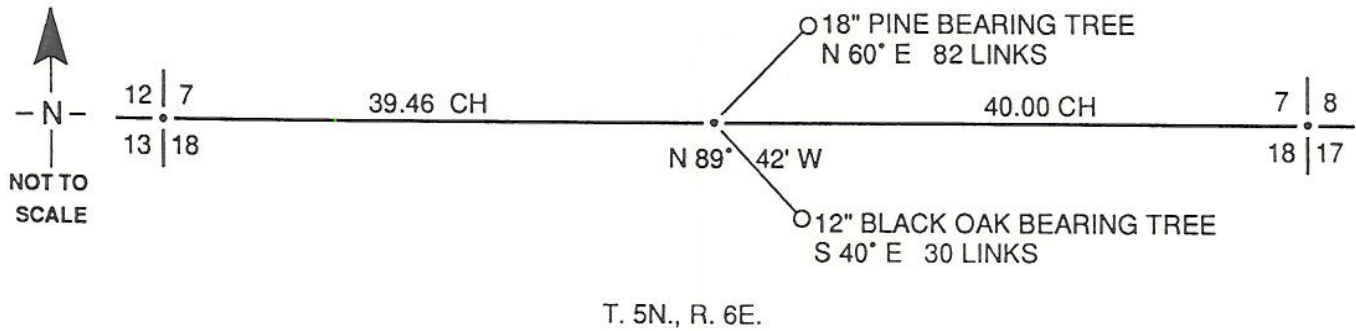
## PROBLEM B3

16 Points

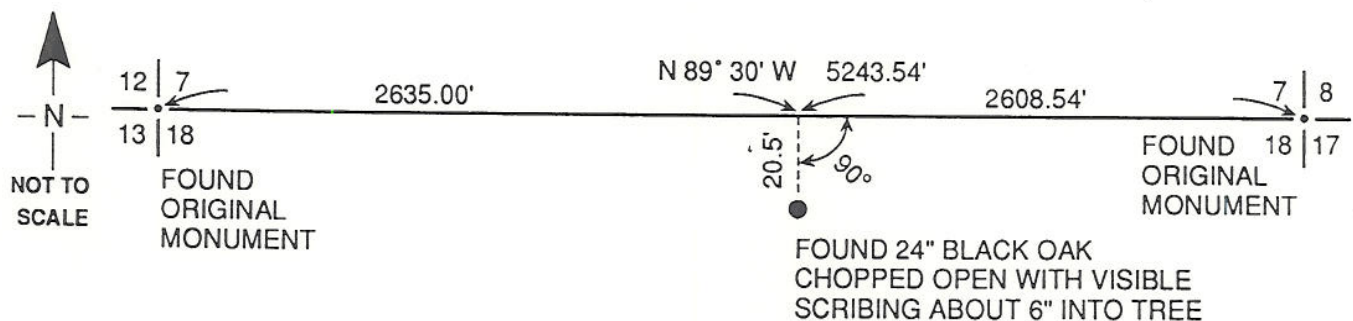
Sheet 1 of 1

### PROBLEM STATEMENT

Below is a sketch compiled from G.L.O. plat and field notes dated July 26, 1879.



Below is a sketch showing the results of a field survey you performed in January 1990.



### PROBLEM REQUIREMENTS

1. Describe how you would re-establish the missing 1/4 corner monument position. **10 Points**
2. Assume that, in addition to the oak tree, you had found a blazed 18" living pine tree without visible scribing near the location called in the notes for the 18" pine bearing tree. How would you re-establish the missing 1/4 corner monument position? Explain your answer. **6 Points**

## PROBLEM B4

32 Points

Sheet 1 of 2

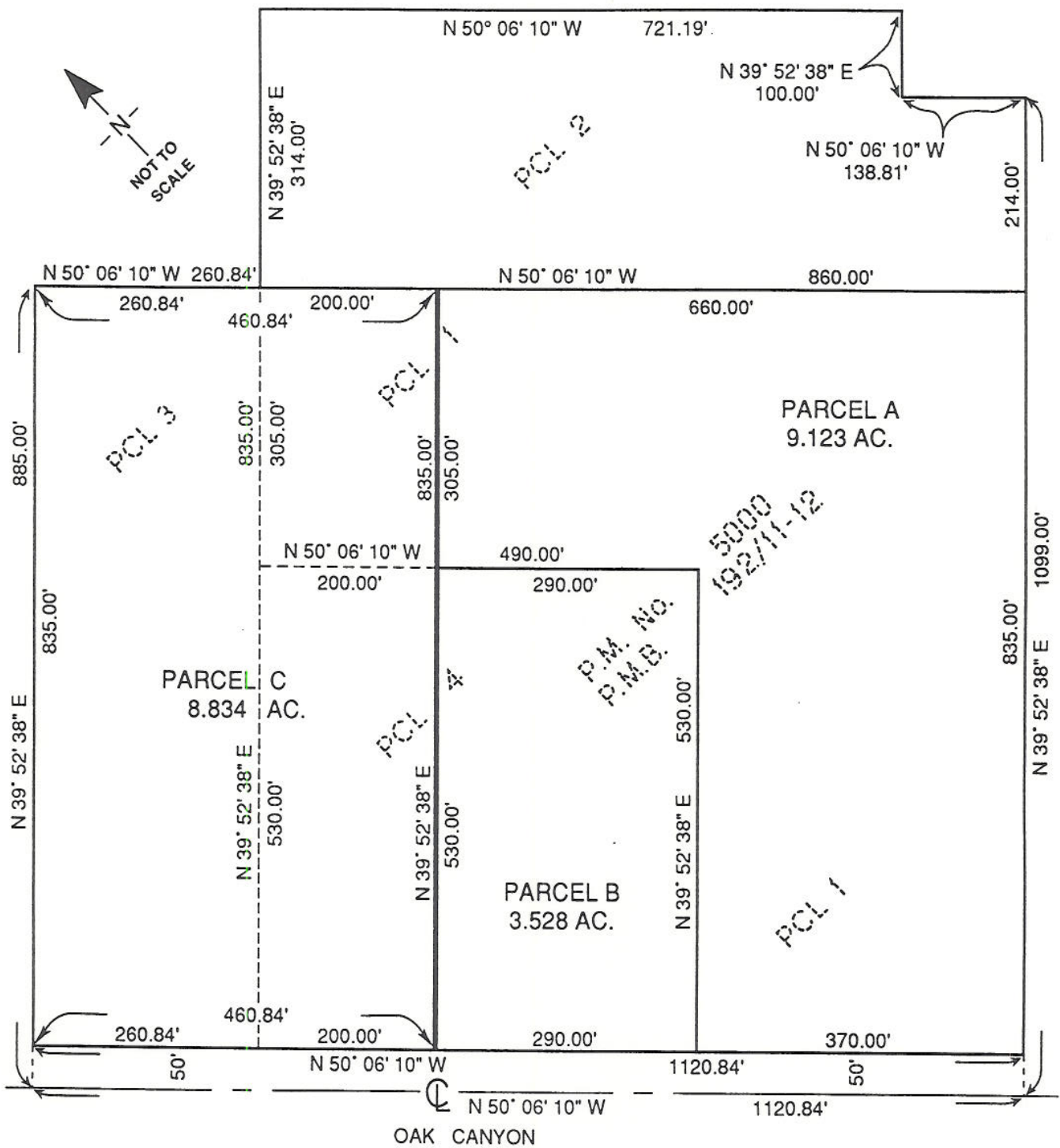
### PROBLEM STATEMENT

Your client has asked you to complete a lot line adjustment of existing parcels 1, 3, and 4 of P.M. No. 5000 filed in P.M. Book 192 at Pages 11 and 12. These parcels are encumbered by deeds of trust. You have also been asked to provide the surveying and mapping services to create the new parcels A, B, and C as shown on the diagram on the facing page. Your survey has confirmed that the record information on the existing parcel map is identical to that on the plat map on the facing page. The resulting parcels conform to local building and zoning ordinances. Your client has required that the new parcel line be monumented.

### PROBLEM REQUIREMENTS

- |                                                                                                                                                      |                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. Prepare a separate legal description for each of the new parcels A, B, and C.<br>(Do not use metes and bounds descriptions.)                      | 24 Points<br>(8 points each) |
| 2. List the document(s) you would advise your client to revise or record in order to transfer title after the lot line adjustment has been approved. | 4 Points                     |
| 3. List the document(s) that, according to state law, you are required to file after monumenting the new lot corners.                                | 2 Points                     |
| 4. Cite the specific section and paragraph(s) of the California Government Code that addresses lot line adjustments.                                 | 2 Points                     |

# PLAT MAP DELINEATING LOT LINE ADJUSTMENT IN THE CITY OF BENTON, COUNTY OF RAINBOW





## PROBLEM B5

24 Points

Sheet 1 of 2

### PROBLEM STATEMENT

You have been provided design criteria as shown on the diagrams below and on the facing page.

### PROBLEM REQUIREMENTS

Answer the following questions using the information provided in the diagrams.

1. Determine the ground elevations of the back of the sidewalk at the following locations:
  - a. Driveway centerline 3 Points
  - b. Southeasterly property corner 3 Points
  - c. Southwesterly property corner 3 Points
2. Provide the grade percentage between Point C and the building pad.  
Show all calculations. 6 Points
3. What is the slope ratio from Point A to the toe of slope? 3 Points
4. Calculate the cut from the back of the sidewalk to the sewer lateral invert at the property line. 3 Points
5. Calculate the distance from the North property line to the toe of slope at Point B. 3 Points

Note: Round all answers to 0.01'.

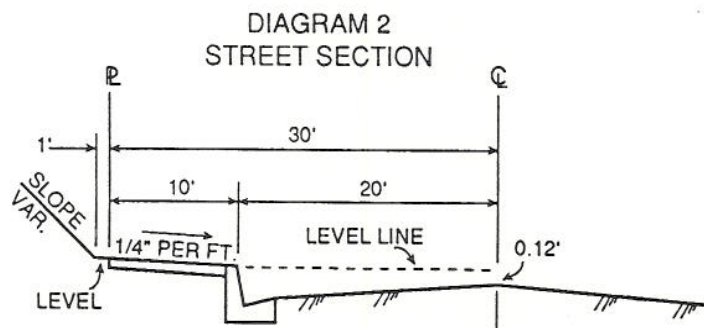
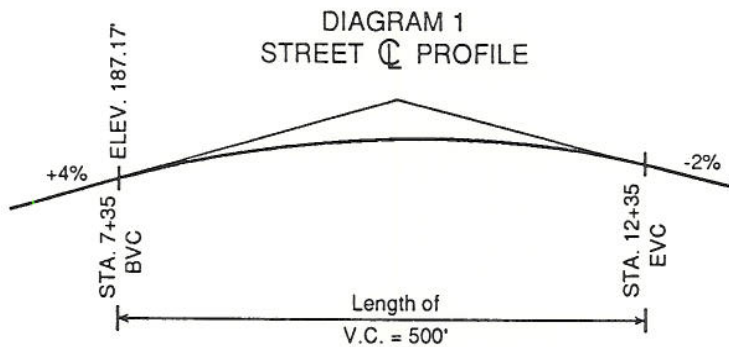
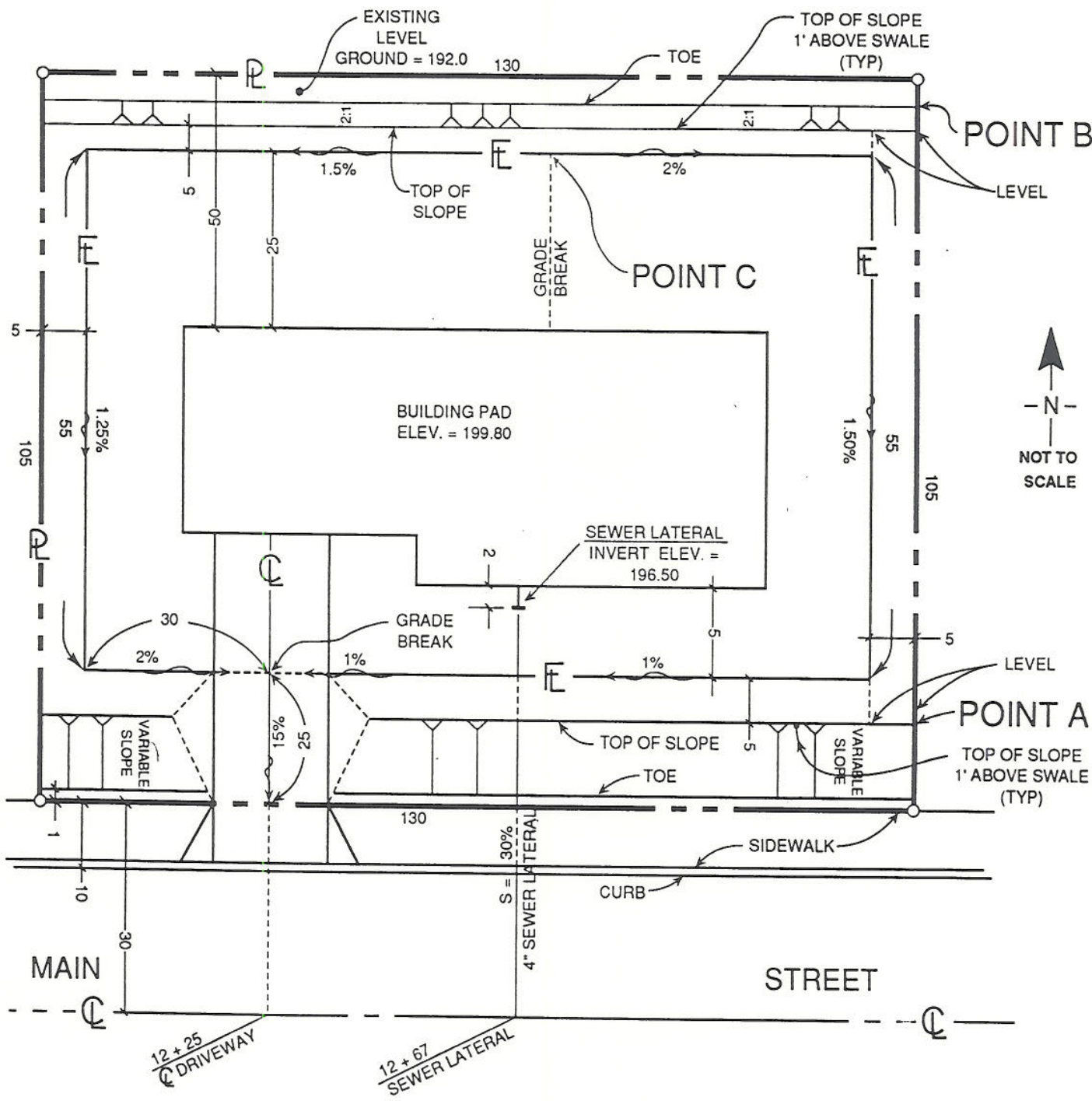




DIAGRAM 3  
PLAN VIEW  
(ALL DIMENSIONS ARE IN FEET)



## PROBLEM B6

20 Points

Sheet 1 of 2

### PROBLEM STATEMENT

On March 3, 1990, you performed a survey of the lands of B. Smith described as follows:

The South 75.00 feet of the West 100.00 feet of the East 200.00 feet of Lot 1, Tract 500,  
recorded in Book 8 of Maps, Page 86, Records of Rainbow County, State of California.

The client acquired the property in 1959 from R. Jones, who still owns the remainder of Lot 1.

### PROBLEM REQUIREMENTS

Use the boundary survey on the opposite page to answer the Problem Requirements.

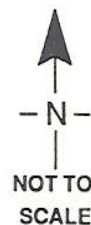
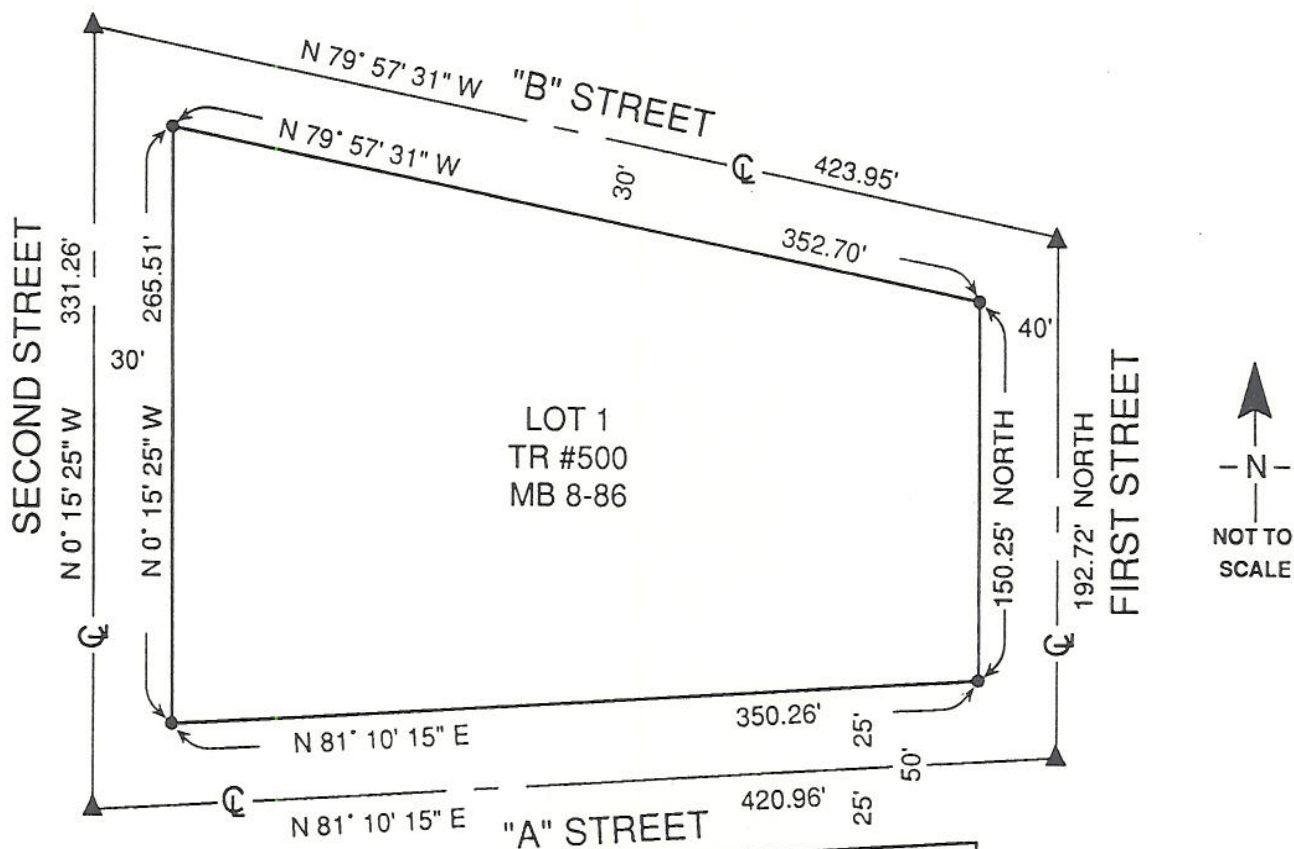
1. Determine the boundaries of your client's property. **6 Points**

2. Draft a Record of Survey Map of your client's property on a separate sheet of the grid paper provided. The Record of Survey should be carefully and clearly drafted and should fulfill all of the requirements of the State of California Business and Professions Code except the following: **14 Points**

- a. sheet size
- b. ink
- c. tracing cloth/polyester film
- d. one-inch border
- e. required surveyor's, County Surveyor's and Recorder's statements
- f. memorandum of oaths

Ignore local Record of Survey requirements.

BOUNDARY SURVEY  
 SKETCH OF LOT 1, TRACT 500  
 BOOK 8 OF MAPS, PAGE 86,  
 RAINBOW COUNTY, CALIFORNIA



LEGEND

- ▲ = FOUND SPIKE PER TR #500
- MB = MAP BOOK
- = FOUND 2" IP, LS 0000 PER TR #500

NOTE: RECORD AND MEASURED DIMENSIONS ARE IDENTICAL