

CITY PLANNING COMMISSION

1231 'I' STREET, SUITE 200, SACRAMENTO, CA 95814

APPLICANT Spink Corporation, 2590 Venture Oaks Way, Sac, CA 95833
OWNER Ernest C. Basham, P.O. Box 464, Broderick, CA 95605
PLANS BY Spink Corporation, 2590 Venture Oaks Way, Sac, CA 95833
FILING DATE 12/29/88 **ENVIR. DET.** Negative Declaration **REPORT BY** DH:kjr
ASSESSOR'S PCL. NO. 226-0230-003

- APPLICATION:**
- A. Negative Declaration
 - B. Tentative Map to divide 5.0+ vacant acres into 20 single family lots in the R-1 Zone
 - C. Variance to reduce the rear and side yard setbacks for two proposed lots

LOCATION: 475 Main Avenue

PROPOSAL: The applicant is requesting the necessary entitlements to divide 5 acres into 20 single family lots

PROJECT INFORMATION:

General Plan Designation: Low Density Residential 4-15 du/net acre
1984 North Sacramento Community
Plan Designation: 7-15 du/net acre
Existing Zoning of Site: R-1
Existing Land Use of Site: Vacant with PG&E overhead high voltage transmission lines and one mobile home

Surrounding Land Use and Zoning:	Setbacks:	Required	Provided
North: Single Family; R-1	Front:	25'	To Be Shown
South: Single Family; R-1	Side(Int):	5'	
East: Vacant, proposed single family; R-1	Side(St):	12 1/2'	
West: Single Family under Construction; R-1	Rear:	15'	

Property Dimensions: 330' x 660'
Property Area: 5+ acres
Density of Development: 4 d.u. per acre
Topography: Flat
Street Improvements: To be extended
Utilities: To be extended

SUBDIVISION REVIEW COMMITTEE RECOMMENDATION: On April 26, 1989, by a vote of six ayes and three absent, the Subdivision Review Committee recommended denial of the tentative map based upon the need to redesign the subdivision to have front-on lots along Main Avenue and reconfigure the lot layout under the power line easement. Should the Planning Commission or City Council decide to approve back-on lots and the applicant's proposed lot layout, the S.R.C. has reviewed and proposed the attached conditions.

PROJECT EVALUATION: Staff has the following comments:

A. Land Use and Zoning

The subject site consists of 5+ acres containing an older mobile home, several out buildings, and piles of stored construction materials and rubbish. An existing private road leads northward to the trailer which is recessed 300+ feet north of Main Avenue. The General Plan and 1984 North Sacramento Community Plan designate the site for Residential Low Density 4-15 du/net acre and Residential 7-15 du/net acre respectively. The site is bordered by single family uses to the south and north with the approved tentative map for Kings Meadow (P87-360) affecting the east property line. To the west lies the Windsong subdivision currently under construction. Sextant Way terminates the subject site's western property line (P87-079). Main Avenue is shown as an 80 foot ultimate right-of-way and a major street.

B. Project Description

The applicant proposes to divide 5+ acres into 20 standard single family lots. The PG&E easement is 100 feet wide and approximately 605 feet long, occupying 1.4 acres of the 5.0 acre site. This results in 3.6 developable acres for 20 lots and a net density of six dwelling units per net acre (see Exhibit A).

In order to establish lots 9 through 13 which back onto Main Avenue and are considered through lots, a subdivision modification is necessary. The City Ordinances prohibit through lots (lots with two street frontages) unless findings for support of the modification can be established.

Several of the lots require variances to reduce the required rear yard setbacks. Lots 2 and 8 have specific building envelopes proposed to show substituted rear yard area (attached as Exhibits B and C).

C. Subdivision Design:

1. Front-On Lots

The applicant has proposed a series of alternatives to divide the site prior to submitting the request. One of the alternatives, Study Plan C (Exhibit E), shows front on lots to Main Avenue. Planning Staff has conducted a survey of existing land uses and recently constructed subdivisions in North Sacramento on major streets. Results of the survey yielded the following information:

- a. Windsong, located two lots to the west of the subject site, has back-on lots and sound wall constructed at the back of sidewalk. The sound wall is appropriate since the subdivision is located adjacent to the intersection of Main and Norwood. No other sound walls are proposed on the north side of Main Avenue between Norwood Avenue and Rio Linda Boulevard.

- b. North Point Subdivision, located at the northwest corner of Main and Norwood Avenues, has back-on lots with a 15 foot landscape setback behind the sidewalk and then a 6 foot high solid masonry decorative sound wall. The original subdivider proposed that the homeowners association maintain the landscape strip. The City was asked to take over maintenance of the 2 acre park and landscape strip by a subsequent developer.
- c. Glenwood Park Unit 6 Subdivision, located on the south side of Main Avenue, due west of Norwood Avenue, has front-on lots, 65 to 70 feet in width and 125 feet of minimum depth with a minimum 35 foot front yard setback. Staff observes that with the front yard landscape treatment, use of a turning area off the driveway to avoid backing out into the traffic flow, and courtyard treatment provided by fencing in the front yard behind the 35 foot building setback, a much more desirable and aesthetic experience is provided than the results of two story structures in Northpointe backing onto Main Avenue adjacent to a sound wall.
- d. Sunridge Subdivision, located at the southwest corner of Bell Avenue and May Street, proposes to have 70 foot wide lots, 115 to 125 feet deep with 35 foot front yard setbacks fronting onto Bell Avenue, which is also designated as a major 80 foot wide roadway. An acoustics report for Sunridge required specific mitigation measures to be used in the construction of units fronting on Bell which can be applied to subject site.
- e. Pickard Woods, located due east to Sunridge on the south side of Bell Avenue, proposes front on lots 75 feet in width with 125 foot deep lots and 35 foot front yard building setback. The acoustic report for Pickard Woods also required building construction techniques to attenuate proposed traffic impacts.

Planning Division Staff has discussed with the applicant the desire to redesign the subdivision to have front-on lots. The applicant does not agree with Planning Staff. Staff points out that along Main Avenue, adjacent lots have front-on existing older single family dwellings. Construction of a 240 foot long, 7 foot high sound wall will not tie into adjacent subdivisions and will wall itself off. The two lots to the west will not accommodate a wall. To the east, existing single family development has larger lots with houses setback a variety of distances.

In recent approvals by the Commission and City Council, acoustic mitigation measures can be incorporated into building design to reduce the interior noise levels to an acceptable noise level on major streets. Staff has recommended the redesign to allow front-on lots with acoustical mitigation measures designed into the dwellings similar to those found in the Negative Declaration for Sunridge (Exhibit D).

2. Height Restriction

Planning Staff expressed a concern over the height of units placed 5 feet from a side property line. On Lots 2 and 8 with reversed rear yard area, the possibility of a two story unit, 5 feet from the rear yard of an adjacent dwelling is possible. Where possible, Planning Staff encourages a restriction to single story heights where new single family development abuts existing or proposed single family development.

Staff also recommends that structures proposed on any lots crossed by the PG&E power line easement be restricted to single story in height. This affects lots 1, 2, 7, 8, 9, 17, and 18. Staff also recommends that all lots fronting on Main Avenue be restricted to single story in height, similar to the condition placed on Sunridge and Pickard Woods.

3. Building Envelopes

Staff has requested a plan showing building envelopes since several of the lots have two or three street frontages. The building envelopes would establish front, rear, and side yard setbacks. Building setbacks should also observe the PG&E power line easement.

D. PG&E Easement

Exhibit E presents the correspondence from PG&E regarding use restrictions under the easement. Construction activities are also limited under the lines. Staff has included conditions regarding the PG&E easement as tentative map conditions.

E. Staff Recommendation - Summary

Staff recommends the applicant redesign the subdivision to provide front-on lots to Main Avenue, 65 to 75 feet in width and 125 feet in depth, with a minimum of 35 feet of front yard building setback. Staff recommends denial of the subdivision modification to establish back-on/through lots. Staff also recommends denial of the variance to reduce rear yard setbacks pending the redesign of the subdivision.

Should the Commission select to recommend approval of the applicant's design, the City Environmental Coordinator and Subdivision Review Committee have proposed mitigation measures and tentative map conditions.

ENVIRONMENTAL DETERMINATION: The City Environmental Review Coordinator has prepared a Mitigated Negative Declaration for the proposed project (see Exhibit F for Initial Study Discussion for P89-040). Since staff is recommending redesign of the project, the Negative Declaration would require amending to reflect mitigation measures similar to those listed for Sunridge, Exhibit D (P88-467). Should the Commission or Council concur with staff and deny the applicant's proposal, staff recommends that the applicant redesign the tentative map and resubmit the map to the City Planning Division for review by Environmental Division and rehearing before the Subdivision Review Committee. Staff would support having the amended report going directly from the SRC to City Council if all concerns are resolved.

Should the Commission or Council seek to approve and ratify the Negative Declaration, the following statements shall apply:

The Environmental Coordinator has determined that the project as proposed will not have a significant impact to the environment; therefore, a Negative Declaration has been prepared. In compliance with Section 15070(B)1 of the California Environmental Quality Act Guidelines, the applicant has incorporated the following mandatory mitigation measures into the project plans to avoid identified effects or to mitigate such effects to a point where clearly no significant effects would occur:

1. All trees to be retained shall be protected from damage during construction on the site. The applicant shall install a chain link construction fence around the drip line, to be installed prior to issuance of any permits for site development. The Building Division shall receive proof of this by submission of either (a) a copy of the rental agreement between the developer and the company renting the fence or (b) photographs showing the construction fence in place.
2. No two story residence shall be permitted on the lots abutting Main Avenue. This condition shall appear as a note on the recorded final subdivision plat for this project.
3. Prior to a Certificate of Occupancy for the residences abutting Main Avenue, the applicant and/or developer shall construct a 7 foot high noise barrier (including berm) along the property line adjacent to the Main Avenue right-of-way on all lots abutting Main Avenue.

Interior day-night average sound levels were calculated only for the bedrooms (the most sensitive receptor location) of a generic house, as specific plans were unavailable. The Noise Ordinance assumes a 15 dB reduction from exterior to interior noise levels with an open window. Therefore, exterior day-night noise levels in excess of 60 Ldn interpret to interior noise levels in excess of 45 Ldn. Even with closed windows, the interior day-night average will equal or exceed 45 dB unless the building construction is designed with sufficient sound transmission loss. To reduce interior noise levels to acceptable levels, the following mitigation measures are required:

4. All joints in exterior walls shall be grouted or caulked airtight.
5. All penetrations of exterior wall shall include a 1/2 inch airspace. This space shall be filled loosely with fiberglass insulation. The space shall then be sealed airtight on both sides of the wall with a resilient, non-hardening caulking or mastic.
6. Window or through-the-wall ventilation and air conditioning units shall not be permitted.
7. All sleeping spaces shall be provided with carpet and pad.

8. There shall be no through the door or through the wall mail or paper chutes.
9. Windows must have a minimum STC rating of 29 or better except in designated areas where the STC rating must be 34 or better. Windows should comprise less than 25 percent of the wall area. Windows shall have an air infiltration rate of less than or equal to 0.20 CFM/lin. ft. when tested with a 25 mile hour wind per ASTM standards.
10. Sliding glass doors must carry an STC rating of 31 or better. They should be double glazed and they must meet or exceed the window air infiltration rating given above.
11. Exterior entrance doors should have a minimum STC rating of 30. They must include complete perimeter door seals.

Non-compliance with, or deletion of any of the above mitigation measures by any party will require the project to be reprocessed for additional environmental review. If this review determines that there is the possibility for significant adverse environmental impact due to the development of the project, additional mitigation measures may be required, or the applicant may be requested to prepare an Environmental Impact Report if identified impacts cannot be reduced to less than a significant level through mitigation.

RECOMMENDATION: Staff recommends the Commission take the following actions:

- A. Ratify the Negative Declaration;
- B. Recommend denial of the tentative map to the City Council; and
- C. Deny the variance to reduce the rear yard setbacks based upon findings of fact which follow.

Tentative Map - Conditions (if approved)

The applicant shall satisfy each of the following conditions prior to filing the final map unless a different time for compliance is specifically noted:

1. Provide standard subdivision improvements pursuant to Section 40.811 of the City Code;
2. Prepare a sewer and drainage study for the review and approval of the City Engineer; may require off-site extensions and/or oversizing;
3. Pay off existing assessments, or file the necessary segregation requests and fees to segregate existing assessments;
4. Pursuant to City Code Section 40.1302 (parkland dedication), the applicant shall submit to the City an appraisal of the property to be subdivided and pay the required parkland dedication in-lieu fees. The appraisal shall be dated not more than 90 days prior to the filing of the final map;

5. Pursuant to City Code Section 40.319-1, the applicant shall indicate easements on the final map to allow for the placement of centralized mail delivery units. The specific locations for such easements shall be subject to review and approval of the City Engineer after consultation with the U.S. Postal Service;
6. The applicant/developer shall designate and place on the final map those structures and/or lots which will meet the required 80 percent south orientation (including solar access) to the satisfaction of the Planning Director, or comply with Title 24 requirements of the Uniform Building Code;
7. Meet all County Sanitation District requirements;
8. Submit a soils test prepared by a registered engineer to be used in street design;
9. Show all existing easements;
10. Dedicate right-of-way along Main Avenue to a 40 ft. half street as per study on file with the City;
11. Petition for annexation to Regional Sanitation District prior to recordation of the map or prior to approval of improvement plans, whichever occurs first;
12. Preserve the oak tree on the site to the satisfaction of the City Arborist. Construct a 6 ft. high chain link fence, 10 feet outside drip line during construction. No grade alteration or underground work is allowed within construction fence;
13. Developer shall provide tower protection at Sextant Way and Kings Drive to the satisfaction of PG&E. Construction activities are restricted under the easement. Land uses are restricted within the easement. Applicant shall provide proof of consent agreement with PG&E;
14. Properly abandon well under permit from the City-County Health Department prior to recordation of final map;
15. Remove all garbage and debris (fencing, sheds, construction material, etc.) to a licensed disposal site prior to recordation of the final map;
16. City may enter into a reimbursement agreement for over width pavement construction on Main Avenue;
17. Sextant Way to be 50 ft. right-of-way between Main Avenue and "A" Court;
18. Prepare a master site plan showing all building setbacks for lots under and adjacent to the PG&E power line easement;

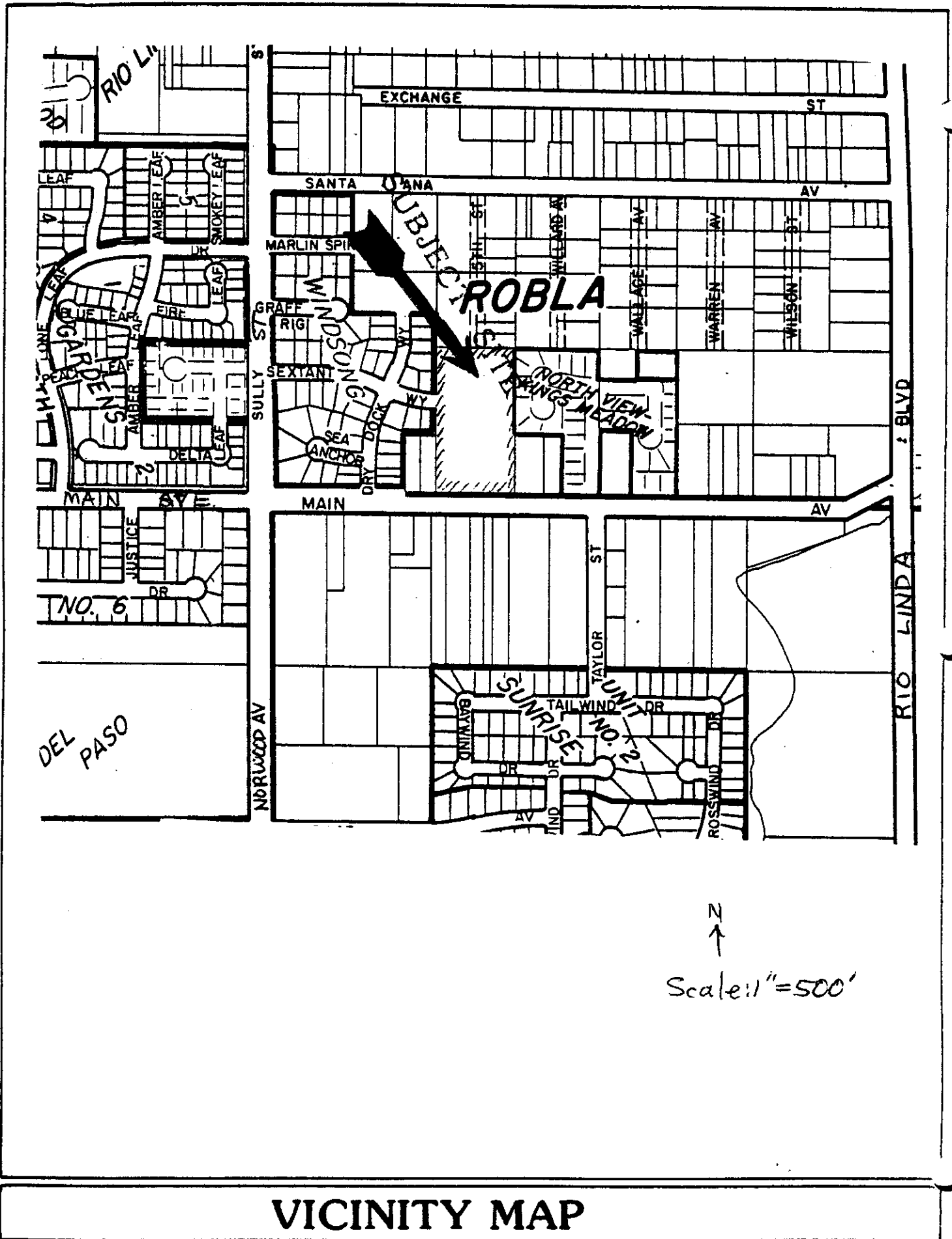
19. For lots with reduced rear yard setbacks, the maximum building height shall be restricted to one story. Note to be placed in deeds referencing this height restriction to respective lots;
20. Alignment of Sextant Way and Kings Drive should be coordinated with adjacent subdivision;
21. Construct transition from property line to existing pavement;
22. Eliminate narrow strip between Sextant Way and Sim's property. Will require off-site dedication at Sim's property for a round corner. City will condemn at developer's expense, if necessary;
23. Dedicate a standard 12.5-foot public utility easement for underground electrical and public utility facilities and appurtenances adjacent to all public ways; and
24. Approval subject to the following notice:

The property on which construction is authorized by this permit may be subject to flooding. It is the applicant's and property owner's responsibility to ascertain whether and to what extent such flooding may occur, and to review the applicable base flood elevations for the proposed project which are contained in the effective Flood Insurance Rate Map; the Department of the Sacramento District Corps of Engineers, Sacramento, California, Flood Insurance Study for the Sacramento City and County of California, FBFM and FIRM work map, dated January 1989; and, all preliminary flood maps available at the City of Sacramento's Planning Division. The Federal Emergency Management Agency and the U.S. Army Corps of Engineers ("Corps") are studying portions of the City of Sacramento to determine what improvements and measures may be needed in order to deem the areas under study adequately protected from a 100 year flood. Until the needed improvements and measures are in place, the areas under study may be subject to flooding by a 100 year or lesser flood. (A "100 year flood" refers to the area subject to inundation by flooding once during any given 100 year cycle; however, such flooding could occur in any given year.) The applicant and property owners should check with the local Corps to ascertain the status of its ongoing study and the projected completion date of any flood control project which might affect the proposed development. Flood insurance may be mandatory in all areas not protected from a 100 year flood, and the City of Sacramento recommends obtaining such insurance whether it is mandated or not. If the investigation of the nature of the flood hazard indicates that the property is at risk, it is the applicant and property owner's responsibility to ensure that all persons holding a record title interest in the property, and all subsequent owners, tenants, occupants, and other interested parties receive notice, as required under applicable law, of the flooding risk to which the property may be subject. This notice is intended to ensure that those persons choosing to develop property in an area subject to flooding have knowledge and the means of acquiring knowledge of the particular risks involved in such development. This notice shall not create liability on the part of the City of Sacramento,

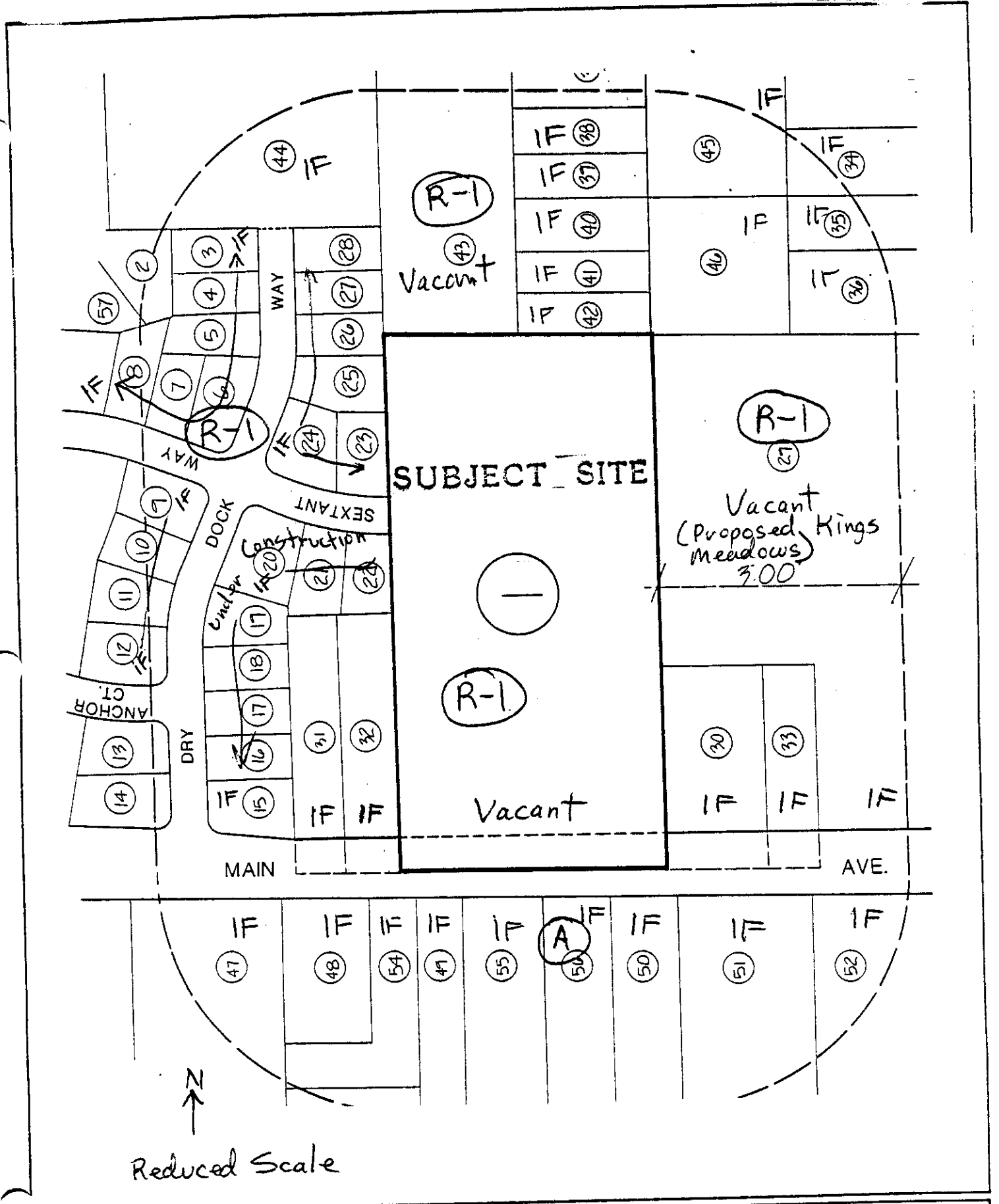
or any of its officers, agents, or employees for any damages to persons or property caused by flooding.

Findings of Fact - Variance - Denial

1. Granting the variance would constitute a special privilege extended to an individual property owner in that:
 - a. a variance would not be granted to other property owners facing similar circumstances when the tentative subdivision map design was not resolved;
 - b. there is no hardship involved to support the request pending redesign of the subdivision;
2. Granting the variance would be injurious to the public health, safety, and welfare in that reduced rear yard setback to 5 feet without reducing building height or finalizing the design of the subdivision to show front-on lots to Main Avenue.



VICINITY MAP



LAND USE & ZONING MAP

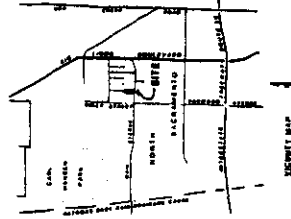
EXHIBIT A TENTATIVE MAP

TENTATIVE SUBDIVISION MAP **BASHAN PROPERTY**

A.P.N. 226-0230-003
CITY OF SACRAMENTO, CALIFORNIA
DECEMBER, 1988

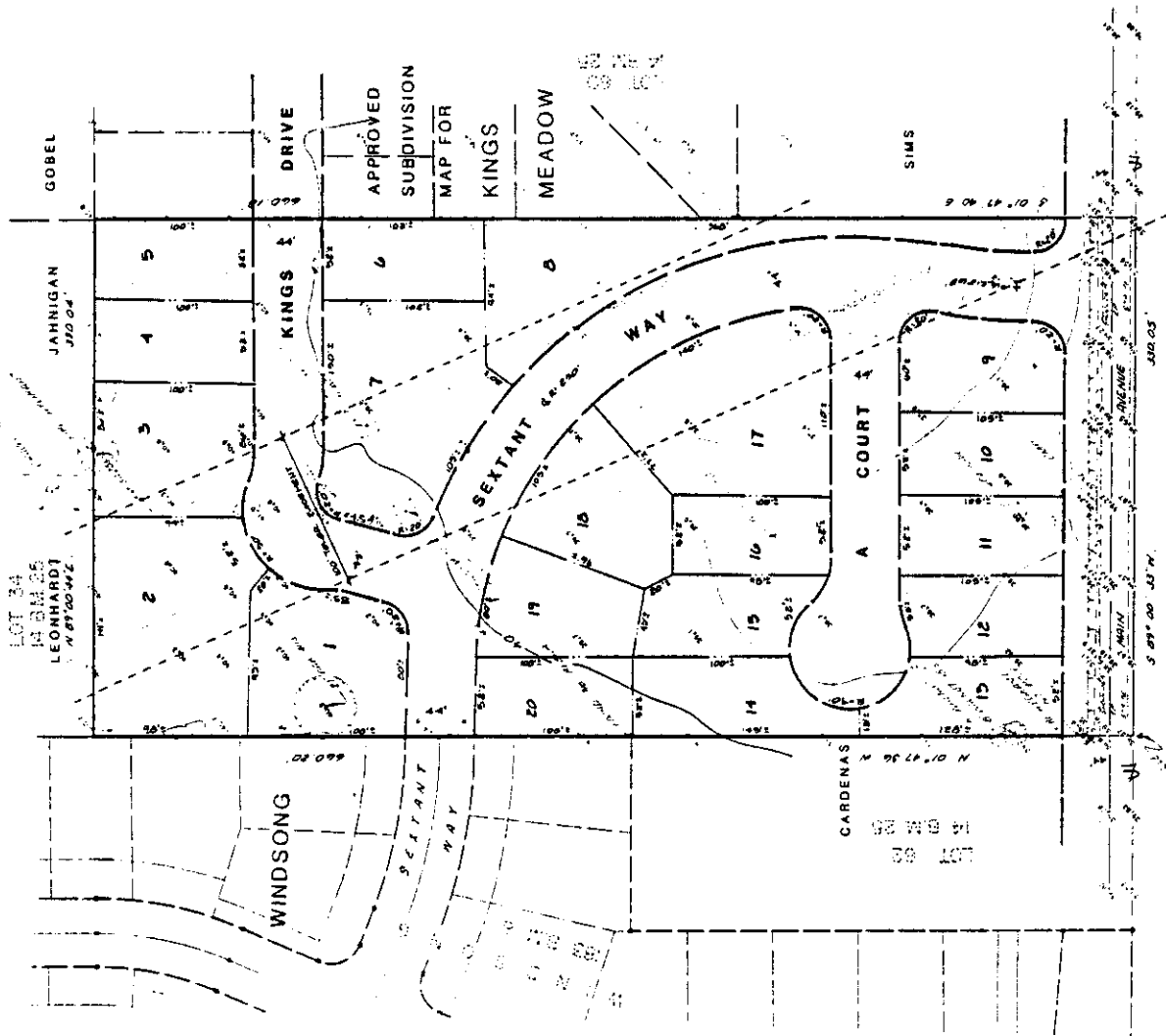
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SEAL:
ENGINEER:
APPROVED:
PLANNING:
RECORDING:
REVISIONS:
SCALE:
DATE:

ALL RIGHTS RESERVED
DATE TO BE FOLDED



THE SPINK CORPORATION
 ENGINEERING - ARCHITECTURE - PLANNING - SURVEYING
 PHOTOGRAPHY - LANDSCAPE ARCHITECTURE
 1000 J STREET, SACRAMENTO, CALIFORNIA 95811
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 FAX 484-0001

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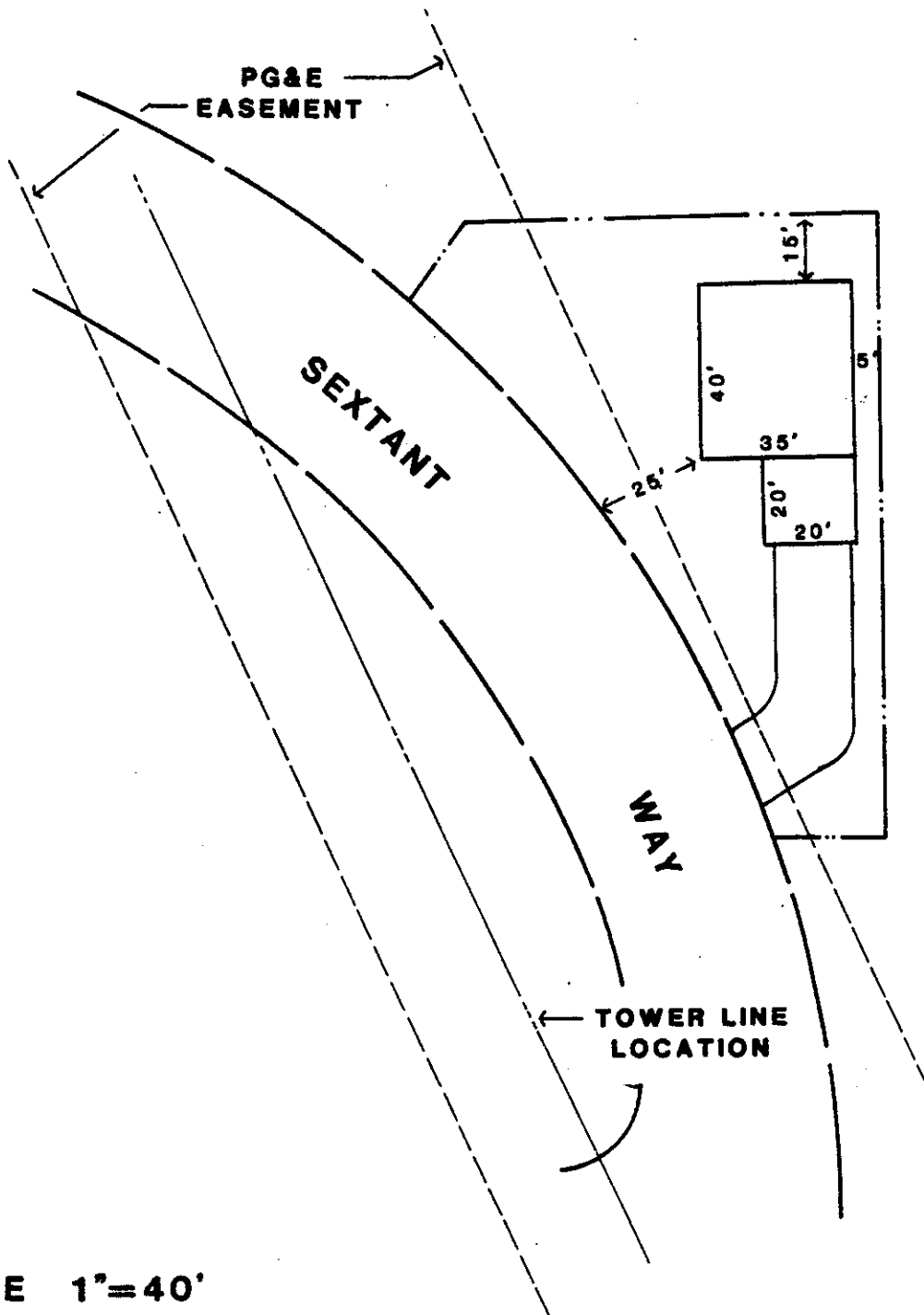
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SCHEMATIC BUILDING FOOTPRINT

LOT #8



SCALE 1"=40'

1-10-89

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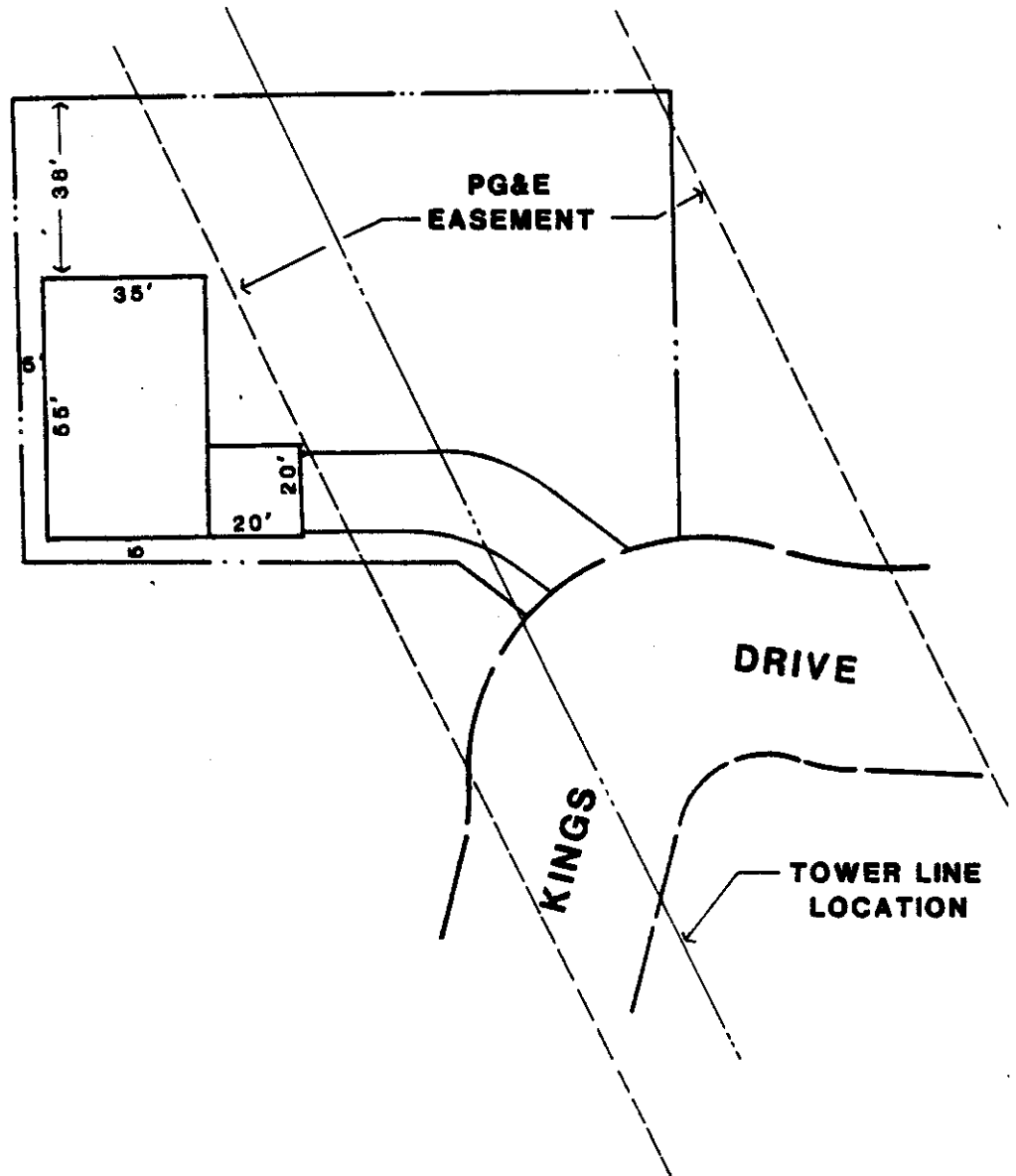
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EXHIBIT C

SCHEMATIC BUILDING FOOTPRINT

LOT #2



SCALE 1" = 40'

1-10-89

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5-11-89

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EXHIBIT D 100-401

NEGATIVE DECLARATION - SUNRIDGE - P-88-467

The Environmental Coordinator has determined that the project as proposed will not have a significant impact to the environment; therefore, a Negative Declaration has been prepared. In compliance with Section 15070(B)1 of the California Environmental Quality Act Guidelines, the applicant has incorporated the following mandatory mitigation measures into the project plans to avoid identified effects or to mitigate such effects to a point where clearly no significant effects would occur:

- A. The applicant shall conform to the requirements of the Uniform Building Code and all other State and local regulations governing excavations and foundations and structural design and construction.
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- B. The applicant shall present a tree preservation plan for the review and approval of the City Arborist prior to application for any building permits. This plan shall include a description by species, size and vitality of each tree to be removed and/or retained.
- C. WALLS
1. Exterior walls shall have a minimum STC rating of 40.
 2. Minimum 1/2" sheathing shall be nailed on the outside face of the 2x4 wood stud construction. The top and bottom edges of the sheathing shall be sealed with the resilient caulking. The sheathing shall be butted tightly together and covered with a minimum 15 lb. felt paper.
 3. A wood or clapboard finish shall be used over the felt paper. The sheathing and finish material shall have a minimum weight of 3 lbs/sq. ft.
 4. R-11 insulation shall be used in the cavity of all studs and shall fit snugly throughout the cavity.
 5. A minimum 1/2 inch gypsum board shall be fastened interior face. The gypsum board shall be completely taped and finished. The perimeter of the wall shall be sealed with a resilient, non-hardening caulking.

NON-COMPLIANCE PAGE

Non-compliance with, or deletion of any of the above mitigation measures by any party will require the project to be reprocessed for additional environmental review. If this review determines that there is the possibility for significant adverse environmental impact due to the development of the project, additional mitigation measures may be required, or the applicant may be requested to prepare an Environmental Impact Report if identified impacts cannot be reduced to less than a significant level through mitigation.

D. FIREPLACES

1. Fireplaces are not recommended because the chimney serves as a conduit for the sound. If used, fireplaces shall include a fully operable damper.

E. WINDOWS

1. Windows shall have an air infiltration rate of less than or equal to 0.20 CFM/lin. ft. when tested with 25 mile hour wind, per ASTM E283.
2. Windows shall have a minimum STC rating of 29.

F. DOORS

1. Exterior doors and sliding glass doors shall have a minimum STC rating of 29 including any lites and using door seals needed to meet STC rating. This should include full perimeter seals.
2. Sliding glass doors shall meet air leakage requirements given for windows.

G. ROOF

1. The combined roof and ceiling shall have an STC rating of 39 or better.

H. CEILING

1. The ceiling shall be constructed from a minimum 1/2 gypsum wall board in all habitable spaces.
2. The attic space above the ceiling shall contain a minimum R-19 insulation.

I. VENTILATION

1. A mechanical ventilation system shall be installed that will provide minimum air circulation and fresh air supply requirements. There shall be no need to open windows, doors or other exterior openings to provide adequate ventilation.
2. Gravity vent openings in attic space shall not exceed code minimums in number and size.

3. If a fan is used for forced ventilation, the attic inlet and discharge openings shall be fitted with sheet metal transfer ducts of at least 20 gauge galvanized steel. The duct shall be a minimum of 6 ft. long and lined for its entire length with 1" duct liner. Each duct shall include a lined 90 bend to prevent direct line of sight.
4. All exhaust fans connecting the interior to the exterior shall be connected with a minimum 10 ft. duct, lined with 1" fiberglass liner and containing one 90 bend with the exception of the kitchen range exhaust.
5. Domestic range exhaust ducts connecting the interior space to the outdoors shall contain a baffle plate across the exterior termination which allows proper ventilation. The dimensions of the baffle plate should extend at least one diameter beyond the line of sight into the vent duct. The baffle plate shall be of the same material and thickness as the vent duct material.

J. Rooms Facing Bell Avenue

1-Story

1. Rooms with bay windows must use resilient clips on inside face of wood stud. Windows must have a minimum STC of 34.
2. Other rooms must use either the resilient clips or the higher STC window.

2-Story

3. Bedrooms must incorporate design #1, 1-story.
4. Living rooms must design #2, 1-story.

K. Units Along South Boundary

5. All units must incorporate #2, 1-story design for bedrooms, family rooms, living rooms, dining rooms and great rooms.

L. GENERAL

1. All joints in exterior walls shall be grouted or caulked

airtight.

2. All penetrations of exterior wall shall include a 1/2 inch airspace. This space shall be filled loosely with fiberglass insulation. The space shall then be sealed airtight on both sides of the wall with a resilient, non-hardening caulking or mastic.
3. Window or through-the-wall ventilation and air conditioning units shall not be permitted.
4. All sleeping spaces shall be provided with carpet and pad.
5. There shall be no through the door or through the wall mail or paper chutes.

All owners are advised that the lots in this subdivision are subject to overflight from aircraft going to and coming from McClellan Air Force Base. As a result, the use and enjoyment of the lots may be subject to noise, vibration, discomfort and inconvenience. This disclosure is made pursuant to the requirements of the County of Sacramento and is not intended to be a covenant.

This disclosure shall be recorded as a note on the final map for this subdivision.

The Acoustics and Vibration Group. Aircraft and Roadway Noise Impact Study for Sunridge Homes Single Family Residential Development on Bell Avenue and May Street, 1988

Pacific Gas and Electric Company

Sacramento Division
5555 Florin Perkins Road
P.O. Box 277444
Sacramento, CA 95826

EXHIBIT E



November 21, 1988

Main Ave Project
652

Mr. James H. Eblen
Lakemont Development Inc.
1150 Murphy Avenue, Suite 200
San Jose, CA 95181

Dear Mr. Eblen:

This letter is in regards to your recent conversation with Mr. Michael Gunby concerning your proposed project in North Sacramento.

As you requested, this Company's choice is study plan "C", of the four plans submitted. This is due to the least amount of exposure to the towers by vehicle traffic.

Additionally, some restrictions and conditions apply to the land use within the easement including, but not limited to, no permanent structures, maximum height of trees 15 feet, anti-climbing guards on towers may be required, tower protection barriers may be required, no swimming pools allowed, maximum height of street lamps is 15 feet, etc.

Thank you for your inquiry. If you have additional questions, please contact Michael Gunby at (916) 386-5284.

Sincerely,

D.W. Metzler
Support Services Manager

By: Debra L. Canadas
Land & Property Maintenance
Supervisor

MAG/rjt

P-89-040

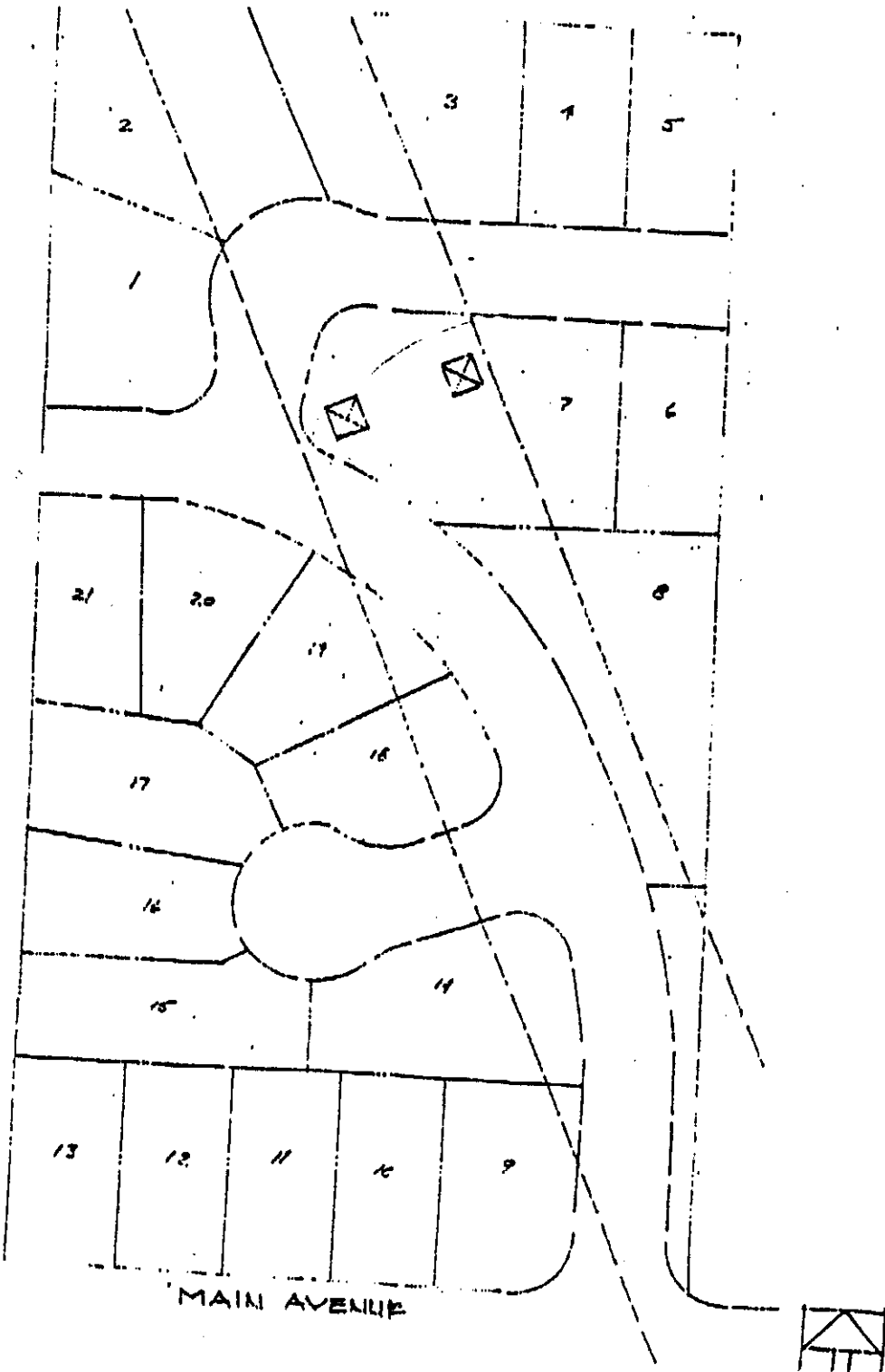
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STUDY PLAN C

OCTOBER 1988

1"=40'



such premises any tools, machinery, equipment, materials, or structures (including scaffolding, hoisting equipment, well drilling, or hoisting equipment) unless and until danger from accidental contact with said high-voltage lines has been effectively guarded against.

(b) Clearances or Safeguards Required. Except where electrical distribution and transmission lines have been de-energized and visibly grounded or effective barriers have been erected to prevent physical and arcing contacts with the high-voltage lines, the following provisions shall be met:

Over Lines. The operation, erection, or handling of tools, machinery, apparatus, supplies, or materials, or any part thereof, over energized high-voltage lines shall be prohibited.

Equipment and Materials in Use. The operation, erection, or handling of tools, machinery, equipment, apparatus, materials, or supplies, or any part thereof within the minimum clearances from energized lines set forth in Table X shall be prohibited.

Storage. The storage of tools, machinery, equipment, supplies, materials, or apparatus under, by, or near energized high-voltage lines is hereby expressly prohibited if at any time during such handling or other manipulation it is possible to bring such tools, machinery, equipment, supplies, materials, or apparatus, or any part thereof, within the minimum required clearances from high-voltage lines as set forth in Table X.

TABLE X—REQUIRED CLEARANCES FROM OVERHEAD HIGH-VOLTAGE LINES

Nominal Voltage (Phase to Phase)	Minimum Required Clearance (Feet)
750 - 50,000	10
over 50,000 - 75,000	11
over 75,000 - 125,000	13
over 125,000 - 175,000	15
over 175,000 - 250,000	17
over 250,000 - 370,000	21
over 370,000 - 550,000	27
over 550,000 - 1,000,000	42

Item 9

Transportation or Transit. The transportation or transit of any tool, machinery, equipment, or apparatus, or the moving of any house or other building in proximity to overhead high-voltage lines shall be expressly prohibited if at any time during such transportation or transit such tool, machinery, equipment, apparatus, or building, or any part thereof, can come closer to high-voltage lines than the minimum clearances set forth in Table Y.

Except where the boom of boom-type equipment is lowered and no load is imposed thereon, the equipment in transit shall conform to the minimum required clearances set forth in Table X.

TABLE Y—REQUIRED CLEARANCES FROM ENERGIZED HIGH-VOLTAGE CONDUCTORS

(While in Transit)

Nominal Voltage (Phase to Phase)	Minimum Required Clearance (Feet)
750 - 50,000	6
over 50,000 - 345,000	10
over 345,000 - 750,000	16
over 750,000 - 1,000,000	20

WARNING SIGNS

2947. Warning Signs Required. The owner, agent, or employer responsible for the operations of equipment shall post and maintain in plain view of the operator and driver on each crane, derrick, power shovel, drilling rig, hay loader, hay stacker, pile driver, or similar apparatus, a durable warning sign legible at 12 feet reading: "Unlawful To Operate This Equipment Within 10 Feet of High-Voltage Lines of 50,000 Volts or Less."

In addition to the above wording, the following statement in small lettering shall be provided on the warning sign: "For Minimum Clearances of High-Voltage Lines in Excess of 50,000 Volts. See Article 86, Title 8, High-Voltage Electrical Safety Orders."

Only specially qualified and authorized persons, such as utility linemen, are exempted from the provisions of the above law.

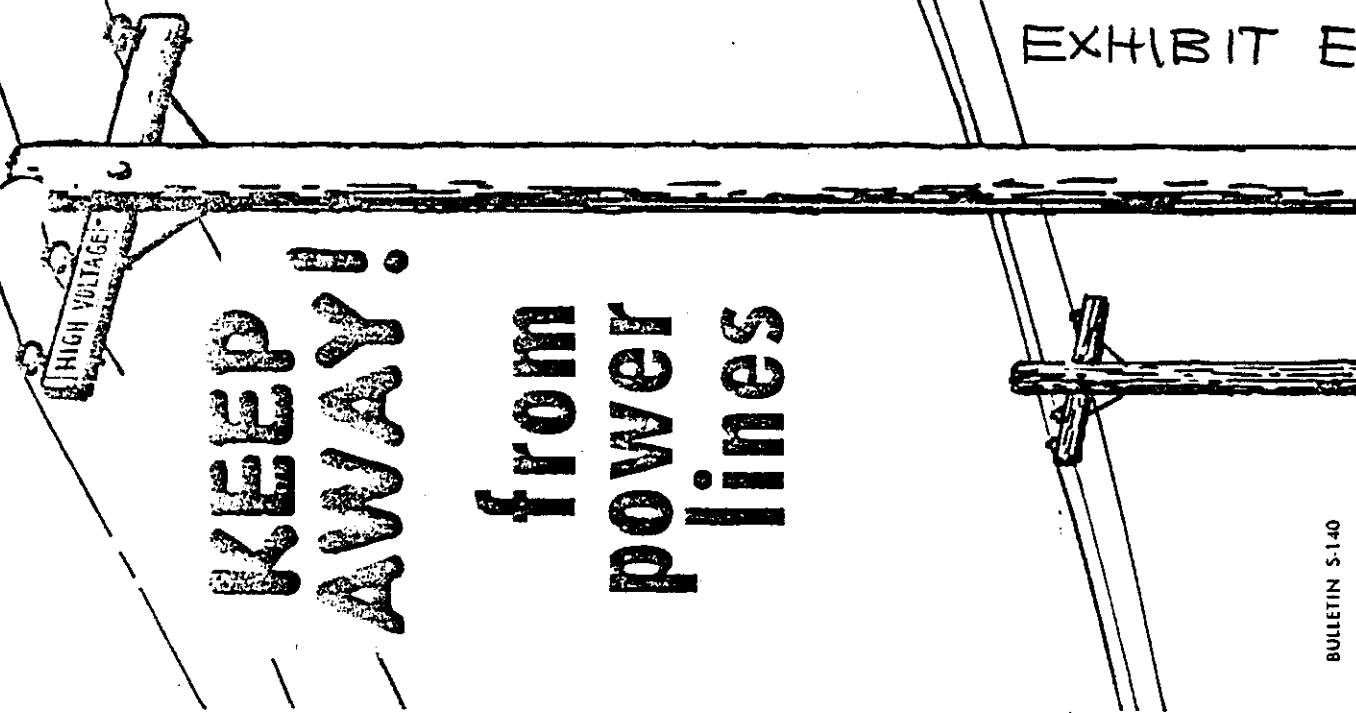


EXHIBIT E

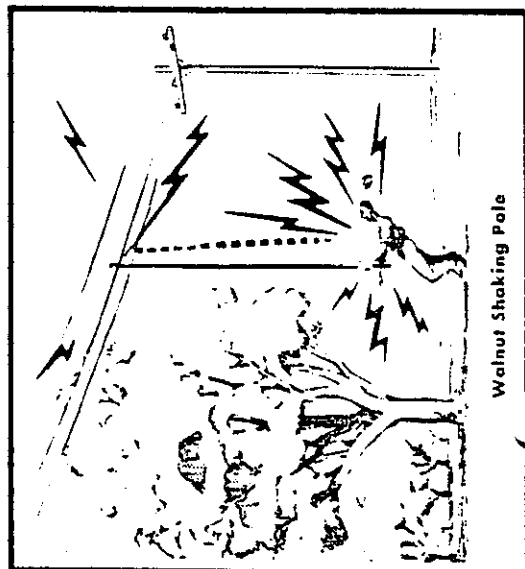
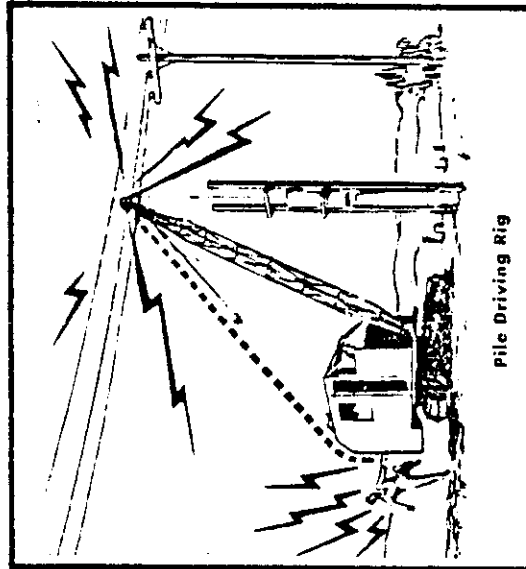
BULLETIN S-140

STATE OF CALIFORNIA
 AGRICULTURE AND SERVICES AGENCY
 DEPARTMENT OF INDUSTRIAL RELATIONS
 DIVISION OF INDUSTRIAL SAFETY
 459 Baker Bldg., Los Angeles, Calif. 90012
 2425 Broadway, San Francisco, Calif. 94118

remember this.....

Electricity, enough to kill, will flow through any metal or other conducting material that touches high-voltage lines. Sometimes it will even flow through wood.

Any metal part of a crane, shovel, pole, or other object that touches high-voltage lines becomes energized—and is then a potential killer. Figures show that one out of three injuries caused by directly or indirectly touching high-voltage lines results in death.



REMEMINDERS FOR OPERATORS OF EQUIPMENT

1. Inspect the route you must travel and the area your equipment will work in. *Make sure that no part of your equipment can come within ten feet of high-voltage lines.* Consult the power company about de-energizing, raising, or re-routing the lines if necessary.

2. Don't attempt under any circumstances to raise or move high-voltage lines. If necessary, the power company will do it.

3. If there is any possibility, when moving equipment, that it may bounce and come within ten feet of high-voltage lines, tie the boom (etc.) down.

4. *Don't take a chance!* Whenever you're in doubt, call either the power company or the Division of Industrial Safety.

If mobile equipment touches a high-voltage line, the operator should back the equipment away or lower the boom, *to break contact with the power line.*

The operator is usually safe if he stays in the cab. If he jumps clear, he should be sure not to touch any part of the equipment when or after he reaches the ground, or he may be burned or killed.

REMEMINDERS FOR OTHERS

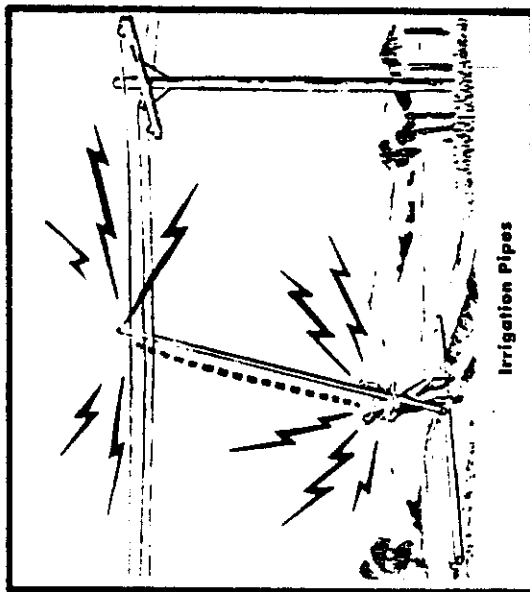
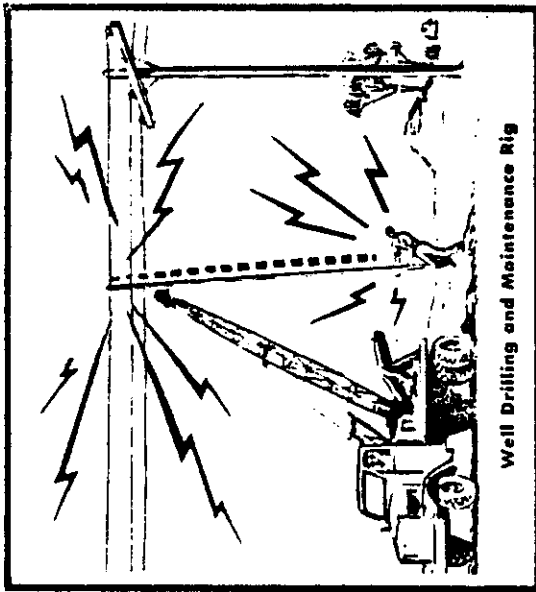
1. Keep away from equipment, cables, or any metal that is touching or in danger of touching high-voltage lines, and report it to your foreman at once.

2. TV antennas can swing or fall, so when installing them make sure that they can not topple closer than ten feet away from a high-voltage line.

3. Don't use metal walnut shakers near high-voltage lines. Sometimes even wooden shakers and pruners can be dangerous. *The safe and sensible thing is not to use shakers and pruners near high-voltage lines.*

4. Don't stack hay under high-voltage lines.

5. Don't stack irrigation pipe under high-voltage lines. And make sure, when you lift them, that they do not come anywhere near such lines.



HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS—Article 86

2946. Provisions for Preventing Accidents Due to Proximity to Overhead Lines. (a) General. No person, firm, or corporation, or agent of same, shall require or permit any employee to perform any function in proximity to energized high-voltage lines; to enter upon any land, building, or other premises and thereto engage in any excavation, demolition, construction, repair, or other operation; or to erect, install, operate, or

We invite Viewpoints from readers on issues of current interest.

V I E W P O I N T



Something new to worry about. Joel B. Goldsteen, AICP, city and regional planning professor and associate director of the Environmental Institute for Technology Transfer at the University of Texas at Arlington, describes the hazards of overhead power lines.

In researching the potential air pollution of overhead high-voltage transmission lines in urban areas, I have become aware of a little known body of scientific research that strongly suggests a correlation between electrical energy distribution, electromagnetic fields, and human health. As a result, I have become convinced of the need to alert planners to a potential public health hazard.

The statistics are alarming. Recent articles in international scientific journals describe greatly increased rates of leukemia and other cancers among those living within 150 meters (500 feet) of high-voltage transmission lines. Tumors and birth defects are documented in article after article.

Last year, my colleague, George High, and I took some of that information and applied it to the Dallas-Fort Worth metropolitan area. After carefully plotting the paths of existing high-voltage lines in the area and extrapolating from the statistics presented in the research, we concluded that some seven percent of the area's residents could at some point be negatively affected by the electromagnetic fields (EMF) of overhead power lines. That figure means that we can conceivably expect to see double the rate of leukemia in children and a higher incidence of cancer in all age groups.

No part of the country is immune from the problem, although the Northeast may be particularly vulnerable because of the high numbers of transmission lines in the dense eastern seaboard cities. Moreover, everyone is at risk: casual visitors to EMF-charged homes; children in schools built under power lines; even joggers running along the trails that have been built along transmission line rights-of-way. One hour's worth of exposure to EMF will adversely affect their biological and chemical systems.

Ironically, planners in recent years have promoted the idea of using power line rights-of-way as parklike "amenities." They have also perpetuated the myth that a 500-foot right-of-way is adequate when current research appears to suggest that 1,000 feet is a safer figure.

What planners should be doing is to prepare risk assessment studies for a variety of potential health hazards. That means, for example, chemical tests for water, soil, and air contamination in places like Baton Rouge, site of one of the largest agglomerations of petrochemical manufacturers in the U.S.

The implications for practice and research are endless. Planners might, for example, use epidemiological studies correlating electromagnetic fields with incidence of leukemia to help in siting new schools. Planners may also find it necessary to supplement existing zoning and subdivision ordinances with additional regulatory documents relating to the newly discovered dangers. Legal research will be needed to clarify issues related to condemnation of land for wider rights-of-way.

Some changes can't wait. Standards for overhead power transmission lines and their rights-of-way must be reexamined immediately. Future studies are likely to show an even more clear and present danger.

Joel B. Goldsteen
5-11-89

P-89-040

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item 9

ATTACHMENT A

INITIAL STUDY DISCUSSION

BASHAN SUBDIVISION (P89-040)

PROPOSED PROJECT

The applicant is proposing to divide 5.0 acres into 20 single family lots. The property is located on the north side of Blair Avenue, at the eastern terminus of Sextant Way. The site currently contains three single family residences (to be demolished) and is traversed by a 100 foot wide high voltage electrical line in a southeasterly direction. The property is zoned Standard Single Family (R-1) and is designated for Residential (7-15 DU/NA) in the 1984 North Sacramento Community Plan and Low Density Residential (4-15 DU/NA) in the 1986-2006 General Plan.

ENVIRONMENTAL IMPACTS

1. Earth

The proposed development will result in compaction and overcovering of the soil on this site. As the site has been designated for urban uses, this impact is considered less than significant. The site will be graded prior to construction commencing; this action will temporarily expose the ground surface to potential wind erosion during summer months. This impact can be reduced to a less than significant level by requiring that any exposed soils on the site be watered after grading and both prior to and during construction. This requirement is also a UBC requirement and is enforced and monitored by Building Division field inspectors.

2. Air Quality

Construction will create a short-term increase in particulate matter both as dust raised from the ground and as vehicle and machinery emissions. A major portion of the dust particles will settle out on and immediately adjacent to the site. A minor portion will remain suspended in the local atmosphere until the next rain. Dust could be a nuisance to adjacent residents, but generally dust is not considered a health hazard, and is a temporary occurrence. Construction equipment powered by internal combustion engines would emit an indeterminable quantity of No_x, HC, particulate, SO₂ and CO. The creation of these emissions would be temporary and is therefore considered to be a less than significant impact.

3. Water

This project will not impact surface or groundwater patterns. Site drainage will be engineered and will use existing City storm drain and/or sewer systems.

The proposed project is identified as being outside the 100 year floodplain as defined on the City adopted Floor Insurance Rate Map, dated February 1988. Based on this adopted map, no significant impacts are expected to occur.

4. Plant Life

The site contains two walnut trees and one oak tree to be preserved. These trees are mainly along the property lines and can easily be retained while still allowing for construction on the lots. The following mitigation measure is required to retain in a viable condition the trees on site.

1. All trees to be retained shall be protected from damage during construction on the site. The applicant shall install a chainlink construction fence around the dripline, to be installed prior to issuance of any permits for site development. The Building Division shall receive proof of this by submission of either (a) a copy of the rental agreement between the developer and the company renting the fence or (b) photographs showing the construction fence in place.

5. Animal Life

The proposed project will not impact animal life.

6. Noise

The site has been identified as being impacted by roadway noise from Main Avenue, and an acoustical study was commissioned to identify and propose mitigation measures for the site. The results of the study are discussed below.

Existing Noise Environment

The site is impacted mainly by roadway traffic on Main Avenue and by military aircraft operations from McClellan Air Force Base. There is some noise influence on the site due to the corona effect of the high voltage power transmission line that traverses the site. Other sources are roadway noise from I-80, small aircraft operations from the Rio Linda Airport and train movement on the Union Pacific Railroad east main line. Lesser sources are human activity from the development occurring in the area, barking dogs, and bird and frog noises. These last two sources are expected to decrease in the future due to development and the other sources to increase.

Measurements to determine the ambient sound levels were made at four different positions on the site. Position 1 was on the future lot 11, 12m. from Main Avenue. Position 2 was under the high voltage line at the entrance to the project. Position 3 was 107 m. from Main Avenue, directly below the high voltage line, on future lot 18. Position 4 was 80 m. from Main Avenue, on future lot 15. The measured and calculated average sound levels are tabulated below:

TABLE 1 - MEASURED SOUND LEVELS, dB (A)

<u>Description</u>	<u>Time</u>	<u>L10</u>	<u>L50</u>	<u>L90</u>	<u>Lmax</u>	<u>Leg</u>	<u>Calced Leg</u>
Position 2	4-5 am	51	44	42	77	54	54
Position 2	8-8:15 am	67	55	45	78	63	63
Position 1	7-8 am	65	54	47	77	61	62
Position 3	8:15-8:30 am	52	45	41	74	50	47
Position 4	8:39-9 am	54	46	41	71	52	49

(Source: Bashan Property Noise Impact Study, TAVG, April 1989)

Positions 1 and 2 are the sites most impacted by traffic noise from Main Avenue positions 3 and 4 less so. The corona effect, which normally produces 50 to 55 dB(a) directly below the wires, was not heard during the measuring. The trains can be heard but do not have an appreciable impact. Single-incident military aircraft fly-over impact the entire site, with measurements recorded at 78dB.

Future Noise Environment

The noise from roadway traffic on Main Avenue will increase with the widening of Main Avenue from 2 lanes to 4 lanes, and will be the dominant noise source for the lots abutting Main Avenue. Lots in the interior of the development will experience an incremental increase in noise due to Main Avenue traffic, but the dominant noise source will still be from aircraft fly overs and human activity. The maximum instantaneous noise will continue to be generated by aircraft. Relatively high maximum sound levels near Main Avenue can also occur from truck movements, loud automobiles and loud motorcycles. The calculated day-night noise levels will average 67-68 Ldn for lots adjacent to Main Avenue, and 59-60 Ldn for interior lots. In terms of consistency with the Noise Element of the General Plan, the lots abutting Main Avenue are "Conditionally Acceptable", as the levels exceed the 60 Ldn threshold for acceptable noise levels, but it is possible to reduce the noise impact by constructing a noise barrier. Therefore, the following mitigation measures are required to reduce the impact to a less than significant level:

2. No two-story residence shall be permitted on the lots abutting Main Avenue. This condition shall appear as a note on the recorded final subdivision plat for this project.
3. Prior to a Certificate of Occupancy for the residences abutting Main Avenue, the applicant and/or developer shall construct a seven foot high noise barrier (including berm) along the property line adjacent to the Main Avenue right-of-way on all lots abutting Main Avenue.

Interior day-night average sound levels were calculated only for the bedrooms (the most sensitive receptor location) of a generic house, as specific plans were unavailable. The Noise Ordinance assumes a 15 dB reduction from exterior to interior noise levels with an open window. Therefore, exterior day-night noise levels in excess of 60 Ldn interpret to interior noise levels in excess of 45 Ldn. Even with closed windows, the interior day-night average will equal or exceed 45 dB unless the

building construction is designed with sufficient sound transmission loss. To reduce interior noise levels to acceptable levels, the following mitigation measures are required.:

4. All joints in exterior walls shall be grouted or caulked airtight.
5. All penetrations of exterior wall shall include a 1/2 inch airspace. This space shall be filled loosely with fiberglass insulation. The space shall then be sealed airtight on both sides of the wall with a resilient, non-hardening caulking or mastic.
6. Window or through-the-wall ventilation and air conditioning units shall not be permitted.
7. All sleeping spaces shall be provided with carpet and pad.
8. There shall be no through the door or through the wall mail or paper chutes.
9. Windows must have a minimum STC rating of 29 or better except in designated areas where the STC rating must be 34 or better. Windows should comprise less than 25 percent of the wall area. Windows shall have an air infiltration rate of less than or equal to 0.20 CFM/lin. ft. when tested with a 25 mile hour wind per ASTM standards.
10. Sliding glass doors must carry an STC rating of 31 or better. They should be double glazed and they must meet or exceed the window air infiltration rating given above.
11. Exterior entrance doors should have a minimum STC rating of 30. They must include complete perimeter door seals.

7. Light and Glare

The project will produce new light in the form of illuminated rear yards and standard interior lighting. The introduction of this type of light is not considered a significant impact.

8. Land Use

The proposed use is consistent with the adopted 1986-2006 General Plan and the 1984 North Sacramento Community Plan, and is therefore not an alteration of the present or planned land use.

9. Natural Resources

The proposed project will not substantially deplete any non-renewable natural resource nor increase the rate of use of any natural resource.

10. Risk of Upset

The proposed project does not involve any hazardous substances nor will it interfere in any emergency response or evacuation plan.

11. Population

The addition of 20 housing units does not substantially alter the population density or growth rate in the North Sacramento Community Plan Area.

12. Housing

The proposed project provides 20 housing units which contribute to the housing stock in the area.

13. Transportation/Circulation

Primary access to the site will be from Main Avenue. It is currently constructed as two lanes, but is proposed to be widened to four lanes. Traffic estimated to be generated by this project will not impact current or future roadway networks for the site. Impacts to traffic will be less than significant.

14. Public Services

The project will not impact Police or Fire protection services. School children generated from this project can be accommodated in local schools without the planned enrollment exceeding capacity. Impacts to public services are considered less than significant.

15. Energy

The proposed project will not use substantial amounts of fuel or energy nor increase demand upon existing energy sources.

16. Utilities

The project will not result in the need for any new utility system.

17. Human Health

The project site is traversed by two 115 KV high voltage power transmission lines. There are two potential hazards arising from these lines. The first is the danger of construction equipment coming within 10 feet of the power lines and the second is the effect of the corona's electromagnetic field on human health. The first hazard can be avoided by warning all operators of heavy equipment to obey Article 86, Title 8, the High Voltage Electrical Safety Order. Information on this law is readily available through PG and E, which has an aggressive educational program aimed at heavy equipment operators. In essence, the law requires a minimum 10 foot clearance from energized high voltage conductors.

The second hazard is less documented and the evidence contradictory. Two studies (the Savitz Study and the New York Power Lines Project) have shown conflicting results regarding the effect of long-term exposure to electromagnetic fields (EMF). Most carefully controlled studies of EMF effects have failed to produce noticeable changes in health and bodily functions. However, extremely large doses of any chemical or physical agent or extreme environmental conditions can often force an effect. Evidence gathered so far, though does not demonstrate that power lines adversely affect public health. Therefore, this impact is considered less than significant.

18. Aesthetics

The project will not obstruct any scenic view nor create an aesthetically offensive site.

19. Recreation

The project will not impact recreation opportunities.

20. Cultural Resources

The project will not impact historic or prehistoric resources.

REFERENCES

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April 1989

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Away from Power Lines", October 1973

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May 1976

Pacific Gas and Electric Company, "Transmission and Distribution Lines:
Electromagnetic Fields", Public Issue Policy Statement, October 1988

