

FINAL
ENVIRONMENTAL IMPACT REPORT

BONITA HACIENDAS

EIR-78-9

Issued by the
Environmental Review Committee
April 6, 1978

Certified by the
Chula Vista Planning Commission
May 10, 1978

Application
Prepared by:

Schwerin, Xinos & Associates
1400 Sixth Avenue, Suite 200
San Diego, CA 92101

Developer:

V & V Development Co.
1550 Broadway
Chula Vista, CA 92011

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Appendices on file in the Planning Department and available for public review.

- A. Evaluation Form
- B. Biological Report
- C. Archaeological Report
- D. Soils Report
- E. Intersection Signalization Warrent Study
- F. Verification

Bonita Haciendas

1.0 INTRODUCTION

1.1 Purpose and Intent

This Environmental Impact Report (EIR) has been prepared to fulfill the requirements of the California Environmental Quality Act of 1970 (CEQA) in disclosing all significant environmental impacts of the proposed project to the decision making authority of the City of Chula Vista, other responsible agencies and the public.

This document is informational in nature and intended to enable appropriate governmental authorities to evaluate the environmental impacts associated with the project, consider measures to reduce the magnitude of any significant impacts and examine alternatives to the project as proposed.

Public agencies are required by law to deny any project for which an EIR has been prepared and has identified one or more significant effects unless changes or alternatives which would mitigate or avoid such impacts were incorporated into the project; such changes are the responsibility of another jurisdiction or agency and adopted by that jurisdiction or agency; or specific economic, social or other considerations make infeasible such mitigation or alternatives.

1.2 Executive Summary

This project involves the subdivision of 30 acres into 57 single family dwellings and 4 open space lots. The subdivision is located north of Bonita Vista High School and to the east of Otay Lakes Rd.

The findings of this report are as follows:

1.2.1 The site contains several Barrel cactus which could be salvaged to avoid the destruction of this rare and endangered species. There will be no other substantial biological impact. The project does represent an incremental impact on a habitat being rapidly removed by development.

1.2.2 Subject to surface collecting, micro-mapping and posthole work, there will be no substantial impact on pre-history cultural resources.

1.2.3 With remedial grading to treat the bentonite clay strips on the site no significant geological or soil impacts will result.

1.2.4 Sewage service to the site is to be provided on a short term basis by a pumping station connected to the sewer line in Otay Lakes Rd. and on a long term basis via gravity line in Long Canyon. Subject to specific design and operation conditions and a cash deposit for a portion of the construction cost of the Long Canyon sewer line, no significant impacts are anticipated.

1.2.5 The project will result in increased attendance at schools which are currently overcrowded. The developer is proposing to make a cash payment to the school districts to provide temporary facilities.

1.2.6 The project will result in an irreversible and significant landform change. The appearance of the site will change substantially once the project is complete. The adversity of this impact will be mitigated through the retention of open space, landscaping and other methods.

2.0 PROJECT DESCRIPTION

The southerly 20 acres of Bonita Haciendas is located within the City of Chula Vista and the northwesterly bounds of the Cockatoo Grove Community, with the exception of ten acres which is located northerly of the City limits and is in the process of being annexed to the City. The project is located easterly of Otay Lakes Rd. northerly of Ridgeback Rd., and Bonita Vista High School, and southerly of vacant County lands. (See Fig. 1 & 2)

The proposed project, Bonita Haciendas, is a 57 lot two unit single family subdivision. These units are to be situated on lots with a minimum area of 11,250 sq. ft. Four open space lots with an area of 3.83 acres are provided. The project will require a rezone application from an existing R-E zone to a R-1-15 zone with the "P" precise plan district attached. (See Fig. 3, attached to the report)

Implementation of the project will require 90,000 cubic yards of grading.

Discretionary actions required for this project are the consideration of a tentative map, rezone application, and annexation of ten acres into the City of Chula Vista.

3.0 IMPACT ANALYSIS

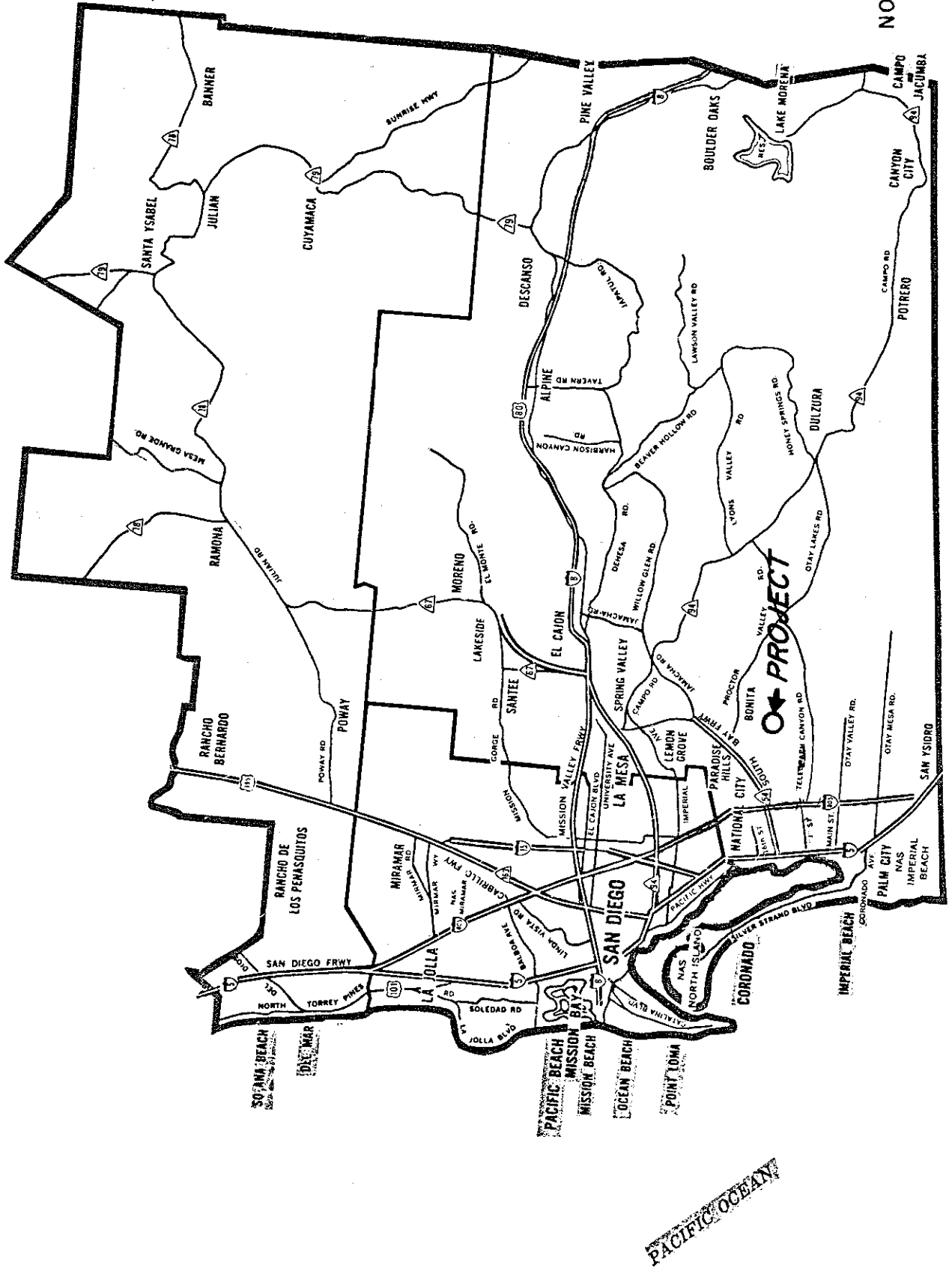
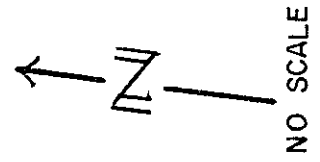
3.1 Biology

3.1.1 Project Setting

Based on five field trips made by the consulting botanist and biologist, the following items were noted. In general, the vegetation ranges from open scarce highly disturbed areas, to variable density of natural brush land to actual wooded ravines. The least dense vegetation lies in the southeasterly portions of the property which has been previously cleared. The tallest and most dense vegetation occurs in the ravines on the north and east facing slope.

The consultants for this project discovered sixt-one species of plants on the site. Of the identified species of plants, twenty-six are non-native and introduced by humans. The native plants are essentially those covered by the inlet coastal sage scrub association dominated by California sage brush and California buckwheat. No true trees as such are found on the project site. There is however lemonade berry which grow to a height of six to eight feet in some areas.

FIG. 1
REGIONAL LOCATOR



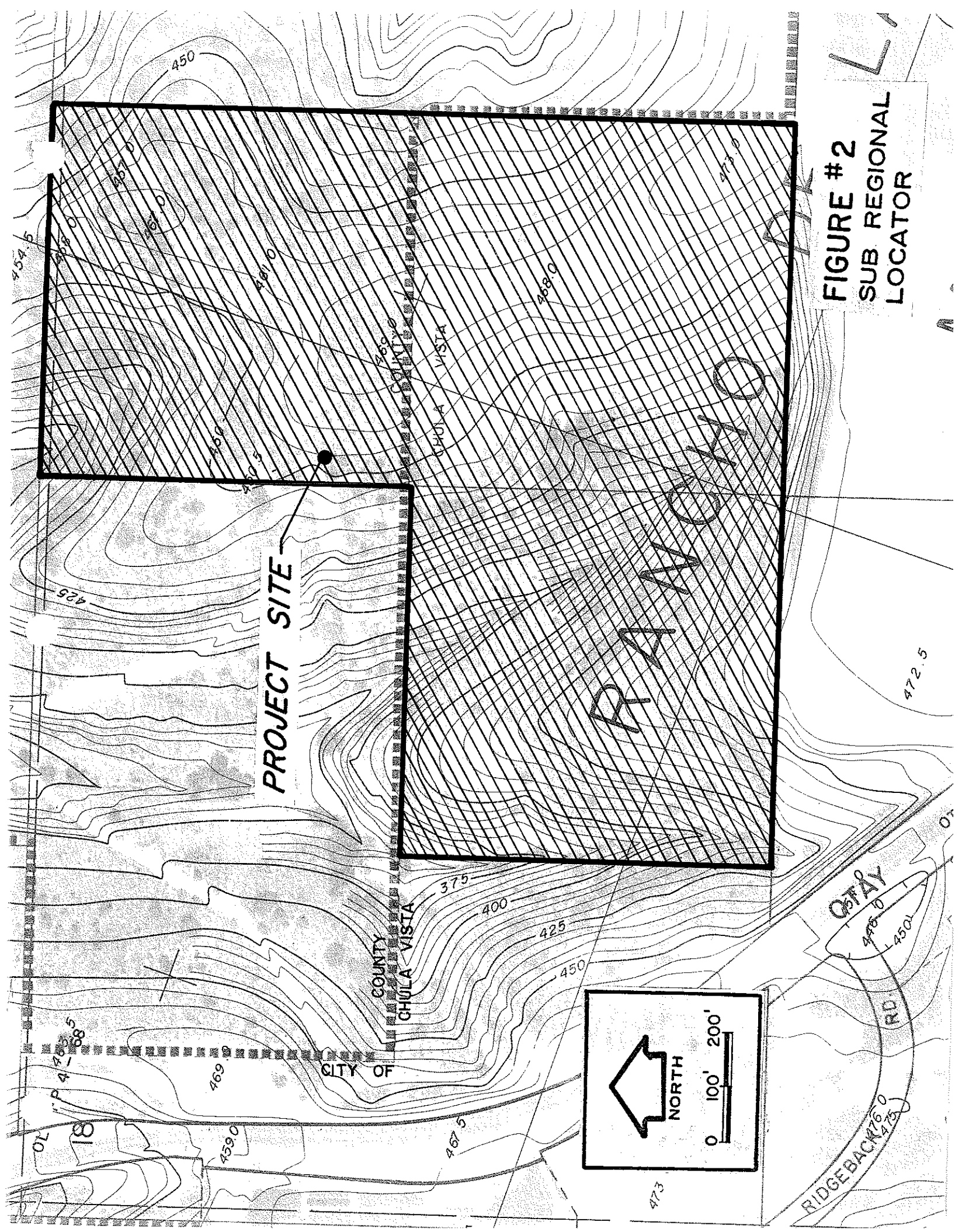


FIGURE #2
SUB REGIONAL
LOCATOR

PROJECT SITE

RANCHO CONEJO

CITY OF
CHULA VISTA

NORTH

0 100' 200'

COSTA RD

RIDGEBACK RD

The habitat of the southeastern quadrant of the site encompasses an area approximately one-third of the total project. It has been found that this area has been disturbed by humans as a result of clearing and dumping of refuse. Further, dominant plant species of this area introduced non-native type grasses and broad-leaved plants. Census counts prepared by consultants produced a total of four-hundred ten birds belonging to thirty-one species. The bird population was dominated by small perching birds which in this case were all song birds. No amphibians were sighted on the survey nor were any heard calling. The aridity of this area does not recommend it as a prime habitat for amphibians although the Western Toad probably occurs on the site. Evidence of reptiles on the site indicated that the Side-Blotch lizard, Western Rattlesnake, and Red Diamond Rattlesnake occupy the site. Evidence of mammalian species on the project indicate that a California Ground Squirrel, Desert Cottontail, and possibly jack-rabbits occur on the site. Evidence was also found of the agile Kangaroo Rat, Dusky-footed Wood Rat, and the Desert Wood Rat. No evidence of coyotes were found.

Among the plant species and animal species encountered on the site, only the Coastal Barrel Cactus is officially designated as endangered species of plants. Among the vertebrate animal groups surveyed, no rare or endangered species of amphibians, reptiles, birds, or mammals were found or were expected to be found. Of the fully protected species noted by the California Department of Fish and Game, it should be expected that the white tail kite would sometime occur on the site while hunting food.

3.1.2 Impact

The tentative subdivision maps (see Fig. 3), indicates 57 lots projected for development. Four acres of natural open space and 1.25 acres (approximately) of dedicated open space are proposed as part of the project. The housing development covers 83.5% of the 30 acre survey site. The following is a breakdown of habitats and portions to be developed on the site.

	<u>Total acres</u>	<u>Acres to develope</u>	<u>% habitat developed</u>
Coastal Sage Scrub	18.5	14.5	78.4
Ravines	1.5	1.13	76.0
Disturbed Slopes	10.0	8.75	87.5

For the areas to be developed, initial clearing, bank cutting and necessary dirt fills will eliminate natural vegetation in natural areas. On the disturbed slopes, clearing, etc. will simply remove whatever sparse vegetation is present. The open space areas, as long as they are not cleared or covered, will remain intact and suffer minor impact i.e., littering, walking, or accident.

The areas to be developed will lose the existing wildlife during construction. The less mobile species may be destroyed by clearing and other construction activities; the more mobile may migrate to the adjacent, undisturbed brushlands. Not all of these migrants will survive such displacement (other habitat already occupied, risks of predation to migrants, etc.) so many will be lost. This indicates that the majority of the existing vertebrate fauna (with perhaps the exception of birds) will be removed and lost. Wildlife which is compatible with development, pets and children will return in small numbers. As horticultural plantings are made, those species of vertebrates which survive in association with man will establish themselves: Western Toads, Alligator Lizards, Starlings, House Sparrows, Mockingbirds, House Finches, Pocket Gophers, House Mice, Opossum, Skunk. As long as the surrounding natural areas remain undeveloped, occasional migrants from these areas may wander into the developed areas. The designated open natural area, without disturbance, should maintain its vertebrate fauna in approximately its normal species composition and numbers of individuals. However, the larger vertebrates may not find this ample area to support their activities.

The designated natural area should provide a modest refuge for native plants and animals. However, the plants and animals in this area will come under increasing pressure from the activities of humans and their domestic pets. The activities of children and such predators as house cats tend to degrade the quality of small, natural areas in close approximation to human habitation.

The developed portion of the site will come to resemble developed subdivisions in this area (south of Bonita High School and north, around Camino Elevado). The horticultural vegetation in these areas represents a different habitat than that utilized by native wildlife, in most cases, and the animals present will be those found in mature, suburban areas (see the ones mentioned above). Increased human occupation of the area will, of course place greater stress on the adjacent, undeveloped brushlands in the same manner that it will on the designated natural area.

3.1.3 Mitigating Measures

1. Current open space proposals are significant and substantial, especially if the vegetation under the power transmission lines and down canyon to the north of the site remains intact.
2. Every effort should be made to insure absolute minimal disturbance to the designated natural area during and after construction.
3. If possible, construction should be timed during the spring to avoid nesting season of the resident or migrant birds which may use the site for that purpose.
4. In the event of the removal of Barrel cactus, consideration of salvage of the plants of this endangered species should be made. An interested organization such as the California Native Plant Society might assist in this.
5. Wherever natural vegetation can be left intact, this should be encouraged.

3.1.4 Significance

The site appears to represent nothing unique in the way of individual species of vertebrate animals nor does it appear to have any uncommon unique or unusual assemblages of animals. It does represent habitat that is being rapidly removed by development.

3.2 Archaeology

3.2.1 Project Setting

The project site for Bonita Haciendas project was studied by Stanley Berryman, consulting archaeologist. He based his findings on a field study made by himself and also a record search performed at the San Diego Museum of Man. This site is situated on a generally north-south trending ridge. Soil is an eroding bright orange-sand lying low which caps the sandstone foundation with a few cobbles. The site consists of a very light scattering of approximately fifteen flakes. It covers an area that covers thirty-two yards in diameter. No cores, primary flakes or other fuels were found. Cultural affiliation is difficult to place because of the lack of culturally identifiable attribute clusters. Due to the eroding nature of the area, there is little potential for site depth. Further, because of the scattered nature of the resource, it is highly probable that this site has been impacted by either natural or human activities.

3.2.2 Impact

Due to the lack of cultural affiliation and eroded nature of the site area, the proposed grading and development of the project area will have little long term impact on the archaeological resources of the area.

3.2.3 Mitigation Measures

Even though the site consists of very few artifacts, some recovery of data from the site should occur prior to the project implementation. This would consist of controlled surface collection and micro-mapping as well as a rectilinear posthole series.

3.2.4 Significance

For reasons stated above, the development of this particular site has little archaeological significance.

3.3 Soils & Geology

3.3.1 Project Setting

Field investigation of the site performed by GEOCON indicates that the property is underlain by two geologic formations and by surficial deposits consisting of top soil and slope wash. Alluvium occurs along the bottom of the drainage channels, however it was not encountered in our exploratory borings. A highly sheared bed of bentonite claystone having a dip of approximately 2° to the west was encountered. The shearing of the bentonite bed encountered in this project was apparently caused by tectonic movement parallel to the bedding rather than landsliding as there is little or no topographic evidence of sliding in the area. The significance of a sheared bentonite bed is that it can contribute to the instability of cut and fill slopes. Remedial grading will be required in the affected areas of the project to mitigate this instability. In general, the grading can be performed as shown on the tentative map for the project; also conventional footings for the residential structures proposed could be used. A review of the geological data and field investigation indicates that no known faults occur on the property or site or its immediate vicinity. The closest active fault lies approximately 40 miles to the east and is the Elsinore Fault.

3.3.2 Impact

As noted above, some adverse soil conditions are present on the site; the mitigating measures which are noted below. No geological hazards are present.

3.3.3 Mitigation Measures

Due to the presence of the bentonite clay strips present in the site, remedial grading for the proposed cut and fill slopes will be necessary. This type of grading includes the construction of larger than normal keyes and benches for fill slopes along the easterly and westerly property lines, the excavation of a stability fill or small buttress between lots 2 and 16 (see Fig. 3) and the removal and recompaction of loose or uncompacted fill.

3.3.4 Significance

In general, no extensive soil preparation is necessary. Some grading measures which are not normally encountered will be required as noted above, but these are not overly excessive. Standard size building foundations will suffice on this site.

3.4 Sewer Facilities

3.4.1 Project Setting

The thirty acre project, Bonita Haciendas, lies easterly of Otay Lakes Rd. Otay Lakes Rd. is currently at an elevation of approximately four-hundred and forty feet immediately easterly of the proposed project site. There is in existence through Otay Lakes Rd. an eight inch vitrified clay pipe flowing northerly. The flow line elevation of the existing facilities is approximately six feet below the finish grade of Otay Lakes Rd. No exact data for the quantity of sewage effluent flowing in the existing pipe was available. However, according to a conversation with Mr. William Gaines with the City of Chula Vista Engineering Dept., the existing sewage effluence in that main is well below capacity.

The project itself lies in an elevation anywhere from ten to one hundred feet below the elevation of Otay Lakes Rd. Consequently, a direct gravity flow system to the existing main lying within Otay Lakes Rd. is impossible. Normally, sewage generation from the project would flow in a gravity system through the Long Canyon. However, the facilities in Long Canyon have not been developed, and they are not planned to be developed in the imminent future. Consequently it is planned for the project to have a sewage pumping station located at the northwest terminus of the extension of Ridgeback Rd. The sewage collected at that point will then be pumped up Ridgeback Rd. to the existing main in Otay Lakes Rd. This pumping station is to be maintained by the residents of the proposed subdivision. It is to have a stand-by system as well as well as an electric monitoring system to preclude emergencies being imposed upon the residents of the site. At the request of the City of Chula Vista Planning Dept. a cost

comparison was performed by the firm of Schwerin, Xinos & Associates as to the feasibility of constructing the extension of a sewer main through the Long Canyon basin to an existing main in Acacia as opposed to the pump system.

This cost comparison shows that the cost differential is significant. The City of Chula Vista Engineering Dept. would therefore find the construction of the sewage pumping station acceptable if the developer guarantees his proportionate share of constructing the Long Canyon gravity trunk sewer.

3.4.2 Impact

The amount of sewage expected to be generated from a 57 unit subdivision is as follows:

No. of Lots	57
No. of persons per lot	3.5
Gal. per day per person	70
Peak Factor	2.5
Million gals. per day (MDG) generated	.0398
or cubic feet per second	.062
<u>(1.55 cfs)</u> MGD	

3.4.3 Mitigation Measures

All the sewage generated from the subdivision will be pumped to the force main constructed as a part of this subdivision to the existing facility within Otay Lakes Rd. It should be noted that a general 8" main on a mild (2%) slope will handle 0.380 cfs. The Bonita Haciendas project will generate .062 cfs. This cumulative figure is considerably less than 0.380 cfs. Consequently, the main in this facility will not be overloaded by the construction of the proposed project. Ultimately sewage generated from this project will be discharged through a main that will be collected in the Long Canyon basin as mentioned in the previous section. This system will discharge into the recent constructed sewer system in and adjacent to Acacia Ave. It is anticipated that the life of the temporary pumping station will be about seven years.

In general, the use of pumping stations should generally be avoided. Consequently, as a mitigating measure for the construction of a sewage pump station the following conditions are recommended to be implemented during the course of this project:

1. Maintenance of the pumping station to be an item in the Homeowners Association budget for this project. (The cost of this activity will likely be about \$2.00 per lot per month, the cost of electricity cannot be determined until design details are known)

2. A dual web-well and holding facility should be constructed within the pumping station in case the first system fails.

3. Electronic monitoring system which would signal an alarm if the first system fails should be constructed.

4. The developer should make a cash deposit with the City Finance Office for the proportionate share of constructing the Long Canyon gravity sewer trunk which will eventually serve the subdivision.

3.4.4 Significance

If the above mentioned mitigating measures are implemented in the course of construction, the significance of a pumping station should be minor. There will be no significant increase in sewage flows due to this project.

3.5 Water Facilities

3.5.1 Project Setting

The project site currently lies within the Otay Municipal Water District's geographical boundaries. In existence at this time is a twelve inch asbestos cement water pipe ten feet northeasterly of the centerline of Otay Lakes Rd.

3.5.2 Impact

As a water main is operated under pressure, the elevation differentials lying between Otay Lakes Rd. and the project site should not be insignificant. The water consumption for the proposed project is as follows:

Population	200 persons
Water usage per capita	150 gal/day
Total Demand	30,000 gal.

3.5.3 Mitigation Measures/Significance

In accordance with representatives from the Otay Municipal Water District there will be no problem in providing water to the proposed project. Consequently, this aspect of the construction and implementation of the Bonita Haciendas project has little or no significance.

3.6 Gas & Electricity

3.6.1 Project Setting

The Bonita Haciendas project lies easterly of Otay Lakes Rd. In existence within Otay Lakes Rd. are electrical facilities constructed from the extension of Ridgeback Rd. to the west. In existence through the project site is a hundred and thirty-eight kilowatt high transmission line that bisects the two corners of the project. Also within the same two hundred and fifty foot easement is a twelve kilowatt power line.

3.6.2 Impact

The proposed project with 57 residential units or approximately two hundred residents will have the following power consumption rates:

Electricity	512 kw hours per month
	57= 29,184 kw hours per month
Gas	82 therms per month x 57 units
	= 4,674 therms per month

3.6.3 Mitigating Measures

The proposed project will utilize all energy conservation as it is outlined in the 1976 edition of the Uniform Building Code. In addition, our proposed project will have water flow restrictors. Solar systems are not to be included in the proposed project as it is felt that they are incompatible with the tile roofs that are to be used on the residential units. San Diego Gas & Electric requires that solar heating be utilized for any individual swimming pools that are constructed.

3.6.4 Significance

San Diego Gas & Electric Co. is prepared to handle the additional load proposed by the construction of the project. Consequently, this item does not have a significant impact on the existing facilities.

3.7 Schools

3.7.1 Project Setting & Impact

The Cockatoo Community is currently served by the Sweetwater Union High School District and the Chula Vista Elementary School District. More specifically, the particular schools that will be service the project will be Bonita Vista Junior High School, Bonita Vista High School, and Benton C. Tiffany Elementary School.

Projected student generation from the subdivision based on a 0.6 ratio would be 34 in the K-6 range, 17 in the 7-9 range, and 15 in the 10-12 range. Current enrollment in Tiffany Elementary School is 679 as of October 7, 1977. Maximum design enrollment of the school is 700. The capacity of Bonita Vista High School and Bonita Vista Junior High School are 1520 and 1410 respectively. As of February 10, 1978, the enrollment of the junior high was 1549 and the senior high was 1679.

3.7.2 Mitigation Measures

The City of Chula Vista's policy stipulates that the developer presents evidence to the Planning Commission at the time of the consideration of the matter that the required public school services will be provided concurrent with the need. Currently both the Chula Vista Elementary School District and the Bonita High School District are entering into secured agreements with the developers for the provision of school services. The fee schedule varies with the proportion of the number of units, but the average fee paid by the developer in advance for the building permit is \$300 for both the elementary school and high school districts. It should be noted that \$300 is more than sufficient to provide temporary facilities for housing students, but not sufficient for providing permanent facilities. The rationalization used by the school boards is that with maturation of existing neighborhoods comes a declining need for schools. Newer neighborhoods have the younger children which will take the place of those who graduate from the district.

Developer is to compensate the school districts, in accordance with the current policy.

3.7.3 Significance

There will be some impact on the existing levels of service provided by the schools, however, this can be mitigated by payment of fees to various school boards that are involved.

3.8 Law Enforcement & Fire Protection

3.8.1 Project Setting

This area will be afforded fire protection and police protection by the City of Chula Vista upon annexation. In accordance with a conversation with Lieutenants of both police and fire departments, protection can be afforded the subdivision. Response for fire calls will be from Fire Station #4 about 1/4 mile southeast of the site. The run time will be about 2 minutes. Primary access for responding to emergency calls within the limits of the proposed subdivision will be the access road off Otay Lakes Rd.

3.8.2 Impact

No individual impact is predicted.

3.8.3 Mitigation Measures

Funds for the provision of the additional services required of both the fire and police departments will come through the increase of property tax funds provided to the City of Chula Vista by the future residents of the proposed subdivision.

3.8.4 Significance

This item is not found to be of significance.

3.9 Noise

3.9.1 Project Setting

The major noise source is Otay Lakes Rd. Measurements were made at the site using a General Radio Community Noise Analyzer Type 1945, which is a Class 1, precision instrument in accordance with ANSI Standard S1.41971. The meter reads the A-weighted sound levels, averages the values over a selected time period and displays the equivalent sound level (Leq) in dB(A) for that period.

Three measurement locations were chosen to represent conditions on the site. The site and the microphone locations are shown in Fig. 1.

A traffic count was made concurrently with the noise measurement in order to establish a direct relationship between noise and traffic.

Traffic counts were obtained from the City of Chula Vista. The oDTs at the site as of May 1977 were 17,774 average daily trips.

Actual traffic counts during the noise measurements were 780, 860 and 860 vehicles per hour. The measured noise was adjusted to the 1977 and the 1995 traffic counts as shown in Table 1.

Table 1 Measured and Projected Noise Levels

<u>Location</u>	<u>Measured Leq dB(A)</u>	<u>1977 CNEL dB(A)</u>	<u>1995 CNEL dB(A)</u>
1	65	68	68
2	61	63	63
3	55	58	58

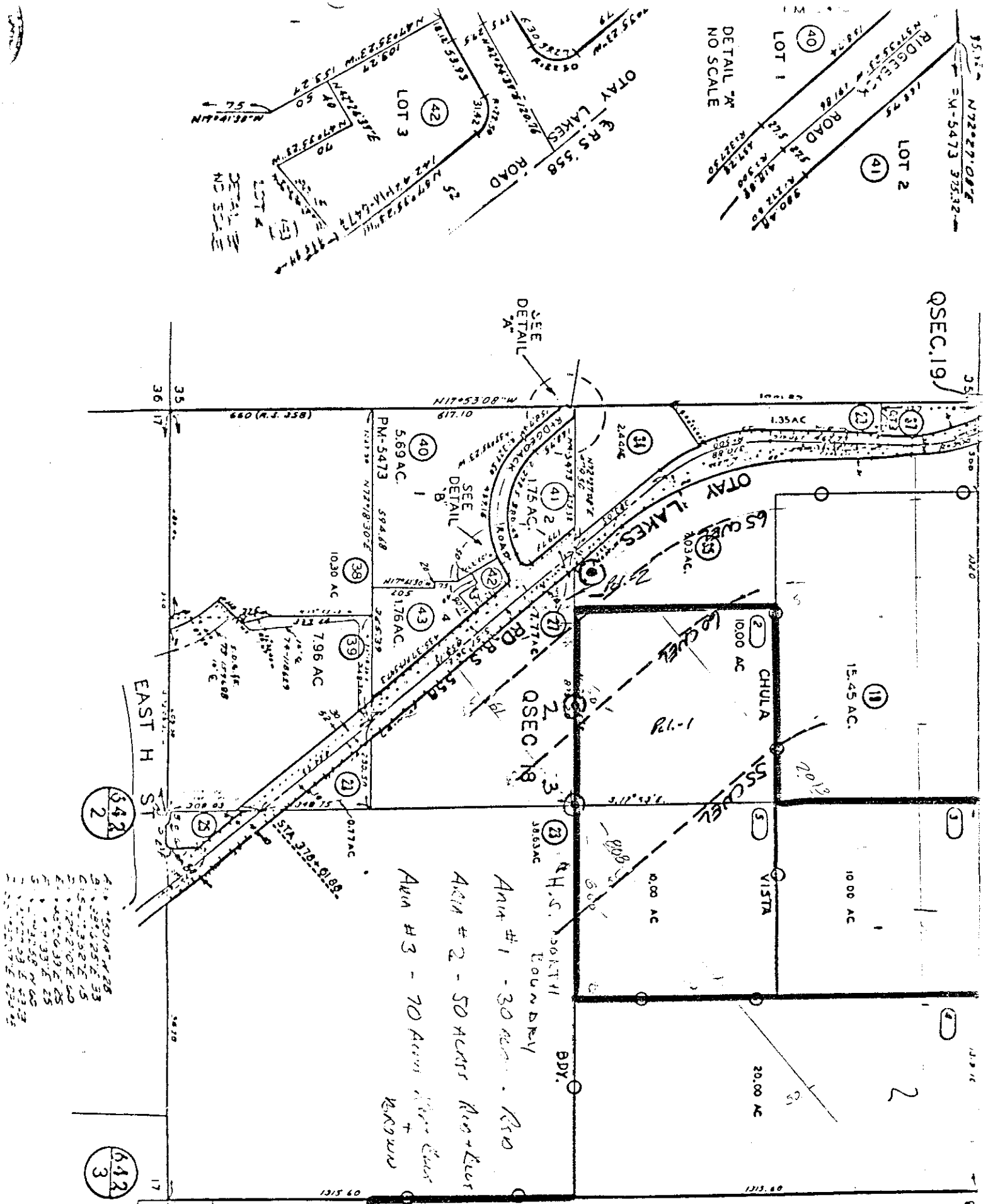


FIGURE 5 1977 AND 1995 NOISE CONTOURS

1995 Traffic

The Chula Vista Public Works Advanced Planning group currently has a computer run yielding 14,700 ADT's for 1995. Discussions with Chula Vista traffic engineers have revealed that this projection may not be too accurate. Two basic assumptions, the building of H St. and Route 125 in that area have tremendous impact upon the projected daily trips. An updated computer run is being prepared but will be unavailable for some time.

The reduced 1995 traffic flow would result in a 1 decibel reduction in CNEL from the 1977 levels.

Due to the stated uncertainty of the 1995 traffic prediction, a conservative approach will be used for this report and the 1995 CNEL will be set equal to the 1977 CNEL,

3.9.2 Impact/Mitigation

The 1977 and 1995 noise contours are identical and shown on Fig. 1. In addition a map having a scale of 1" - 50' is submitted under separate cover. Levels existing over the project area all less than 65 CNEL except for one small corner. Normal building construction will satisfy the requirements of the state noise insulation standards except that ventilation may be required where the CNEL is greater than 62 dB. No special mitigating measures will be required.

3.9.3 Significance

There will be no substantial impact due to acoustical factors.

3.10 Traffic

3.10.1 Project Setting

The primary access to the Bonita Haciendas will be through the extension of Ridgeback Rd. easterly from Otay Lakes Rd. Ridgeback Rd. has just recently been completed to the east. Otay Lakes Rd. is classified as a major road whereas Ridgeback Rd. is classified as a collector street. Based on information provided by the City of Chula Vista, Otay Lakes Rd. has a current ADT (average daily traffic) of 17,774.

During peak hours, Otay Lakes Rd. carries 1730 vehicles in both directions.

In addition to the traffic generated by this project, an apartment development is currently under construction across Otay Lakes Rd. which will use the intersection with Ridgeback Rd. for access.

3.10.2 Impact

Traffic near the Otay Lakes Rd. and Ridgeback Rd. intersection will be generated in accordance with Table 2.

Table 2

<u>Project</u>	<u>DU's</u>		<u>Factor</u>		<u>Total Trips</u>
Bonita Haciendas	57 DU	x	11 trips	=	627 ADT
Apartments	90 DU	x	8 trips	=	720 ADT
					<hr/>
					1347 ADT

About 10% of the trips generated occur during the peak hour, thus Bonita Haciendas will generate 63 trips while the apartments will generate about 72 trips. Based on this information, an analysis was conducted to determine if this intersection would warrant signalization. This study which is contained in Appendix E, concluded that the traffic levels would not warrant signalization. However, there will be some delay in making left hand turn movements during peak hour conditions.

3.10.3 Mitigation/Analysis of Significance

The cumulative impacts of the proposed project and others in the vicinity of the project would not result in any significant impact and no special mitigation is necessary.

3.11 Land Form / Grading & Drainage

3.11.1 Project Setting

The proposed project is situated on 30 ± acres of vacant land. The property is comprised of gently rolling land with slopes ranging from 30% to less than 1%.

The average slope is approximately 13%. The maximum elevation is 473.0' M.S.L. and is located at the southeasterly portion of the project. The minimum elevation is 360 and located at the northwest corner of the project. Otay Lakes Rd. is about 130± to the southwestly corner of the proposed project. The elevation of Otay Lakes Rd. ranges from 463.0' M.S.L., at the northerly bounds to 454.0' M.S.L. at the southerly bounds. The majority of the property overlooks the Long Canyon drainage basin. Approximately 35% of this property views the City of San Diego to the north.

The elevation of the southerly property line is generally about 450.0' M.S.L. The western property line elevation ranges from 450.0' M.S.L. to 375.0' M.S.L. There is no physical separation to the north, east and west. There are downward slopes immediately adjacent to the northerly property line of the project in heights of about 50'.

There is a ravine located at the toe of Otay Lakes Rd. which is generally along the westerly side of the project. There are no drainage tributaries crossing this area. Waters originating on the property ultimately drain into the Long Canyon basin.

3.11.2 Impact

Grading with the proposed project will conform to the existing topography as close as possible. However, it will be necessary to create some cut and fill banks in order to accommodate the maximum allowable street grade and also to provide level pads for residential structures. Earthwork is planned to balance at about 90,000 cubic yards cut and 90,000 cubic yards fill. Maximum slopes are to occur along the western and northern portions of the property adjacent to the extension of Ridgeback. These slopes range from five feet in height to 23 feet.

Grading that is proposed will be at a 2:1 slope which is approximately equal to slopes that exist leading up to the southwesterly boundary.

Special attention has been given to the location of slopes that are visible from Otay Lakes Rd. Split level units are proposed along streets with steeper gradients. This

eliminates the visual appearances of manufactured slopes. Where large elevation differentials are necessary, along rear lot lines perpendicular to the natural contours, some front to rear split units are proposed. Contour grading is proposed for some of the areas inside the open space lots. Homeowners maintenance of these areas will assure their future upkeep.

As a result of these mitigating measures, the majority of slopes that will be visible from outside the limits of the project will be gradually sloped and heavily landscaped, thereby enhancing the visual appearance.

The project site is located at the crest of the hills which start at Bonita Vista High school and slope away gradually to the north. Therefore, there will be a certain amount of water flow which will pass through the project from the southerly side. The project is located within several sub-basins of the Long Canyon drainage basin, the "Fogg" drainage study indicates that the current runoff is 158 cfs and due to topography and soil types, development would not increase this runoff volume.

No underground drainage facilities currently exist on the site. New construction will provide for all lot grading to drain toward the streets and across the paved driveway. Underground drainage facilities will be designed for 100 year storm drain waters in excess of that which can be provided for by curb and gutter.

Drainage facilities are proposed that will collect the waters from the south and deposit them in their original water courses to the north. No diversion of drainage waters from their original pattern is proposed.

As 70% of the project site is proposed to be regraded, a considerable amount of siltation will occur prior to the completion of the landscaping. Landscaping will be provided on all cut and fill banks to insure slope stability. There will be a period of time prior to this landscpaing taking hold that sedimentation will be discharged off site.

3.11.3 Mitigating Measures to grading, drainage & landscaping.

Measures that will be incorporated to reduce the impact of the grading operation are as follows:

1. Dust control measures as outlines in the City of Chula Vista grading ordinance will be fully utilized.
2. Slope banks will be at a slope ratio of 2 horizontal to one vertical to reduce the visual impact to Otay Lakes Road.
3. Restrict the construction of major slope banks as shown on the grading plans to the minimum height that could possibly be used.

No special mitigating measures are necessary for the drainage control of the proposed project. Normal subdivision design dictates that all lot drainage goes to the streets. There is no proposed change in the direction of any of the original water courses that are on the project. All the storm drain facilities that will be constructed will be to the 100 year volume.

To mitigate the seriousness of the sedimentation that will evolve from the construction of the proposed project, it is proposed that the siltation traps be constructed at the northwesterly termination of the newly constructed drainage facilities. A time limitation between the completion of the proposed grading and the installation of the landscaping should be imposed upon the developer. This time frame should of course allow for the construction of the residential units in between, therefore a reasonable time period should be anticipated to be approximately eight months.

3.11.4 Significance

Two of the aforementioned items cannot be totally mitigated. These are sedimentation and visual impact. However, with the inclusion of the mitigation measures previously mentioned, their total impact should not be of high significance.

4.0 ALTERNATIVES TO THE PROJECT AS PROPOSED.

The project site could be developed in accordance with the existing R-E zoning which would permit the deivision of the site into 20,000 sq. ft. lots with 25% reduced to 15,000 sq. ft. as long as the overall density were not higher than one unit per 20,000 sq. ft. of land area.

The same number of lots or slightly fewer would likely result but they would be larger lots and these would not be the common landscaped open spaces. The overall impact of the development would be quite similar to that of the project as proposed.

Development of the site in accordance with the grading restruictions of the Hillside Development Policy would result in about 25% of the site remaining ungraded and fewer dwelling units. If the property were zoned R-1-15-H, a maximum of 48 dwelling units would be permitted. The most logical area to be retained as natural open space would be the ravines in the western portion of the property. However the extension of Ridgeback Rd. through this area to serve the properties to the north would require extensive grading.

Much of the remaining area contains non-native vegetation which is not essential to retain. Therefore this alternative would have similar impacts to the project as proposed.

A higher density project would have a greater impact on such community facilities as schools and transportation and would not conform to the General Plan.

The "no project" alternative would result in none of the impacts identified in this EIR being realized. Because these impacts are insignificant or mitigatable, no significant reduction in the environmental consequences would result and the objectives of the project would not be realized.

5.0 GROWTH INDUCING IMPACTS

Bonita Haciendas project has incorporated within its design the extension of Ridgeback Rd. to the north. By so doing, it locks its alignment to a particular vicinity. It also provides impetus for the natural extension of this street into Long Canyon basin. The project does not however, extend sewer facilities in any particular direction as the sewage generated from this project will be pumped to Otay Lakes Rd. The construction of a water main and other streets leading to the easterly boundaries of the project will ease the construction burdens of any development to the east of the project site. Therefore it must be concluded that the Bonita Haciendas project will have a growth inducing effect.

6.0 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

The potential impacts which could result from this project can be mitigated to an insignificant level. There will be incremental impacts on public facilities (schools), air quality, waste water treatment facilities and an increase in the consumption of natural resources. There will be an irreversible change in land use and the appearance of the site.

7.0 EFFECTS FOUND TO BE INSIGNIFICANT

The evaluation contained in Appendix A details those effects of this project which were analyzed and found to be clearly insignificant and are not discussed in this focused EIR.

8.0 ORGANIZATIONS AND PERSONS CONTACTED

City of Chula Vista Fire Department

City of Chula Vista Engineering Department

City of Chula Vista Planning Department

City of Chula Vista Department of Parks & Recreation

City of Chula Vista Police Department

Ross Dingman, PhD., Biologist

Phillip Collier, PhD., Biologist

GEOCON, Inc., Specialists in the applied earth sciences

Stan Berryman, M.S., Consulting Archaeologist

San Diego Acoustics

San Diego Museum of Man

Otay Municipal Water District

Schwerin, Xinos & Associates

Local Agency Formation Commission