BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of the )
) DEPARTMENT OF GENERAL PLANNING,
) CITY AND COUNTY OF HONOLULU )
)
) To Amend the Agricultural Land Use )
) District Boundary into the Urban )
) Land Use District for Approximately )
) 252 Acres of Land at Honouliuli, Ewa, )
) Oahu, State of Hawaii, Tax Map Key )
) Numbers: 9-1-17: portion of 6, )
) portion of 9, portion of 10, 11, )
) portion of 18, portion of 34; )
) 9-1-22:1, portion of 2, 3, portion )
) of 5, portion of 13 )
)
)

FINDINGS OF FACT, CONCLUSIONS OF LAW,
AND DECISION AND ORDER

DOCKET NO. A87-616
) DEPARTMENT OF GENERAL PLANNING, CITY AND )
) COUNTY OF HONOLULU )
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DEPARTMENT OF GENERAL PLANNING,
CITY AND COUNTY OF HONOLULU

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To Amend the Agricultural Land Use
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Numbers: 9-1-17: portion of 6,
portion of 9, portion of 10, 11,
portion of 18, portion of 34;
9-1-22:1, portion of 2, 3, portion
of 5, portion of 13

FINDINGS OF FACT, CONCLUSIONS OF LAW,
AND DECISION AND ORDER

The City and County of Honolulu, a municipal
corporation of the State of Hawaii, through its Department of
General Planning (hereinafter "Petitioner" or "City"), filed a
Petition on January 5, 1988, pursuant to Chapter 205 and
Section 201E-210, Hawaii Revised Statutes, as amended ("HRS"),
and Title 15, Subtitle 3, Chapter 15, Hawaii Administrative
Rules, as amended (hereinafter "Commission Rules"), to amend
the Land Use District Boundary to reclassify approximately 252
acres of land situate at Honouliuli, Ewa, State of Hawaii, Tax
Map Key Numbers: 9-1-17: portion of 6, portion of 9, portion of
10, 11, portion of 18, portion of 34; 9-1-22:1, portion of 2,
3, portion of 5, portion of 13, (hereinafter "Property"), from
the Agricultural District to the Urban District to develop a residential subdivision for the purpose of providing affordable housing, referred to as "West Loch Estates." The Land Use Commission (hereinafter "Commission"), having heard and examined the testimony and evidence presented during the hearings, the Petitioner's proposed findings of fact, conclusions of law and decision and order, hereby makes the following findings of fact:

FINDINGS OF FACT

Procedural Matters


3. The Commission received eleven timely requests and two untimely requests to appear as public witnesses. All of the requests were granted by the Commission. None of the public witnesses appeared in person to testify before the Commission. However, five of the witnesses submitted written testimony which was entered into the record.

4. Tongg Ranch, Inc. filed a timely intervention request with the Commission on January 19, 1988 and was
admitted as a party to the proceedings by the Commission on February 9, 1988.

Description of the Property

5. The Property consists of approximately 252 acres of land located on the Ewa Plain at Honouliuli, Ewa, Oahu, adjacent to the West Loch of Pearl Harbor. The communities of Waipahu and Ewa are located generally north and southwest of the Property respectively.

Phase I is triangular in shape and consists of approximately 90 acres. It is bounded by Fort Weaver Road to the west, Waipahu to the north, West Loch to the east, and the Honouliuli Stream flood plain to the south.

Phase II is irregular in shape and consists of approximately 162 acres. It is bounded by Fort Weaver Road to the west, the old Oahu Railway and Land Company easement to the east and south and separated from Phase I by the Honouliuli Stream flood plain which lies to the north.

The Honouliuli Stream flood plain area, which is not included in the Property, is proposed to be developed as a 197-acre, 18-hole municipal championship golf course by the City and County of Honolulu Parks and Recreation Department. The City and County of Honolulu Parks and Recreation Department also proposes to develop a 39-acre shoreline park which will be located along the makai borders of Phase I and Phase II and the proposed golf course.
6. The Property Tax Map Key Numbers and the corresponding acreages for the Property are as follows:

<table>
<thead>
<tr>
<th>Tax Map Key Number</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-1-17: 06 (portion)</td>
<td>79.088</td>
<td>142.438</td>
<td>221.526</td>
</tr>
<tr>
<td>9-1-17: 09 (portion)</td>
<td>4.595</td>
<td>4.595</td>
<td></td>
</tr>
<tr>
<td>9-1-17: 10 (portion)</td>
<td>13.643</td>
<td>13.643</td>
<td></td>
</tr>
<tr>
<td>9-1-17: 11</td>
<td>0.543</td>
<td>0.543</td>
<td></td>
</tr>
<tr>
<td>9-1-17: 18 (portion)</td>
<td>10.278</td>
<td></td>
<td>10.278</td>
</tr>
<tr>
<td>9-1-17: 34 (portion)</td>
<td></td>
<td>0.619</td>
<td>0.619</td>
</tr>
<tr>
<td>9-1-22: 01</td>
<td>0.112</td>
<td></td>
<td>0.112</td>
</tr>
<tr>
<td>9-1-22: 02 (portion)</td>
<td>0.274</td>
<td></td>
<td>0.274</td>
</tr>
<tr>
<td>9-1-22: 03</td>
<td>0.088</td>
<td></td>
<td>0.088</td>
</tr>
<tr>
<td>9-1-22: 05 (portion)</td>
<td>0.001</td>
<td></td>
<td>0.001</td>
</tr>
<tr>
<td>9-1-22: 13 (portion)</td>
<td>0.309</td>
<td></td>
<td>0.309</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90.151</strong></td>
<td><strong>161.838</strong></td>
<td><strong>251.988</strong></td>
</tr>
</tbody>
</table>

7. The records of the City and County of Honolulu Department of Finance, Real Property Assessment Division, indicate that the Property is owned by the Estate of James Campbell with the exception of Tax Map Key No. 9-1-22: 13, which is owned by Walter W. Johnson, et al. The Oahu Sugar Company, Limited, holds recorded leases to portions of the lands owned by The Estate of James Campbell. Utility easements in favor of Hawaiian Telephone Company and Hawaiian Electric Company (held in trust by Hawaiian Trust Company), and road and drainage easements in favor of the Department of Transportation, State of Hawaii, affect portions of the Property.

8. Petitioner has obtained written authorizations to file the Petition from the owners of the Property.
9. Petitioner intends to acquire the fee simple interest to the Property, subject to said easements, through purchase or, if necessary, condemnation as provided for by Section 70-80, HRS. For this purpose, the sum of $13,825,000.00 was included in the Executive Capital Budget Appropriation Ordinance (No. 87-71) approved by the Honolulu City Council on May 20, 1987.

10. At present, the Property is predominantly used for agriculture and related activities, with scattered residential, ranch and pasture, cemetery and industrial/commercial uses. Substantial portions of Phase I are vacant.

11. The Property consists of gently sloping lowlands with grades ranging from 0 to 5 percent. In Phase I ground elevations within the Property range from sea level along the coastal areas to approximately 65 feet above sea level. In Phase II ground elevation is 40 feet above sea level. Phase II lands contain east-west and north-south trenching remnants of old sea bluffs (approximately 30 feet high).

12. The climate at the site of the Property and surrounding area is constant and relatively dry, with prevailing tradewinds from the northeast which blow 85 percent of the time at an average of 9 knots per hour. Temperatures in the Ewa Plain area range from 72 to 80 degrees Fahrenheit. Rainfall in the area is approximately 20 inches a year.
13. The Property contains a variety of soil types, including silty clays, mottled clays, massive clays, coral deposits, as well as mixed soil types. Generally, permeability and runoff are slow, with only slight erosion hazards. The soils are neutral to slightly acid and workability is considered difficult. According to the State Department of Agriculture, the lands within the Property are largely classified as "Prime" and "Other Important" under the Agricultural Lands of Importance to the State of Hawaii ("ALISH") system. The Land Study Bureau's ("LSB") Detailed Land Classification ratings for the different soil types found within the Property are as follows:

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>LSB Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honouliuli Series</td>
<td>B16i, C17i</td>
</tr>
<tr>
<td>Haleiwa Series</td>
<td>B161, C1/1</td>
</tr>
<tr>
<td>Halemano Series</td>
<td>E105</td>
</tr>
<tr>
<td>Kaloko Series</td>
<td>B16i</td>
</tr>
<tr>
<td>Keauau</td>
<td>E32, C17i, B16i</td>
</tr>
<tr>
<td>Pearl Harbor Series</td>
<td>D99, D99i</td>
</tr>
<tr>
<td>Waipahu Series</td>
<td>B16i, C17i</td>
</tr>
</tbody>
</table>

The soils found on the Property may be moderately expansive and special site preparation and construction techniques will be required.

14. A flood hazard zone study was conducted by the Federal Insurance Administration and released on September 4, 1987. Findings from this study indicate that the Property is not located within an area subject to probable flooding. The low-lying area scheduled for golf course development between
Phases I and II is comprised of Zones AE, D, and X. Zone AE is a special flood hazard area inundated by 100-year flood levels. Zone D represents unstudied areas under the Federal Flood Insurance Program and is an area of undetermined but possible flood hazards. Zone X represents areas within the 500 year flood or areas within the 100 year flood with average depths of less than one foot.

**Description of the Proposed Development**

15. Petitioner proposes to develop the Property as a master-planned residential community, under and in accordance with Chapter 201E, HRS, and Section 46-15.1, HRS, to be known as the West Loch Estates (also referred to herein as the "Project").

16. The Project's proposed land use and area allocation is as follows:
<table>
<thead>
<tr>
<th>LAND USE</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Total Both Phases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACRES</td>
<td>NO. OF UNITS</td>
<td>ACRES</td>
</tr>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family</td>
<td>75.9</td>
<td>570</td>
<td>105.6</td>
</tr>
<tr>
<td>Relocation</td>
<td>4.4</td>
<td>30</td>
<td>9.5</td>
</tr>
<tr>
<td>Elderly</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>80.3</td>
<td>600</td>
<td>115.1</td>
</tr>
<tr>
<td>Recreation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>District Park</td>
<td>--</td>
<td>--</td>
<td>16.4</td>
</tr>
<tr>
<td>Tot Lot</td>
<td>0.3</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Greenbelts</td>
<td>2.8</td>
<td>--</td>
<td>22.9</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>3.1</td>
<td>--</td>
<td>22.9</td>
</tr>
<tr>
<td>Buffer/Setback</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FWS/RR Buffer</td>
<td>--</td>
<td>--</td>
<td>5.9</td>
</tr>
<tr>
<td>Ft Weaver Buffer</td>
<td>1.8</td>
<td>--</td>
<td>3.1</td>
</tr>
<tr>
<td>Balfour Blvd Buffer</td>
<td>--</td>
<td>--</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>1.8</td>
<td>--</td>
<td>13.0</td>
</tr>
<tr>
<td>Civic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Sch.</td>
<td>--</td>
<td>--</td>
<td>6.4</td>
</tr>
<tr>
<td>Day Care Fac.</td>
<td>--</td>
<td>--</td>
<td>1.6</td>
</tr>
<tr>
<td>Park-and-Ride</td>
<td>--</td>
<td>--</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>--</td>
<td>--</td>
<td>13.6</td>
</tr>
<tr>
<td>Commercial</td>
<td>--</td>
<td>--</td>
<td>3.7</td>
</tr>
<tr>
<td>Circulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>108' ROW</td>
<td>2.0</td>
<td>--</td>
<td>3.3</td>
</tr>
<tr>
<td>70' ROW</td>
<td>--</td>
<td>--</td>
<td>3.0</td>
</tr>
<tr>
<td>Park Access Rd</td>
<td>0.6</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>2.6</td>
<td>--</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>87.8</td>
<td>600</td>
<td>174.6</td>
</tr>
</tbody>
</table>

¹Approximately ten and one-half acres within Phase II, also known as Lower Village, is designated within the Urban Land Use District.
17. The Project will consist of 1,500 housing units, fifty percent (50%) of which shall be single-family residential units having purchase prices that are affordable to gap-group purchasers--those earning over 80% but not more than 120% of the median income established by the federal government for the Honolulu area--and ten percent (10%) of which shall be multi-family dwellings to be made available as affordable rental units for the elderly. The remaining forty percent (40%), or approximately 600, of the units will be sold at prevailing market prices ("market units").

In addition, approximately 30 units will be developed for relocation purposes for a total of 1,530 housing units.

18. Petitioner proposes to provide an integrated mix of housing types in both phases. Market units will be located primarily in areas offering superior views, increased privacy and/or larger lot sizes to maximize their desirability and in turn, command the highest sales prices. The elderly housing component of the Project has been located in close proximity to major access roads and community and commercial facilities as a means of ensuring that the needs of this group are adequately met.

19. No prices for the affordable units have yet been determined. Petitioner's Master Plan projects market unit sales prices ranging from approximately $140,000 to $150,000, and gap group units ranging from $100,000 to $120,000.
20. The Project will contain a 16.4-acre district park located near the entry of Phase II at Fort Weaver Road which will include facilities such as a gymnasium, playing fields, a recreation center and a swimming pool.

21. A 5.6 acre park-and-ride facility, with a maximum capacity of 500 vehicles, is planned at the Fort Weaver Road entry. It is anticipated that the facility would be used on weekends and evenings as a parking area for recreational and social activities related to the adjacent 16.4-acre district park.

22. A 1.6-acre day care center site is proposed to be located adjacent to the district park and in close proximity to the park-and-ride facility and public school sites. This location will permit parents to drop their children off at the day care center, leave their cars at the park-and-ride facility and select commuting alternatives that include mass transit and rideshare programs.

23. A blast hazard zone that originates from the ammunition wharves at Lualualei, West Loch Branch, is located approximately 200 feet from the closest point of the proposed Project. The Project area closest to the blast zone, will be buffered by a shoreline park and setback area related to the Fish and Wildlife Service (FWS) wildlife refuge.

24. Petitioner proposes to undertake a relocation assistance program on behalf of the tenants who will be
displaced by the Project. Petitioner states that efforts have been made to contact each of the tenant households, evaluate the types and amounts of assistance necessary, and to seek input from affected tenants in the development of relocation housing or other similar resources that may be required.

25. Construction of the Project will take place in two phases, both of which are scheduled for completion within five years after the date of final county zoning approval or exemption therefrom, whichever occurs sooner. Construction of Phase I is planned to begin in or around July, 1988. Phase II construction is expected to begin two years after that date.

Development Costs and Project Financing

26. The total cost for the development of West Loch Estates is presently estimated at $74,560,000. The breakdown of estimated costs for the Project is as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and Engineering</td>
<td>$4,100,000</td>
</tr>
<tr>
<td>Land Acquisition</td>
<td>$7,500,000</td>
</tr>
<tr>
<td>Site Improvements Construction</td>
<td>$46,530,000</td>
</tr>
<tr>
<td>Off-site</td>
<td>$4,460,000</td>
</tr>
<tr>
<td>On-site</td>
<td>$42,070,000</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td>$9,720,000</td>
</tr>
<tr>
<td>Construction Management</td>
<td>$500,000</td>
</tr>
<tr>
<td>Financing/Carrying Administrative</td>
<td>$8,620,000</td>
</tr>
<tr>
<td>Administrative</td>
<td>$600,000</td>
</tr>
<tr>
<td>Contingency</td>
<td>$6,710,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$74,560,000</td>
</tr>
</tbody>
</table>
27. Petitioner proposes to obtain the funds necessary to complete the Project through the issuance of short-term General Obligation bonds. These bonds will be redeemed at maturity through use of revenues from the sale of the improved house lots and/or the sale of tracts of land to home builders who would develop and provide "house-and-lot packages" in accordance with construction and cost specifications prescribed by the City. All Project costs are expected to be recovered in this manner and, Petitioner does not anticipate any external subsidization by the taxpayers of the City and County of Honolulu.

Need for the Proposed Development

28. Petitioner's market analysis for the 600 market units indicates that the existing supply of market priced units currently exceeds demand. This condition of oversupply is estimated to continue for approximately two years. After this period, Petitioner believes that demand will again exceed supply and an additional 900 to 1,000 units would be required. Should the proposed Waiawa, Mililani-Mauka and Ewa by Gentry projects receive necessary land use and zoning approvals, the market study states that total available inventory would again exceed demand from 1990 to approximately the year 2000.

However, the proposed Mililani-Mauka market units are anticipated to be priced at a higher level and may not be directly competitive with the Petitioner's market units.
29. Petitioner's market analysis for the 750 gap-group units estimates that current demand for gap-group units is approximately 30,000 units on Oahu. Although there have been some public and private developments targeted for this group, the number of units produced has not been adequate to meet demand. Petitioner's market study further concludes that the island-wide market demand for gap-group housing is expected to remain very strong with sufficient demand to accommodate all anticipated supply.

30. Petitioner did not submit a market analysis for the affordable rental units.

**State and County Plans and Programs**

31. The Property is located within the State Land Use Agricultural District, as shown on Land Use District Boundary Map 0-5, 0-6, and 0-10.

32. The General Plan for the City and County of Honolulu, adopted by the City Council and approved by the Mayor on December 23, 1982 (Resolution No. 82-188), sets forth the City's broad policies for the long-range development of the City and County of Honolulu. According to the General Plan, Ewa is the future location of Oahu's secondary urban center or "second city."

33. On May 14, 1987, the City Council approved an amendment to the Development Plan for Ewa which changed the land use designation for Phase I of the Project from
Agriculture to Residential. On December 2, 1987, the City Council approved an amendment to the Development Plan for Ewa which changed the land use designation for Phase II of the Project from Agriculture to Residential.

34. Most of the Property is zoned AG-1 Restricted Agricultural District, with a small portion of Phase I zoned R-5 Residential District.

35. Portions of the Property are within the special management area.

**IMPACT UPON RESOURCES OF THE AREA**

**Agricultural Resources**

36. The development of the West Loch Estates subdivision together with the proposed municipal golf course will result in the urbanization and withdrawal of approximately 206 acres of sugarcane lands currently under cultivation by Oahu Sugar Company ("Oahu Sugar"). Most of these lands are rated as "prime agricultural lands" under the Agricultural Lands of Importance in the State of Hawaii or "ALISH"

system and as B lands with some C, D or E lands, under the Land Study Bureau's Overall Productivity Rating.

37. According to Appendix J of the Petitioner's Final Environmental Impact Statement (FEIS), Oahu Sugar Company currently cultivates about 13,540 total acres. In 1982, 4,860 acres were fallowed due to their high production costs.
38. Petitioner indicates that the impact on Oahu Sugar Company by the withdrawal of cane cultivation, from the Property will not adversely affect the economic viability of Oahu Sugar Company, nor require layoffs of sugar workers. However, when considered cumulatively with other proposed Ewa development projects, the impact on Oahu Sugar Company may be more severe.

39. Petitioner has been working with Oahu Sugar Company to ensure that the Project will have minimal impact in the sugar industry. The selection of the Project site, at the edge of the sugar plantation, rather than at the center, was based on input from Oahu Sugar Company.

40. The State is concerned about Balfour Boulevard, a major cane haul road that traverses Phase II of the Property. Cane haul trucks operating up to 24 hours daily during cane haul season could generate complaints from residents regarding dust, noise, aesthetic, economic impacts and be a potential hazard to children playing in the area.

41. The State recommends that if Phase II is developed, alternative cane harvesting routes to adjacent cultivated areas must be provided by the Petitioner to replace disrupted cane haul roads lost as a result of Project development.

42. Petitioner has proposed measures to assure the continued unrestricted use of Balfour Boulevard for
agricultural purposes and mitigate the effects of this use on the homes within the Project site. These measures include the use of landscaped setbacks, sound attenuation walls, sprinklers and a fence line on both sides of that roadway. A restrictive covenant discouraging homeowners from filing suit or taking any other action to close or restrict the use of Balfour Boulevard would also be incorporated in all of the conveyance documents for Phase II of the Project.

43. Two livestock processing facilities are presently located proximate to the Property. Kahua Meat Company, Ltd. is located at the intersection of Old Fort Weaver Road and new Fort Weaver Road, and is primarily used as a slaughterhouse. Visual, olfactory, and noise factors associated with the slaughtering of animals may be offensive to new residents and other users of the Property. However, no complaints are anticipated by the Petitioner due to existing setback distances.

The other livestock processing facility is located within the Property and is operated by Tongg Ranch, Inc. Petitioner proposes to assist in the relocation of this facility.

Water Quality

44. The urbanization of the Property poses no known risk of contamination to groundwater or coastal waters. All domestic wastewater from the Project will be discharged into the City's sewer system. Surface water runoff will be directed
into the proposed municipal golf course drainage system for retention and settlement prior to outflow.

45. In their comments of November 30, 1987, the DLNR indicated that impacts on aquatic resources are not expected to be significant since the proposed Project would be located inland from shoreline areas. They also state that precautions should be taken to prevent construction debris and other contaminants from entering coastal waters.

**Air Quality**

46. Petitioner's air quality study indicates that traffic related air pollution would generate the greatest increase to air pollutants and will most likely occur within 40 meters of Fort Weaver Road after the year 1991. While it does not appear likely that the federal 1-hour carbon monoxide standard will be exceeded in 1991, there appears to be a "non-zero probability" that the federal 8-hour standard could be exceeded by 1991 or later in close proximity (within 20 meters) of Fort Weaver Road. These areas which may exceed State standards have been projected under "worst-case meteorological conditions" and are located at two proposed project access intersections with Fort Weaver Road.

Petitioner's air quality study states on page 7, "Violations of the State's (8-hour) standard, however, are indicated for 1991 and 1997 both with and without the project."
47. Short-term direct air quality impacts resulting from development of the Property are expected to consist of fugitive dust during the construction period. Dust control could be accomplished through frequent watering of unpaved roads and of areas of exposed soil and by completing and paving roadways and parking areas early in the development process.

48. Indirect air quality impacts include an incremental increase in the emission of pollutants (estimated at less than 0.1% of the entire island) due to electrical generation and solid waste disposal requirements associated with the Project and an increase in air pollutant emissions due to the presence of Project-generated traffic. Traffic-related air quality impacts can be mitigated by appropriate setbacks.

Noise

49. Petitioner's noise expert prepared a noise study for the Project which covered both air traffic and highway noise impacts.

50. Noise impacts from air traffic are expected to be minimal. The project site is located well outside the Barbers Point Naval Air Station and Honolulu International Airport 55 Ldn noise contours.

51. Traffic noise increases of 0.4 to 1.3 Ldn are projected to occur as a result of increased traffic from the Project on Fort Weaver Road. Highway noise, however, is considered to be within the "Significant Exposure, Normally
Unacceptable" category. Along the Diamond Head side of Fort Weaver Road, the first row of proposed lots fronting the road currently receive noise levels in the 67 to 73 Ldn range. Existing setbacks to the 65 Ldn level are estimated to range between 235 feet and 128 feet from the centerline of the roadway. In the vicinity of the Renton Road intersection, existing noise levels are less significant and rated as within the "moderate Exposure, Acceptable" category. This is due primarily to the large setback distances which currently exist from the centerline of Fort Weaver Road.

52. Other noise impacts can be expected during the peak harvesting season resulting from sugarcane haul trucks.

53. Petitioner intends to utilize setback distances equivalent to the future 65 Ldn contour when siting future residential units. Petitioner will also provide for sound attenuating berms or walls, and/or other sound attenuating measures.

Flora and Fauna

54. According to the botanical study of the Property, the site is of little botanical interest. Vegetation on the Property is dominated by introduced species. Of the total 164 plant species inventoried, 86.6% or 142 species are introduced; 16 are indigenous (native to the islands and elsewhere); 1 is endemic (native only to the islands); and 5 are of early Polynesian introduction. The native species are found in
similar environmental habitats throughout the islands. None of the native species found on the Property is considered rare, threatened or endangered.

55. According to the Petitioner's wildlife study, the Property in its present condition is of no significance from the standpoint of animal life. There are no endemic forest birds in the Project area or anywhere near it. All of the mammals, land reptiles, and amphibians that occur on the Property are introduced.

56. The Honouliuli and Waiawa National Wildlife Refuges are in close proximity to Phase II of the Project site and are of special value to the endangered Hawaiian stilt and, to a lesser degree, other endangered Hawaiian waterbirds. Petitioner states that the Refuges will be protected from any adverse impacts associated with urban activities by providing adequate setback distances and a greenbelt buffer between these sensitive wetlands and the residential subdivision.

57. The U.S. Fish and Wildlife Service expressed concern that the proposed Project as currently envisioned, poses environmental risks to the Pearl Harbor National Wildlife Refuge at Honouliuli. Of specific concern, is protection of endangered waterbirds from the anticipated population increase of stray cats and dogs, and wild mongooses in the Phase II area. The anticipated increase in population of these predators may increase the level of predation on the ground-nesting endangered waterbirds that use the refuge.
Other concerns were expressed by the Fish and Wildlife service in terms of noise and lighting impacts associated with activities resulting from the increased human populations in the area.

58. In response to the Fish and Wildlife Service's concern, the Petitioner has agreed to provide the following mitigation measures:

a. A visual screen of native shrubs will be established outside the refuge fence line along the existing railroad right-of-way. This hedge will visually isolate the refuge from human activities along the right-of-way.

b. A 300-foot wide buffer zone will separate the refuge from the housing development. This buffer zone will be planted with trees, shrubs, and groundcover to block noise and street lights from disturbing endangered Hawaiian waterbirds and migrant waterfowl in the refuge. This buffer zone and plantings should be completed before construction of the Phase II housing increment begins.

c. The railroad right-of-way abuts the boundary of the refuge. To limit human disturbances to the refuge, a foot path will be constructed in the buffer zone and gates will be constructed across the right-of-way to direct pedestrian traffic away from the right-of-way and refuge.

d. Trees will be planted along the right-of-way setback in the southern section of the Phase II housing increment to screen the refuge from housing and lights.
e. The four fishponds adjacent to the refuge will not be filled. The Petitioner intends to clear dense vegetation surrounding the fishponds, plant a visual buffer of shrubs around the ponds, consolidate the four ponds into a single large pond, construct nesting islands, and manage this site as a waterbird habitat. This improved waterbird habitat will be incorporated into the interpretive program of the shoreline park. Wetland habitat improvements will be coordinated with the Service and U.S. Army Corps of Engineers, as appropriate.

f. Petitioner will construct a chain-link fence along the Pearl Harbor boundary of the refuge to exclude dogs and cats associated with the proposed housing project and to limit trespassing onto the refuge. The chain-link fence shall be at least six feet in height and have its bottom edge buried approximately ten inches into the ground. The Fish and Wildlife Service will assume maintenance and replacement responsibilities for the fence. Construction of the fence and vegetation screen should parallel housing and shoreline park development.

Historical Resources

59. Petitioner's archaeological reconnaissance survey indicates that the Project will have minimal impacts on archaeological or historical resources. The entire Project area has been extensively modified in recent times, primarily by sugarcane cultivation. The only site on the Property
believed to be culturally significant is a cemetery complex. If possible, preservation of the cemetery "as is" is desirable; however, if not practical, then proper disinterment and reburial in accordance with State Department of Health regulations will be carried out.

60. In the event that previously unknown or unexpected subsurface cultural features, deposits, or burial are encountered in the course of construction, Petitioner has agreed to immediately seek appropriate archaeological consultation.

61. Petitioner has been consulting with the State Department of Land and Natural Resources (DLNR), State Historic Preservation Office (SHPO) and is developing appropriate mitigation measures to deal with the possibility of archaeological findings in the shoreline areas of the site. The mitigation measures will be formalized by a management plan approved by SHPO.

ADEQUACY OF PUBLIC SERVICES AND FACILITIES

Water Resource and Service

62. Potable water demand for the Project is estimated to be 800,000 gallons per day, which will be furnished by the Board of Water Supply. Water for the Project will be drawn from a new well currently under construction at the Waipio Heights III site. Storage will be provided by a new 1.5 million gallon per day (mgd) capacity reservoir to be
constructed in the Waipahu-Honouliuli area at the 228 foot elevation. All on-site transmission lines necessary to bring water to the Project will be designed and installed to meet Board of Water Supply standards.

63. The Property is located within the Department of Land and Natural Resources' Pearl Harbor Ground Water Control Area ("PHGWCA"). The Property is located within the coastal caprock subarea boundary and is not a significant recharge area for the PHGWCA.

64. Adequate water capacity, both potable and non-potable, is available from the PHGWCA to serve the Project. An application to reallocate the necessary potable water from the Waiola Estates project is pending before the DLNR.

65. Utilization of non-potable water to fulfill the irrigation requirements of the Project is also planned. An application for water allocation approval is now pending before the DLNR.

Roadways and Highways

66. The Project site is linked to the highway system primarily by one arterial highway (Fort Weaver Road) which runs in a north/south direction between Ewa Beach and Farrington Highway. The H-1 Freeway and Kunia Interchange is located approximately 2000 feet mauka of the Farrington Highway/Fort Weaver Road intersection. Fort Weaver Road is a four-lane
divided highway with sufficient roadway width for left-turn storage lanes to service the Project.

67. Access roads are planned for the Project at four locations, two for each Phase of the Project. According to Petitioner's Master Plan, a park and ride facility will provide a 500-space parking lot for bus riders and sufficient area for bus turn-around and passenger pick-up. A greenbelt system will provide for pedestrian and bicycle circulation throughout the Project.

68. Petitioner's traffic analysis, FEIS Appendix F, projected 1991 traffic capacities, with and without the Project, at the four access intersections using the current year conditions as a base. No regional or downstream impacts were projected.

The study determined that only the Farrington/Leoole Street intersection is operating near capacity at the present time. Projections which assumed development of Phases I and II, indicated that all intersections with Fort Weaver Road would operate at near capacity levels by 1991.

69. Petitioner's traffic study recommends the following transportation improvements:

1) Turning lanes on Fort Weaver Road should be considered for the Phase I and II intersections.

2) During development of Phase I, the traffic signal operation at access Road A should be upgraded to provide for a protected left turn for southbound traffic. A left turn storage lane on Fort Weaver Road should be provided for this movement.
3) Modify the existing pavement markings on the south leg at the signalized intersection of Leolele Street and Farrington Highway. This action could establish two northbound lanes and one south bound lane. One of the two northbound lanes should be used exclusively as a left turn lane.

4) Signalization of access Road B should be considered and plans developed basec on future traffic patterns and housing developments south of Renton Road.

70. Petitioner states that the City will consider measures to alleviate traffic beyond 1991 by including turning lanes on Fort Weaver Road, improving pavement markings at Leolele Street and Farrington Highway, and improving signalization.

71. Appendix G of the Petitioner's FEIS indicated that the current Development Plan facilities map identifies two major roadway construction projects planned for the Ewa area. The first involves expansion of the H-1 Freeway from Kunia Road to Makakilo. The second is future expansion of Fort Weaver Road to provide additional lanes in two directions from the Ewa Town area to Ewa Beach. Both projects are planned for completion within the next six years.

72. In their comments of November 23, 1987, the Department of Transportation (DOT) expressed concerns that cumulative regional impacts have not been addressed. DOT believes that if all proposed developments along Fort Weaver Road were developed, a 6-lane facility would probably be required from Renton Road to H-1.
73. City Ordinance No. 84-94, a unilateral agreement for conditional zoning agreed to by Campbell Estate, and Hirano Brothers, Ltd. for a proposed development located south of the Property, provides for a minimum 40 foot setback from the railroad right-of-way. DOT recommends that this provision be made a condition to the proposed reclassification.

Wastewater Management

74. The Property is located in the "no pass zone" where ground disposal of wastewater is not permitted.

75. The City's treatment, disposal and interceptor sewer system can accommodate the anticipated wastewater flow requirements for the Project estimated to be between 550,000 to 600,000 gallons per day.

76. Wastewater from Phase I of the Project will be handled both by the existing Waipahu sewage system and a planned 1,200-foot long, 12-inch relief sewer extending from the site to the Kunia Wastewater Pump Station. This line may be upgraded to a 15-inch trunk sewer if necessary.

77. Wastewater from Phase II of the Project will be accommodated by the Ewa sewers through lines running under Fort Weaver Road to an 84-inch interceptor line at Geiger Road. Waste will be treated at the Honouliuli Wastewater Treatment Plant.

78. The existing capacity at the Honouliuli treatment plant is 25 mgd. Although the current flow is only 21 mgd, the
City's Division of Wastewater Management is seeking funds to expand the plant capacity to 38 mgd by the year 1994. This expansion is intended to accommodate many of the proposed developments in Central and Leeward Oahu.

**Solid Waste Disposal**

79. Solid waste collection and disposal for the Project will be provided by the City. It is anticipated that the Ewa area will be serviced by a new landfill site at Waimanalo Gulch and/or the planned Garbage-to-Energy (H-POWER) facility in Campbell Industrial Park.

**Drainage**

80. Drainage on the Property will be handled by a street drainage system consisting of underground drain lines, drain manholes, and intake boxes. Runoff from the system will be discharged into the proposed municipal golf course drainage system. The design of the golf course system will provide the capacity necessary to effectively retain and settle surface runoff from the Project, the golf course, and drainage areas mauka of the Project, prior to discharge into West Loch receiving waters. This is expected to minimize the effects of increase runoff and possible alterations of current stream runoff quality due to urbanization of the Property.

**Fire Protection**

81. Petitioner states that fire protection for the Project is adequate. Primary fire protection for the Project
will come from the Waipahu Fire Station. Additionally, the Barbers Point Naval Air Station fire company is available to assist the Honolulu Fire Department under a mutual aid agreement. New fire facilities are also planned for the Ewa district.

Police Protection

82. The Honolulu Police Department's Pearl City substation is expected to provide primary service to the Project. The adequacy of police protection in the future is dependent upon the rate of development in Ewa and the availability of funding for sufficient personnel, equipment and communications.

Health Care

83. The availability of health care services necessary to service the Project will be adequate. Recently, Kaiser-Permanente's Moanalua Medical Center opened a facility. Also, there are plans for Pali Momi Medical Center in Pearl City and plans for the St. Francis Hospital-West on Fort Weaver Road at Farrington Highway.

Education

84. The State Department of Education ("DOE") estimates that the Project population would include 240 to 480 elementary school children, 90 to 170 intermediate school students, and 160 to 240 high school students. These students are expected to attend Ewa Elementary School, Ilima Intermediate School and Campbell High School, respectively.
The DOE is currently seeking funds to expand Ewa Elementary and is also formulating a comprehensive plan for new school facilities in Ewa. Phase II of the Project will include a 6.4-acre site reserved for use by the DOE as a future elementary school.

Utilities (Electricity and Telephone)

85. Electricity and telephone service to the Project site are available. Realignment of existing power lines, a new transformer station at or near the Property, and/or an additional switching station may be required to service the area.

Recreation, Parks and Open Space

86. Approximately 18 acres in Phase II of the Project have been reserved for a district park to be used by residents of West Loch Estates and adjacent communities. The City's master plan for the area also includes a 39-acre shoreline park on West Loch and a 197-acre municipal golf course between Phase I and Phase II of the Property.

87. The U.S. Department of the Navy expressed concern regarding security of the military installation due to potential access by the public to the waters off the Pearl Harbor Naval Station.

88. Petitioner will install signs to prohibit any entry into the waters and instruct the golf course maintenance personnel to prohibit boating and swimming within the waters.
Socio-Economic Impact

89. The Ewa area, and the site of the proposed West Loch development, is characterized by agricultural uses interspersed with rural residential structures. As such, some of the primary socio-economic impacts resulting from the conversion of this area into an urban setting will be a shift of lifestyles by area residents from that of a rural to urban character, and an increase in the availability of affordable housing for those income groups which would not otherwise be able to afford a home.

90. Once completed, it is estimated that the Project could provide approximately 270 new jobs.

Conformance with Urban District Standards

91. The Property meets the standards applicable in establishing boundaries of the Urban District set forth in Section 15-15-18 of the Commission's Rules as follows:

(a) uses proposed by Petitioner are "city-like" in character;

(b) the Property is in close proximity to existing and planned centers of trade and employment;

(c) basic services such as sewers, transportation systems, water, sanitation, schools, parks and police and fire protection are, or will be, adequate to serve the Property;
(d) topography and drainage of the Property in its developed state will be satisfactory and reasonably free from the danger of floods, tsunami, unstable soil conditions, and other adverse environmental effects;

(e) the Property is contiguous to existing urban areas and is indicated for future urban use on the county general plan and development plan;

(f) the proposed development of the Property will not contribute to scattered or spot urban development, nor necessitate an unreasonable investment in public infrastructure or support services;

(g) the proposed development will provide open space amenities and will preserve and enhance scenic and natural amenities; and

(h) the design and construction controls proposed by Petitioner are adequate to protect the public health, safety and welfare and the public’s interests in the aesthetic quality of the landscape.

CONFORMANCE WITH THE HAWAII STATE PLAN

92. The proposed reclassification of the Property addresses the following objectives, policies, and priority guidelines of the Hawaii State Plan relating to agricultural lands:

Priority Guidelines 226-104(b)(2) "Make available marginal or non-essential agricultural lands for appropriate urban
uses while maintaining agricultural lands of importance in the agricultural district."

226-104(b)(1) "Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures and away from areas where other important benefits are present, such as protection of lifestyles.

226-106(1) "Seek to use marginal or non-essential agricultural land and public land to meet housing needs of low and moderate-income and gap-group households."

Urban use of this area may direct urban development pressures away from areas more suitable for agricultural production and groundwater recharge purposes. Although the proposed reclassification would utilize sugarcane lands, it is reasonably necessary for urban growth and the provision of affordable housing to remove the Property from agricultural production. Public facilities and services are available or can be made available by the Petitioner.

226-19(b)(2) "To achieve the housing objectives, it shall be the policy of this State to: Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households."
The primary objective of the West Loch Estates project is to provide affordable housing for Hawaii residents.

RULING ON PROPOSED FINDINGS OF FACT

Any of the proposed findings of fact submitted by the Petitioner not adopted by the Commission herein, or rejected by clear contrary findings of fact herein, are hereby denied and rejected.

CONCLUSIONS OF LAW

Pursuant to Chapter 205, Hawaii Revised Statutes, as amended, and the Hawaii Administrative Rules, the Commission finds upon a preponderance of evidence that the reclassification of a portion of the Property consisting of approximately 212.597 acres north of Balfour Boulevard from the Agricultural District into the Urban District at Honouliuli, Ewa, Island of Oahu, City and County of Honolulu, subject to the conditions stated in the Order, conforms to the standards for establishing the Urban boundaries, is reasonable and is non-violative of Section 205-2, Hawaii Revised Statutes, and the Hawaii State Plan, as set forth in Chapter 226, Hawaii Revised Statutes, as amended.

ORDER

IT IS HEREBY ORDERED that a portion of the Property, consisting of approximately 212.597 acres north of Balfour Boulevard, being the subject of Docket Number A87-616 by the Department of General Planning, City and County of Honolulu,
situated at Honouliuli, Ewa, Island of Oahu, identified as Tax Map Key Number 9-1-17: portion of 6, portion of 9, portion of 10, 11, portion of 18, portion of 34; 9-1-22: 1, portion of 2, 3, portion of 5, and portion of 13, and approximately identified on Exhibit A attached hereto and incorporated by reference herein, for reclassification from the Agricultural District to the Urban District, shall be and hereby is approved subject to the following conditions:

1. The Property shall be developed for the purpose of providing affordable housing in accordance with the requirements of Chapter 201E and Section 46-15.1 of the Hawaii Revised Statutes.

2. Petitioner shall provide housing opportunities for low and low-moderate income Hawaii residents by offering for sale or rental, on a preferential basis, 60 percent of the residential units to residents of the State of Hawaii of low and low-moderate family income as determined by the Housing Finance Development Corporation of the State, provided, however, that Petitioner shall comply with Chapters 46 and 201E, Hawaii Revised Statutes.

3. Petitioner shall fund and coordinate with the Honolulu Board of Water Supply and the Department of Land and Natural Resources measures designed to obtain the required water for the Project. In the event that water is not available from the proposed source due to insufficient supply
and/or the source is not contaminant free, the Petitioner shall fund the necessary water resource, storage, transmission facilities and filtration system.

4. Petitioner shall provide continuous professional archaeological monitoring of the Project site's coastal areas during all grading, digging, or other earthworking phases of Project development in accordance with Department of Land and Natural Resources requirements. Should any archaeological resources such as artifacts, shell, bone or charcoal deposits, human burial, rock or coral alignments, pavings, or walls be encountered, during the Project's development, Petitioner shall immediately stop work and contact the State Historic Preservation Office.

5. Petitioner shall participate in the funding and construction of the transportation improvements at the Project access points as identified in the Petition. If necessary, these improvements shall include the widening of Fort Weaver Road to accommodate traffic generated by the Project on a schedule acceptable to and coordinated with the State Department of Transportation.

6. Petitioner shall appoint and fund a transportation manager whose function would be the formation, use and continuation of alternative transportation opportunities that would maximize the use of existing and proposed transportation systems.
7. A forty (40) foot setback shall be established along the existing railroad right-of-way in a manner compatible with City Ordinance No. 84-94.

8. Petitioner shall inform all prospective occupants that the Hawaii Right to Farm Act, Chapter 165, Hawaii Revised Statutes, limits the circumstances under which preexisting farming activities may be deemed a nuisance.

9. Petitioner shall relocate existing agricultural operations which may include livestock processing facilities and sugarcane haul road(s) as necessary to maintain the uninterrupted agricultural operation of these facilities.

10. Petitioner shall participate in an air quality monitoring program with the State Department of Health. In the event that state air quality standards are exceeded, Petitioner shall take actions as determined necessary by the Department of Health.

11. Petitioner shall participate in an animal control program in coordination with the United States Department of Interior, Fish and Wildlife Service, to mitigate increased predation of endangered wildlife species from domestic and/or stray animals in the vicinity of the Pearl Harbor National Wildlife Refuge at Honouliuli.

12. As represented, Petitioner shall include a covenant in the deed of every purchaser of Phase II lots indicating that surrounding agricultural operations and the
agricultural use of Balfour Boulevard may generate possible odor, noise, and dust pollution. In addition, Petitioner shall mitigate the potential adverse impacts of the agricultural use of Balfour Boulevard by providing a landscaped buffer and continuous fencing on the northern boundary of Balfour Boulevard. Furthermore, Petitioner shall indemnify and hold harmless the State of Hawaii, its officers, employees, and agents from and against any and all actions, claims, suits, damages, and costs, arising out of or resulting from the use of Balfour Boulevard and in connection with canehaul operations. Petitioner shall defend the State of Hawaii, its officers, employees, and agents against any such action or claim.

IT IS ALSO HEREBY ORDERED that the balance of the Property, consisting of approximately 39.403 acres, situate at Honouliuli, Ewa, Island of Oahu, identified as Oahu Tax Map Key Number 9-1-17: portion of 6, also approximately identified on Exhibit A attached hereto and incorporated by reference herein, is denied reclassification from the Agricultural District to the Urban District and shall remain in the Agricultural District.
Done at Honolulu, Hawaii, this 15th day of April 1988, per motions on February 16, 1988 and March 29, 1988.

LAND USE COMMISSION
STATE OF HAWAII

By                        
TEOFILO PHIL TACBIAN
Chairman and Commissioner

By                        
FREDERICK P. WHITTEMORE
Vice Chairman and Commissioner

By                        
LAWRENCE F. CHUN
Commissioner

By                        
EVERETT L. CUSKADEN
Commissioner

By                        
ROBERT S. TAMAYE
Commissioner

By                        
SHARON R. HIMENO
Commissioner

By                        
RENTON L. K. NIP
Commissioner

By                        
RICHARD B. F. CHOU
Commissioner

By                        
TORU SUZUKI
Commissioner
BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of the )  DOCKET NO. A87-616
)  
)  
)  DEPARTMENT OF GENERAL PLANNING,
)  CITY AND COUNTY OF HONOLULU
    )  DEPARTMENT OF GENERAL PLANNING, CITY AND
    )  COUNTY OF HONOLULU

To Amend the Agricultural Land Use )
District Boundary into the Urban )
Land Use District for Approximately )
252 Acres of Land at Honolulu, Ewa, )
Oahu, State of Hawaii, Tax Map Key )
Numbers: 9-1-17: portion of 6, )
portion of 9, portion of 10, 11, )
portion of 18, portion of 34; )
9-1-22:1, portion of 2, 3, portion )
of 5, portion of 13 )

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Findings of Fact, Conclusions of Law, and Decision and Order was served upon the following by either hand delivery or depositing the same in the U. S. Postal Service by certified mail:

ROGER A. ULVELING, Director
Department of Business and Economic Development
State of Hawaii
250 South King Street
Honolulu, Hawaii 96813

desc.

DONALD A. CLEGG, Chief Planning Officer
desc.
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

desc.

RICHARD D. WURDEMAN, Corporation Counsel
desc.
City and County of Honolulu
City Hall, First Floor
Honolulu, Hawaii 96813

desc.

RONALD P. TONGG, ESQ., Attorney for Intervenor
desc.
Tongg Ranch, Inc.
169 South Kukui Street
Honolulu, Hawaii 96813-2389

desc.

Dated: Honolulu, Hawaii, this 15th day of April, 1988.

ESTHER UEDA, Executive Officer
DOCKET NO. A87-616 - DEPARTMENT OF GENERAL PLANNING,
CITY AND COUNTY OF HONOLULU

A copy of the Land Use Commission's Findings of
Fact, Conclusions of Law, and Decision and Order was served
upon the following by regular mail on April 15, 1988.

ROLAND KIM, Project Coordinator
Housing Finance and Development Corporation
1002 North School Street
Honolulu, Hawaii 96817