A04-753 State's Exhibits
Aina Nui Corp.

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

ORIGINAL

In the Matter of the Petition of AINA NUI CORPORATION To Amend the Agricultural Land Use District Boundaries into the Urban Land Use District For Approximately 174.209 Acres in Ewa District, Island of Oahu, Tax Map Key Nos. (1) 9-1-014: 033 (por.) and (1) 9-1-015: 004 (por.) and 020 (por.)	)	DOCKET NO. A04-753

LAND USE COMMISSION
STATE OF HAWAII
2005 NOV 28 P 2:36

OFFICE OF PLANNING'S EXCEPTIONS TO PETITIONER AINA NUI CORPORATION'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER

The Office of Planning, State of Hawaii, stipulates to Petitioner Aina Nui Corporation's Proposed Findings of Fact, Conclusions of Law, and Decision and Order dated November 21, 2005 with the following exceptions:

Drainage

Finding No. 86: The last sentence should be amended as follows:

> In addition to State and County agencies designated to review and approve drainage plans, any proposed drainage master plan will be submitted to DOT for review and [comment] approval.

Condition No. 9

Condition No. 9 should be amended as follows:

> Drainage Improvements. Petitioner shall fund the design and construction of drainage improvements required as a result of the development of the Petition Area to the satisfaction of appropriate State and County agencies. Drainage

improvements affecting Kalaeloa Barbers Point Harbor shall be submitted to the DOT for review and [comment] approval.

DATED at Honolulu, Hawaii, this 28th day of November, 2005.

STATE OF HAWAII
OFFICE OF PLANNING

Mary Lou Kobayashi for
LAURA H. THIELEN
Director

DOCKET NO. A04-753

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Exceptions to Petitioner Aina Nui Corporation's Proposed Findings of Fact, Conclusions of Law, and Decision and Order dated November 21, 2005 were served upon the following by either hand delivery or depositing the same in the U.S. Postal Service.

BENJAMIN A. KUDO 2262-0
NAOMI U. KUWAYE 6648-0
Attorneys for Aina Nui Corporation
Imanaka, Kudo, Fujimoto
A Limited Liability Law Company
745 Fort Street Mall, 17th Floor
Honolulu, Hawaii 96813

AINA NUI CORPORATION
Petitioner
1001 Kamokila Boulevard, Suite 255
Kapolei, Hawaii 96707

STEPHANIE AVEIRO
Executive Director
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RODNEY K. HARAGA
Director
Department of Transportation
869 Punchbowl Street
Honolulu Hawaii 96813

HENRY ENG
Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

CORPORATION COUNSEL
Department of the Corporation Counsel
City and County of Honolulu
530 South King Street
Honolulu, Hawaii 96813

LAND USE COMMISSION
STATE OF HAWAII
2005 NOV 28 P 2:36

PLANNING COMMISSION
Chair
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

DEPARTMENT OF THE NAVY
Commander Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

DATED at Honolulu, Hawaii, this 28th day of November, 2005.

Mary Lou Kobayashi
LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

ORIGINAL

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of	)	**DOCKET NO. A04-753**
	)	
AINA NUI CORPORATION	)	
	)	
To Amend the Agricultural Land Use District Boundary into the Urban Land Use District for Approximately 174.209 Acres in the Ewa District, Island of Oahu, Tax Map Key Nos. 9-1-14: 33 Por. and 9-1-15: 04, and 20 Por.	)	

LAND USE COMMISSION
STATE OF HAWAII
2005 OCT 19 A 9:06

SUPPLEMENTAL TESTIMONY OF THE OFFICE OF PLANNING

The Office of Planning submits the following testimony to supplement written testimony filed with the State Land Use Commission on September 26, 2005 based on recent discussions with the State Department of Transportation (DOT) and with the Petitioner.

Additionally, the Housing and Community Development Corporation of Hawaii (HCDCH) has provided new information on housing demand and supply for Oahu.

I. STATE DEPARTMENT OF TRANSPORTATION PROPOSED CONDITIONS

The State Department of Transportation recommends the following new conditions:

Notification of Potential Nuisances – Kalaeloa Harbor

Petitioner shall notify all prospective buyers of houses in the petition area of the potential adverse impact of noise, dust, lighting, fumes or other industrial events associated with commercial marine activities. In addition, petitioner shall place notice of such operations on the recorded deeds of homes in the petition area, thereby providing legal notice to all future buyers. Petitioner or its successor in interest shall defend, indemnify and hold harmless the State of Hawaii from and against all liability, loss, damage, cost and expense, including all attorneys fees and all claims, suits and demands arising out of or resulting from nuisance claims pertaining or relating to the normal commercial marine activities in Kalaeloa Harbor.

Hanua Street Improvements and Extension

Petitioner shall set aside and dedicate Hanua Street for a four (4) lane highway to Campbell Industrial Park. In the event the Hanua Street extension is built, petitioner

agrees it shall be built as a four lane divided highway in accordance with State highway standards, or to an alternative design as identified by the State Department of Transportation.

II. EWA HIGHWAY MASTER PLAN IMPACT FEE

Petitioner shall pay whichever is greater, the existing per unit impact fee as defined in the Revised Ordinances of Honolulu (Ord. 02-52), or a new per unit impact fee adopted by the City and County Council of Honolulu up to and including December 31, 2010. If Petitioner receives building permits and pays the current per unit impact fee prior to December 31, 2010, and the Council increases the per unit fee by December 31, 2010, Petitioner shall pay the difference retroactively in the manner proscribed by the Council. If the Council does not amend the impact fee prior to December 31, 2010, then Petitioner shall not be responsible for any retroactive differential.

III. HOUSING AND COMMUNITY DEVELOPMENT CORPORATION OF HAWAII

The HCDCH has provided the following additional information:

Estimated Housing Need

Per the 2003 Hawaii Housing Policy Study, from 2003-2007, there is an estimated statewide need for nearly 17,000 rental units for households earning 80% and below the HUD area median income and nearly 13,000 for-sale units for households earning from 80%-140% of the HUD area median income. The majority of the units are needed on Oahu with an estimated need for over 11,000 rentals and nearly 10,000 for-sale units.

Projected Housing Demand

The housing policy study included a demand survey to measure current housing conditions, preferences for new units, qualifications for ownership and rental, and demographic characteristics of households.

Approximately 127,683 households or 43.7% of the total households on Oahu intended to move to another housing unit. By 2008, approximately 86,444 households (30%) intended to move. (Table IV-C-3)

Of the 127,683 households with an intention to move, approximately 11.3% (14,422 households) indicated Leeward Oahu as a preferred location. Approximately 7,643 households preferred to own their home and 3,314 preferred to rent. Of the potential buyers, 28% could

afford to pay up to $1,300 per month for housing costs; 22.4% could afford to pay $1,400-$1,699 per month; and 25.1% could afford to pay $1,700-$3,000 per month for housing costs. Of the potential renters, 24.7% could afford to pay up to $800 per month for housing costs and 20.9% could afford to pay $800-$1,099 per month for housing costs. (Table IV-C-9a)

There were 15,085 households on Oahu that indicated they would move in the next two years (by 2005) and indicated a preference to own or rent. Approximately 9,791 households preferred to own their units, of which 95% preferred a single family unit. Of these potential buyers 42.1% had incomes at 80% and below the HUD area median income; 32.3% had incomes from 80%-120% of the HUD area median income; and 2.5% had incomes from 120%-140% of the HUD area median income. Approximately 5,294 households preferred to rent their units, of which 71.9% preferred a single family unit. Of these potential renters, 27.8% had incomes at 50% and below the HUD area median income and 11.4% had incomes from 50%-80% of the HUD area median income. (Table IV-C-13a)

What's Planned by HCDCH and the Department of Hawaiian Home Lands (DHHL) for the Area?

1. Villages of Kapolei

HCDCH is the master developer for the Villages of Kapolei. At build out, the master planned community will have approximately 3,844 units, 71% of which will be affordable to households earning 120% and below the HUD area median income. Currently, 2,899 units have been completed of which 62% have been sold or rented to households earning 120% of the HUD area median income or below: 1,581 affordable single and multi-family units; 136 affordable rental units; 75 gap (140% of median) single family units; and 1,107 market single and multi-family units. Approximately 945 additional units will be developed: 598 single and multi-family for-sale units for those earning 120% and below the HUD area median income and 347 rental units for those earning 70% and below the HUD area median income.

2. Two DHHL Projects

The Department of Hawaiian Home Lands is the developer of Village 8, named Kaupe'a, which consists of 326 single family units. The Department of Hawaiian Home Lands also has substantial plans for residential, office, and commercial development in the Kapolei/Ewa region.

Grading work for approximately 400 single family units in East Kapolei is projected to start in 2006. Funding for planning and design work for approximately 318 acres is in the FY 2005-2006 budget. Plans call for approximately 2,000 residential units.

3. Private Housing Projects

Castle and Cooke Homes Hawaii will build 67 single family units in Kapolei Villages 4 and 5; 205 multi-family units in Villages 5 and 6; and 287 rental units in Villages 2, 5 and 6. The *Pacific Housing Assistance Corporation,* a private non-profit community development corporation, will build 60 senior rental units in Kapolei Village 2.

Comments on the City and County of Honolulu's Affordable Housing Policy, Particularly Whether They Address the Rental Market Needs

The City's existing rules for Unilateral Agreements require developers to provide 30% of the total number of housing units for households earning 120% or below the HUD area median income. At least a third of the "affordable" units must be targeted for households earning 80% or less of the median income. Units for this income group are generally rentals. Rents must be set at the HUD Section 8 fair market rents for tenants in this income group: 0-bedroom - $760; 1-bedroom - $891; 2-bedrooms - $1,087; 3-bedrooms - $1,577; and 4-bedrooms - $1,765.

In 1999, the City Council placed a moratorium, through August 5, 2001, on the affordable housing requirements in existing unilateral agreements. Developers were permitted to sell affordable units free from any conditions related to buyer income eligibility and buyback and shared appreciation restrictions. In 2001, the City Council approved an extension of the moratorium to August 5, 2005. The moratorium has since sunset and the City Council is discussing alternatives including extending the moratorium for another year.

DATED at Honolulu, Hawaii, this 19th day of October, 2005.

STATE OF HAWAII
OFFICE OF PLANNING

LAURA H. THIELEN
Director

DOCKET NO. A04-753
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Supplemental Testimony was served upon the following by either hand delivery or depositing the same in the U.S. Postal Service.

BENJAMIN A. KUDO 2262-0
NAOMI U. KUWAYE 6648-0
Attorneys for Aina Nui Corporation
Imanaka, Kudo, Fujimoto
A Limited Liability Law Company
745 Fort Street Mall, 17th Floor
Honolulu, Hawaii 96813

AINA NUI CORPORATION
Petitioner
1001 Kamokila Boulevard, Suite 255
Kapolei, Hawaii 96707

STEPHANIE AVEIRO
Executive Director
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RODNEY K. HARAGA
Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

HENRY ENG
Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

CORPORATION COUNSEL
Department of the Corporation Counsel
City and County of Honolulu
530 South King Street

Honolulu, Hawaii 96813

PLANNING COMMISSION
Chair
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

DEPARTMENT OF THE NAVY
Commander Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

DATED at Honolulu, Hawaii, this 19th day of October, 2005.

LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

ORIGINAL

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 19 A 9:38

In the Matter of the Petition of **AINA NUI CORPORATION** To Amend the Agricultural Land Use District Boundary into the Urban Land Use District for Approximately 174.209 Acres in the Ewa District, Island of Oahu, Tax Map Key Nos. 9-1-14: 33 por. and 9-1-15: 04, and 20 por.	**DOCKET NO. A04-753** **Aina Nui Corporation**

STATEMENT OF POSITION OF THE OFFICE OF PLANNING IN SUPPORT OF THE PETITION

Recommendation

In accordance with Section 15-15-55 of the State Land Use Commission Rules, the Office of Planning (OP) recommends approval with conditions of the Petition by Aina Nui Corporation (Petitioner), to reclassify approximately 174.209 acres of land situated on the Island of Oahu, State of Hawaii, identified by tax map keys 9-1-14: 33por. and 9-1-15: 04, and 20por., from the State Land Use Agricultural District to the Urban District.

Description of the Property

The Petition Area is located within the Ewa District south of the Makaiwa Hills Urban District, makai of H-1 Freeway, and approximately 20 miles west of Downtown Honolulu. The Petition Area straddles the Oahu Railway and Land Company Railroad Right-of-Way (OR&L ROW), owned by the State of Hawaii. The Petition Area is bordered on the north by a 372.6-acre land area formerly known as Ko Olina Phase II that was reclassified from the State Land Use Agricultural District to the Urban District in 1991 (Land Use Commission (LUC) Docket A90-655). With the exception of the OR&L ROW, a quarrying and stockpiling operation by Hawaiian Cement, a small agricultural

operation by Aloun Farms, and a Coast Guard Range Light used to navigate entry into Kalaeloa Harbor, lands within the 174.209-acre Petition Area and 372.6-acre Urbanized Area (546.809 Project Area) are vacant and underutilized.

Proposed Use of the Property

Aina Nui Corporation proposes to consolidate the Petition Area (174.2 acres) with the adjacent 372.6-acre parcel to the north. The 372.6-acre land area (identified by tax map keys 9-1-15:18, and 4 por., 9-1-56: 11 por., and 12 por.) was reclassified to the State Land Use Urban District in 1991 for development of Phase II of the Ko Olina Resort by West Beach Estates (LUC Docket A90-655). Reclassification of the Petition Area and consolidation with the 372.6 parcel would define the Project Area for Kapolei West and facilitate development of the entire 546.8-acre parcel (Project Area) by Aina Nui Corporation according to the Kapolei West Master Plan.

OP's Testimony (*OP Exhibit 1*) will further discuss the impact the project may have on the area's resources, roadways, public services and facilities.

Major Concerns for Development Projects in the Ewa Plain

Traffic congestion, drainage and flooding, are among several areas of concern facing developments in the Ewa region. Without appropriate mitigation measures, scheduling of infrastructure improvements and coordination with appropriate State and County agencies, the level of service for public services and facilities within the region will continue to operate at below satisfactory levels.

Traffic

In 2001, a group of nine major Hawaii landowners and developers within the Ewa Region, including the State of Hawaii Housing and Community Development Corporation of Hawaii (HCDCH), worked with the State Department of Transportation (DOT) and the County Department of Transportation Services to develop the Ewa Highway Master Plan (EHMP). The EHMP was developed in order to determine the specific Ewa highway improvements needed to support future projected growth; and, to allocate the proportionate costs of these improvements between the State, City and developers. The developers and landowners participating in the Ewa highway plan and

identified as the Ewa Highways Master Plan Group (EHMPG), include Castle & Cooke Kunia Inc., Campbell Estate, Finance Realty Ltd., Gentry Homes Ltd., Haseko (Ewa) Inc., Ko Olina Development LLC, Land Use Research Foundation, Schuler Homes and the HCDCH.

The EMHP identifies six regional roadway project improvements that are needed to accommodate the projected growth in the area. These are:

- Construction of the North-South Road and Interchange
- Widening of Fort Weaver Road
- Widening of Fort Barrette Road
- Construction of a new Kapolei Interchange
- Completion of Kapolei Parkway
- Improvements to the existing Makakilo Interchange

In 2002, Ordinance 02-52 was passed by the Honolulu City Council which sets forth a regulatory scheme for the assessment and collection of impact fees on a pro-rata share basis "by landowners, developers, homebuilders, and others who directly contribute to expanding the population and increasing economic activity in the Ewa region through new land development activities." Revised Ordinances of Honolulu (ROH) Chapter 33A. (OP Exh. 7)

The Legislature passed an Act to permit the City and County of Honolulu to assess impact fees for State highway improvements (subject to the Director of DOT's consent), and to enable DOT to establish a Highway Development Special Fund to hold monies assessed as impact fees by the City and County of Honolulu as part of the EHMP. (HRS 264-121-127, OP Exh. 8) By law, these EHMP funds are to be encumbered for the capitol costs of State highway improvements within six (6) years of collection, or refunded to the contributing entity.

Several road improvements proposed within the region are underway, while others are still in the design stage. These include the Fort Weaver Widening Project from four to six lanes, and the North-South Road Project with an interim on-off ramp to and from Honolulu. DOT has emphasized the need to monitor each project's progress and growth within the overall development of the region, to ensure that the effects of both

local and regional impacts resulting from the proposed project, and the overall development of the Ewa region can be assessed and updated as new information is presented. ROH 33A-1.6(h) charges the County Director of Transportation Services, the County Director of Planning and Permitting and the State Director of the Department of Transportation to review and recommend revisions, as necessary, to the EHMP at least once every five (5) years.

The Petitioner's Traffic Impact Assessment Report (Appendix K) discusses impacts of the Project traffic with the Urbanized Area and recommends mitigation measures such as improvements to key intersections. The Petitioner should clarify and explain the commitments it will be making under the EHMP, and whether any additional commitments for on-site or off-site transportation infrastructure improvements will be made for the subject Kapolei West Expansion Area which is the subject of this Petition.

Drainage

The drainage pattern in this region flows from the Waianae mountain range above Makakilo. During intense rainstorms, low-lying parts of the Ewa Plain are subject to flooding and ponding. Large areas of the Project Area are unable to drain properly due to the berming effect created by the OR&L ROW, and an existing drainage ditch that is built-up above ground. Even without development of the Project Area, storm and surface water drainage from the Area have already affected Barbers Point harbor. The drainage systems proposed by the Petitioner should prevent and/or control further runoff and flooding into the harbor.

Water

Developments in the Ewa Plain have affected the region's available water resources. The region contains many industrial facilities and residential subdivisions that consume non-potable and potable water. According to the Ewa Development Plan, by 2020 an additional 35 million gallons per day (mgd) of potable water and 26 mgd of non-potable water will be needed to meet projected growth. The Commission on Water Resource Management recommended that the Petitioner provide a breakdown and identify the source for the potable and non-potable water for the proposed project.

Conclusion

This position statement does not attempt to include all concerns that may be of statewide interest, or conditions to be imposed on the subject petition and agreements negotiated between the parties. Further discussions will include considerations surrounding the adequacy of existing public facilities, and the impact of the project on archaeological and historic resources, botanical resources, groundwater resources, and noise and air quality. These concerns will be addressed in OP's Testimony (*OP Exhibit 1*) before the State Land Use Commission for Docket No. A04-753.

DATED at Honolulu, Hawaii, this 19 day of September 2005.

OFFICE OF PLANNING
STATE OF HAWAII

Laura H. Thielen
Director
Office of Planning

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 19 A 9:39

Docket No. A04-753
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Position Statement was served upon the following by either hand delivery or depositing the same in the U.S. Postal Service.

BENJAMIN A. KUDO 2262-0
NAOMI U. KUWAYE 6648-0
Attorneys for Aina Nui Corporation
Imanaka, Kudo & Fujimoto
A Limited Liability Law Company
745 Fort Street Mall, 17th Floor
Honolulu, Hawaii 96813

AINA NUI CORPORATION
Petitioner
1001 Kamokila Boulevard, Suite 255
Kapolei, Hawaii 96707

STEPHANIE AVEIRO
Executive Director
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RODNEY HARAGA
Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

HENRY ENG
Director
Department of Planning and Permitting
City and County of Honolulu
650 S. King Street, 8th Floor
Honolulu, Hawaii 96813

CORPORATION COUNSEL
Department of the Corporation Counsel
City and County of Honolulu
530 South King Street
Honolulu, Hawaii 96813

PLANNING COMMISSION
Chair
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

DEPARTMENT OF THE NAVY
Commander Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

DATED at Honolulu, Hawaii, this 19 day of September, 2005.

LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 19 A 9:40

In the Matter of the Petition of	)	
	)	
AINA NUI CORPORATION	)	**DOCKET NO. A04-753**
	)	**Aina Nui Corporation**
To Amend the Agricultural Land Use District Boundary into the Urban Land Use District for Approximately 174.209 Acres in the Ewa District, Island of Oahu, Tax Map Key Nos. 9-1-14: 33 por. and 9-1-15: 04, and 20 por.	)	

STATEMENT OF POSITION OF THE OFFICE OF PLANNING IN SUPPORT OF THE PETITION

Recommendation

In accordance with Section 15-15-55 of the State Land Use Commission Rules, the Office of Planning (OP) recommends approval with conditions of the Petition by Aina Nui Corporation (Petitioner), to reclassify approximately 174.209 acres of land situated on the Island of Oahu, State of Hawaii, identified by tax map keys 9-1-14: 33por. and 9-1-15: 04, and 20por., from the State Land Use Agricultural District to the Urban District.

Description of the Property

The Petition Area is located within the Ewa District south of the Makaiwa Hills Urban District, makai of H-1 Freeway, and approximately 20 miles west of Downtown Honolulu. The Petition Area straddles the Oahu Railway and Land Company Railroad Right-of-Way (OR&L ROW), owned by the State of Hawaii. The Petition Area is bordered on the north by a 372.6-acre land area formerly known as Ko Olina Phase II that was reclassified from the State Land Use Agricultural District to the Urban District in 1991 (Land Use Commission (LUC) Docket A90-655). With the exception of the OR&L ROW, a quarrying and stockpiling operation by Hawaiian Cement, a small agricultural

operation by Aloun Farms, and a Coast Guard Range Light used to navigate entry into Kalaeloa Harbor, lands within the 174.209-acre Petition Area and 372.6-acre Urbanized Area (546.809 Project Area) are vacant and underutilized.

Proposed Use of the Property

Aina Nui Corporation proposes to consolidate the Petition Area (174.2 acres) with the adjacent 372.6-acre parcel to the north. The 372.6-acre land area (identified by tax map keys 9-1-15:18, and 4 por., 9-1-56: 11 por., and 12 por.) was reclassified to the State Land Use Urban District in 1991 for development of Phase II of the Ko Olina Resort by West Beach Estates (LUC Docket A90-655). Reclassification of the Petition Area and consolidation with the 372.6 parcel would define the Project Area for Kapolei West and facilitate development of the entire 546.8-acre parcel (Project Area) by Aina Nui Corporation according to the Kapolei West Master Plan.

OP's Testimony (*OP Exhibit 1*) will further discuss the impact the project may have on the area's resources, roadways, public services and facilities.

Major Concerns for Development Projects in the Ewa Plain

Traffic congestion, drainage and flooding, are among several areas of concern facing developments in the Ewa region. Without appropriate mitigation measures, scheduling of infrastructure improvements and coordination with appropriate State and County agencies, the level of service for public services and facilities within the region will continue to operate at below satisfactory levels.

Traffic

In 2001, a group of nine major Hawaii landowners and developers within the Ewa Region, including the State of Hawaii Housing and Community Development Corporation of Hawaii (HCDCH), worked with the State Department of Transportation (DOT) and the County Department of Transportation Services to develop the Ewa Highway Master Plan (EHMP). The EHMP was developed in order to determine the specific Ewa highway improvements needed to support future projected growth; and, to allocate the proportionate costs of these improvements between the State, City and developers. The developers and landowners participating in the Ewa highway plan and

identified as the Ewa Highways Master Plan Group (EHMPG), include Castle & Cooke Kunia Inc., Campbell Estate, Finance Realty Ltd., Gentry Homes Ltd., Haseko (Ewa) Inc., Ko Olina Development LLC, Land Use Research Foundation, Schuler Homes and the HCDCH.

The EMHP identifies six regional roadway project improvements that are needed to accommodate the projected growth in the area. These are:

- Construction of the North-South Road and Interchange
- Widening of Fort Weaver Road
- Widening of Fort Barrette Road
- Construction of a new Kapolei Interchange
- Completion of Kapolei Parkway
- Improvements to the existing Makakilo Interchange

In 2002, Ordinance 02-52 was passed by the Honolulu City Council which sets forth a regulatory scheme for the assessment and collection of impact fees on a pro-rata share basis "by landowners, developers, homebuilders, and others who directly contribute to expanding the population and increasing economic activity in the Ewa region through new land development activities." Revised Ordinances of Honolulu (ROH) Chapter 33A. (OP Exh. 7)

The Legislature passed an Act to permit the City and County of Honolulu to assess impact fees for State highway improvements (subject to the Director of DOT's consent), and to enable DOT to establish a Highway Development Special Fund to hold monies assessed as impact fees by the City and County of Honolulu as part of the EHMP. (HRS 264-121-127, OP Exh. 8) By law, these EHMP funds are to be encumbered for the capitol costs of State highway improvements within six (6) years of collection, or refunded to the contributing entity.

Several road improvements proposed within the region are underway, while others are still in the design stage. These include the Fort Weaver Widening Project from four to six lanes, and the North-South Road Project with an interim on-off ramp to and from Honolulu. DOT has emphasized the need to monitor each project's progress and growth within the overall development of the region, to ensure that the effects of both

local and regional impacts resulting from the proposed project, and the overall development of the Ewa region can be assessed and updated as new information is presented. ROH 33A-1.6(h) charges the County Director of Transportation Services, the County Director of Planning and Permitting and the State Director of the Department of Transportation to review and recommend revisions, as necessary, to the EHMP at least once every five (5) years.

The Petitioner's Traffic Impact Assessment Report (Appendix K) discusses impacts of the Project traffic with the Urbanized Area and recommends mitigation measures such as improvements to key intersections. The Petitioner should clarify and explain the commitments it will be making under the EHMP, and whether any additional commitments for on-site or off-site transportation infrastructure improvements will be made for the subject Kapolei West Expansion Area which is the subject of this Petition.

Drainage

The drainage pattern in this region flows from the Waianae mountain range above Makakilo. During intense rainstorms, low-lying parts of the Ewa Plain are subject to flooding and ponding. Large areas of the Project Area are unable to drain properly due to the berming effect created by the OR&L ROW, and an existing drainage ditch that is built-up above ground. Even without development of the Project Area, storm and surface water drainage from the Area have already affected Barbers Point harbor. The drainage systems proposed by the Petitioner should prevent and/or control further runoff and flooding into the harbor.

Water

Developments in the Ewa Plain have affected the region's available water resources. The region contains many industrial facilities and residential subdivisions that consume non-potable and potable water. According to the Ewa Development Plan, by 2020 an additional 35 million gallons per day (mgd) of potable water and 26 mgd of non-potable water will be needed to meet projected growth. The Commission on Water Resource Management recommended that the Petitioner provide a breakdown and identify the source for the potable and non-potable water for the proposed project.

Conclusion

This position statement does not attempt to include all concerns that may be of statewide interest, or conditions to be imposed on the subject petition and agreements negotiated between the parties. Further discussions will include considerations surrounding the adequacy of existing public facilities, and the impact of the project on archaeological and historic resources, botanical resources, groundwater resources, and noise and air quality. These concerns will be addressed in OP's Testimony (*OP Exhibit 1*) before the State Land Use Commission for Docket No. A04-753.

DATED at Honolulu, Hawaii, this 19 day of September 2005.

OFFICE OF PLANNING
STATE OF HAWAII

Laura H. Thielen
Director
Office of Planning

Docket No. A04-753
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Position Statement was served upon the following by either hand delivery or depositing the same in the U.S. Postal Service.

BENJAMIN A. KUDO 2262-0
NAOMI U. KUWAYE 6648-0
Attorneys for Aina Nui Corporation
Imanaka, Kudo & Fujimoto
A Limited Liability Law Company
745 Fort Street Mall, 17th Floor
Honolulu, Hawaii 96813

AINA NUI CORPORATION
Petitioner
1001 Kamokila Boulevard, Suite 255
Kapolei, Hawaii 96707

STEPHANIE AVEIRO
Executive Director
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RODNEY HARAGA
Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

HENRY ENG
Director
Department of Planning and Permitting
City and County of Honolulu
650 S. King Street, 8th Floor
Honolulu, Hawaii 96813

CORPORATION COUNSEL
Department of the Corporation Counsel
City and County of Honolulu
530 South King Street
Honolulu, Hawaii 96813

PLANNING COMMISSION
Chair
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

DEPARTMENT OF THE NAVY
Commander Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

DATED at Honolulu, Hawaii, this 19 day of September, 2005.

LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 19 A 9:40

In the Matter of the Petition of	)	
	)	
AINA NUI CORPORATION	)	**DOCKET NO. A04-753**
	)	**Aina Nui Corporation**
To Amend the Agricultural Land Use District Boundary into the Urban Land Use District for Approximately 174.209 Acres in the Ewa District, Island of Oahu, Tax Map Key Nos. 9-1-14: 33 por. and 9-1-15: 04, and 20 por.	)	

STATEMENT OF POSITION OF THE OFFICE OF PLANNING IN SUPPORT OF THE PETITION

Recommendation

In accordance with Section 15-15-55 of the State Land Use Commission Rules, the Office of Planning (OP) recommends approval with conditions of the Petition by Aina Nui Corporation (Petitioner), to reclassify approximately 174.209 acres of land situated on the Island of Oahu, State of Hawaii, identified by tax map keys 9-1-14: 33por. and 9-1-15: 04, and 20por., from the State Land Use Agricultural District to the Urban District.

Description of the Property

The Petition Area is located within the Ewa District south of the Makaiwa Hills Urban District, makai of H-1 Freeway, and approximately 20 miles west of Downtown Honolulu. The Petition Area straddles the Oahu Railway and Land Company Railroad Right-of-Way (OR&L ROW), owned by the State of Hawaii. The Petition Area is bordered on the north by a 372.6-acre land area formerly known as Ko Olina Phase II that was reclassified from the State Land Use Agricultural District to the Urban District in 1991 (Land Use Commission (LUC) Docket A90-655). With the exception of the OR&L ROW, a quarrying and stockpiling operation by Hawaiian Cement, a small agricultural

operation by Aloun Farms, and a Coast Guard Range Light used to navigate entry into Kalaeloa Harbor, lands within the 174.209-acre Petition Area and 372.6-acre Urbanized Area (546.809 Project Area) are vacant and underutilized.

Proposed Use of the Property

Aina Nui Corporation proposes to consolidate the Petition Area (174.2 acres) with the adjacent 372.6-acre parcel to the north. The 372.6-acre land area (identified by tax map keys 9-1-15:18, and 4 por., 9-1-56: 11 por., and 12 por.) was reclassified to the State Land Use Urban District in 1991 for development of Phase II of the Ko Olina Resort by West Beach Estates (LUC Docket A90-655). Reclassification of the Petition Area and consolidation with the 372.6 parcel would define the Project Area for Kapolei West and facilitate development of the entire 546.8-acre parcel (Project Area) by Aina Nui Corporation according to the Kapolei West Master Plan.

OP's Testimony (*OP Exhibit 1*) will further discuss the impact the project may have on the area's resources, roadways, public services and facilities.

Major Concerns for Development Projects in the Ewa Plain

Traffic congestion, drainage and flooding, are among several areas of concern facing developments in the Ewa region. Without appropriate mitigation measures, scheduling of infrastructure improvements and coordination with appropriate State and County agencies, the level of service for public services and facilities within the region will continue to operate at below satisfactory levels.

Traffic

In 2001, a group of nine major Hawaii landowners and developers within the Ewa Region, including the State of Hawaii Housing and Community Development Corporation of Hawaii (HCDCH), worked with the State Department of Transportation (DOT) and the County Department of Transportation Services to develop the Ewa Highway Master Plan (EHMP). The EHMP was developed in order to determine the specific Ewa highway improvements needed to support future projected growth; and, to allocate the proportionate costs of these improvements between the State, City and developers. The developers and landowners participating in the Ewa highway plan and

identified as the Ewa Highways Master Plan Group (EHMPG), include Castle & Cooke Kunia Inc., Campbell Estate, Finance Realty Ltd., Gentry Homes Ltd., Haseko (Ewa) Inc., Ko Olina Development LLC, Land Use Research Foundation, Schuler Homes and the HCDCH.

The EMHP identifies six regional roadway project improvements that are needed to accommodate the projected growth in the area. These are:

- Construction of the North-South Road and Interchange
- Widening of Fort Weaver Road
- Widening of Fort Barrette Road
- Construction of a new Kapolei Interchange
- Completion of Kapolei Parkway
- Improvements to the existing Makakilo Interchange

In 2002, Ordinance 02-52 was passed by the Honolulu City Council which sets forth a regulatory scheme for the assessment and collection of impact fees on a pro-rata share basis "by landowners, developers, homebuilders, and others who directly contribute to expanding the population and increasing economic activity in the Ewa region through new land development activities." Revised Ordinances of Honolulu (ROH) Chapter 33A. (OP Exh. 7)

The Legislature passed an Act to permit the City and County of Honolulu to assess impact fees for State highway improvements (subject to the Director of DOT's consent), and to enable DOT to establish a Highway Development Special Fund to hold monies assessed as impact fees by the City and County of Honolulu as part of the EHMP. (HRS 264-121-127, OP Exh. 8) By law, these EHMP funds are to be encumbered for the capitol costs of State highway improvements within six (6) years of collection, or refunded to the contributing entity.

Several road improvements proposed within the region are underway, while others are still in the design stage. These include the Fort Weaver Widening Project from four to six lanes, and the North-South Road Project with an interim on-off ramp to and from Honolulu. DOT has emphasized the need to monitor each project's progress and growth within the overall development of the region, to ensure that the effects of both

local and regional impacts resulting from the proposed project, and the overall development of the Ewa region can be assessed and updated as new information is presented. ROH 33A-1.6(h) charges the County Director of Transportation Services, the County Director of Planning and Permitting and the State Director of the Department of Transportation to review and recommend revisions, as necessary, to the EHMP at least once every five (5) years.

The Petitioner's Traffic Impact Assessment Report (Appendix K) discusses impacts of the Project traffic with the Urbanized Area and recommends mitigation measures such as improvements to key intersections. The Petitioner should clarify and explain the commitments it will be making under the EHMP, and whether any additional commitments for on-site or off-site transportation infrastructure improvements will be made for the subject Kapolei West Expansion Area which is the subject of this Petition.

Drainage

The drainage pattern in this region flows from the Waianae mountain range above Makakilo. During intense rainstorms, low-lying parts of the Ewa Plain are subject to flooding and ponding. Large areas of the Project Area are unable to drain properly due to the berming effect created by the OR&L ROW, and an existing drainage ditch that is built-up above ground. Even without development of the Project Area, storm and surface water drainage from the Area have already affected Barbers Point harbor. The drainage systems proposed by the Petitioner should prevent and/or control further runoff and flooding into the harbor.

Water

Developments in the Ewa Plain have affected the region's available water resources. The region contains many industrial facilities and residential subdivisions that consume non-potable and potable water. According to the Ewa Development Plan, by 2020 an additional 35 million gallons per day (mgd) of potable water and 26 mgd of non-potable water will be needed to meet projected growth. The Commission on Water Resource Management recommended that the Petitioner provide a breakdown and identify the source for the potable and non-potable water for the proposed project.

Conclusion

This position statement does not attempt to include all concerns that may be of statewide interest, or conditions to be imposed on the subject petition and agreements negotiated between the parties. Further discussions will include considerations surrounding the adequacy of existing public facilities, and the impact of the project on archaeological and historic resources, botanical resources, groundwater resources, and noise and air quality. These concerns will be addressed in OP's Testimony (*OP Exhibit 1*) before the State Land Use Commission for Docket No. A04-753.

DATED at Honolulu, Hawaii, this 19 day of September 2005.

OFFICE OF PLANNING
STATE OF HAWAII

Laura H. Thielen
Director
Office of Planning

Docket No. A04-753
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Position Statement was served upon the following by either hand delivery or depositing the same in the U.S. Postal Service.

BENJAMIN A. KUDO 2262-0
NAOMI U. KUWAYE 6648-0
Attorneys for Aina Nui Corporation
Imanaka, Kudo & Fujimoto
A Limited Liability Law Company
745 Fort Street Mall, 17th Floor
Honolulu, Hawaii 96813

AINA NUI CORPORATION
Petitioner
1001 Kamokila Boulevard, Suite 255
Kapolei, Hawaii 96707

STEPHANIE AVEIRO
Executive Director
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RODNEY HARAGA
Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

HENRY ENG
Director
Department of Planning and Permitting
City and County of Honolulu
650 S. King Street, 8th Floor
Honolulu, Hawaii 96813

CORPORATION COUNSEL
Department of the Corporation Counsel
City and County of Honolulu
530 South King Street
Honolulu, Hawaii 96813

PLANNING COMMISSION
Chair
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

DEPARTMENT OF THE NAVY
Commander Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

DATED at Honolulu, Hawaii, this 19 day of September, 2005.

LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

original

ORIGINAL

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4:53

BEFORE THE LAND USE COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Petition of	)	
	)	
AINA NUI CORPORATION	)	DOCKET NO. A04-753
	)	Aina Nui Corporation
To Amend the Agricultural Land Use District Boundary into the Urban Land Use District for Approximately 174.209 Acres in the Ewa District, Island of Oahu, Tax Map Key Nos. 9-1-14: 33 por. and 9-1-15: 04, and 20 por.	)	

TESTIMONY OF THE OFFICE OF PLANNING

The Office of Planning (hereinafter referred to as "OP") recommends approval with conditions for the Petition by Aina Nui Corporation, (Petitioner), to reclassify approximately 174.209 acres of land comprised of three parcels situated in the Ewa District, Island of Oahu, and identified by Tax Map Key Numbers 3-9-1-14: 33 por. and 9-1-15: 04, and 20 por. from the State Agricultural District to the Urban District *(OP Exhibit 2).*

OP's testimony is based on the following review and analysis of information provided in the Petition, Petitioner's Final Environmental Impact Statement (FEIS), and comments received from Federal, State, and County agencies to date.

GENERAL INFORMATION

The Petitioner, Aina Nui Corporation, a Hawai`i corporation and agent for The Estate of James Campbell (Campbell Estate) whose principal place of business and mailing address is 1001 Kamokila Boulevard, Suite 255, Kapolei, Hawaii 96707 has filed a Petition to reclassify approximately 174.09 acres of land at Kapolei from the State Agricultural District to the Urban District. The Petition Area straddles the Oahu Railway and Land Company Railroad Right of Way (OR&LROW). Aina Nui Corporation is the fee simple owner of the portion of the Petition Area above the OR&LROW. Campbell Estate is the fee simple owner of the portion of the Petition Area below the OR&LROW (identified by TMKs 9-1-14: 33 por. and 9-1-15: and 20 por.) and is currently in the process of transferring that portion to the Petitioner. Petitioner's

OP
Exhibit No. 1

Exhibit 9 is a Letter of Authorization from Campbell Estate authorizing Aina Nui Corporation to include the Campbell Estate owned portion in the petition to reclassify the subject property from the State Land Use Agricultural District to the Urban District.

North of the Petition Area is a 372.6 acre parcel identified by tax map keys 9-1-15:18, and 4 por., and 9-1-56:11 por., and 12 por. The parcel was reclassified from the Agricultural District to the Urban District by the Land Use Commission (LUC) for development of Phase II of the Ko Olina Resort Project by West Beach Estates (LUC Docket A90-655) (*Petitioner's Exhibit* 5). In 2000, Seaside at Kapolei, LLC acquired the option to purchase the parcel from the Estate of James Campbell and relinquished its development rights for 48.8 acres to the Estate of James Campbell. In 2003 Seaside at Kapolei, LLC relinquished its development option to the Estate. The Estate then transferred the 372.6 parcel to Aina Nui Corporation, an affiliate of the Estate of James Campbell.

DESCRIPTION OF THE PROPERTY

The Petition Area is within the State Land Use Agricultural District and within a region designated for urban development within the City and County of Honolulu's Ewa Development Plan.

The Project Area consisting of the Petition Area (174.209 acres) and the adjacent urbanized area to the north (372.6 acres) is located approximately 20 miles west of Downtown Honolulu. As stated previously, the Petition straddles the Oahu Railway and Land Company Railroad Right of Way (OR&L ROW). The portion north of the OR&L ROW and the southeast portion below the OR&LROW are zoned AG-1 (Restricted Agriculture) by the City and County of Honolulu. The remaining portion is zoned AG-2 (General Agriculture).

Soils

Soils within the Petition Area (174.209 acres) portion of the Project Area are classified as coral outcrop (85 percent), Mamala stony silty clay loam (10%), and Ewa silty clay loam (5%). The remainder of the Project Area (373 acres) consists of Honouliuli clay (37 %), Lualualei stony clays (30%), Ewa silty clay (17%), with pockets of coral outcrop, keaau stony clay, Lualualei clay, Lualualei extremely stony clay, Mamala stony silty clay loam, stony steep land and Waialua stony clay, scattered throughout the Project Area comprising approximately 16%.

Drainage

The drainage pattern in this region flows from the Waianae mountain range above Makakilo. Three natural drainage basins (Makaiwa Gulch, Palailai Gulch, Awanui Gulch) drain the Project Area. During intense rainstorms, low-lying parts of the Ewa Plain are subject to flooding. Large areas of the Project Area are unable to drain properly due to the berming effect created by the OR&L ROW, and an existing drainage ditch that is built-up above ground. According to the Petitioner, existing drainage patterns will be retained and incorporated into the golf course, which will serve as a drainage basin.

Flood Zone

There are no wetlands or perennial and intermittent streams in the Project Area. The Project Area is located within an area designated on the Flood Insurance Rate Maps as Zone D. The Zone D designation is used for areas where there are possible, but undetermined flood hazards. In areas designated as Zone D, no analysis of flood hazards have been conducted. The Petition is outside of the tsunami inundation zone.

Existing & Proposed Adjacent Land Uses

Previous uses of the Petition Area included sugarcane cultivation by the Ewa Plantation Company and the Oahu sugar Plantation, livestock grazing, and coral pit quarry operations. The OR&L ROW is currently used by the Hawaiian Railway society, and quarrying and stockpiling operations currently occur within and adjacent to the Petition Area's southern boundary. With the exception of the OR&L ROW, a quarrying stockpiling operation, a small agricultural operation by Aloun Farms within the southeast corner of the Petition Area, and a Coast Guard Range Light used to navigate entry into the Harbor within the southernmost tip of the Petition Area, lands within the Petition Area and Urbanized Area are vacant.

PETITIONER'S PROPOSED USE OF THE PROPERTY

Reclassification of the Petition Area would enable Aina Nui Corporation to develop the total 547-acre Project Area for Kapolei West according to the identified land uses within the

Kapolei West Master Plan. Kapolei West will include a golf course, residential, and commercial uses, parks and a middle school.

Petition Area

The uses and acreage within the Petition Area will be developed as follows: 1,180 low and medium density residential units (86.5 acres), parks (17.1 acres), circulation and open space (10.7 acres) and a portion of the golf course (59.9 acres).

Urban Area

The Urban portion of the Project Area will contain the greater part of the golf course (152.8 acres), neighborhood and regional commercial areas (25.2 acres), mixed use/residential and transit center site (15.8 acres), parks (7.7 acres) roadways, pedestrian and bike paths, open space areas (36.3 acres), middle school (15.5 acres), and approximately 1,190 low and medium density residential units (119.3 acres). (*See Petitioner's EIS, pp. 2-6 to 2-13*) for the distribution of land uses within the Project Area and a description of all the elements in the Master Plan).

The Petitioner intends to implement construction for the West Kapolei Project within a 15-year period. Construction in the Petition Area is anticipated to begin in 2008.

KEY ISSUES IDENTIFIED BY THE LAND USE COMMISSION

At a pre-hearing conference on September 19, 2005, the Land Use Commission staff identified several issues of concern to the Commission, including transportation, affordable housing and schools. OP has also identified agriculture and water as key issues of state concern. Accordingly, OP's testimony will address these five matters out of order, with the remainder of the standard information provided in the traditional order.

1. AGRICULTURAL LANDS

OP's position is that this petition seeks to reclassify lands in the area which has been identified and planned for urban growth on Oahu, and that the county has identified and planned to preserve other areas on Oahu for agricultural use.

EVOLUTION OF THE DESIGNATION OF THE EWA REGION AS THE LOCATION OF OAHU'S SECOND CITY

The Estate of James Campbell

The idea for locating Oahu's "second city" at Kapolei began to evolve more than 50 years ago when much of the region was still in sugarcane cultivation. At that time, the Estate of James Campbell owned approximately 41,000 acres on Oahu, with most of the Estate's acreage located in Ewa Plain. When the sugar industry began to fade in the late seventies, the Trustees for Campbell Estate saw an opportunity to support development of the Ewa region as an area to direct growth pressures away from urban Honolulu. The Estate set aside approximately 890 acres to develop the Estate's vision for Ewa as a place where residential, commercial, recreational and business ventures would prosper and create jobs. According to the Estate's 1990 Annual Report, that vision required a "solution to Oahu's pressing need for a self contained 'second city' where residents could live work and play."

General Plan,City and County of Honolulu

Planning for a second urban area on Oahu began in 1955. The City and County of Honolulu developed the first master plan for approximately 32,000 acres on the Ewa Plain. By the early seventies the City and County of Honolulu had begun directing new developments to the Ewa plain through the General Plan revision program. In 1989, the City Council passed a resolution designating Kapolei, as the second urban center for Oahu. Approximately 43,000 people lived in the Kapolei area by the time the Estate broke ground on the city of Kapolei in 1990. The 1992 General Plan outlined the objectives and policies for Honolulu's future development, and established basic growth policies for Oahu, which included the development of the secondary urban center at Kapolei and the Ewa and Central Oahu urban-fringe areas.

Ewa Development Plan.

Development on the Ewa Plain is guided by the City and County's Ewa Development Plan. The Ewa Region is one of eight planning areas on Oahu with a Development Plan to implement the objectives and policies of the General Plan, and to guide the long-range land use and infrastructure planning for the area.

According to the Development Plan, the Ewa region is to be developed as a secondary Urban Center that will provide a wide range of jobs in Ko Olina, Ewa Marina, the industrial

parks at Kalaeloa, Barbers Point Deep Draft Harbor, and in the offices and retail centers located at the City of Kapolei and east Kapolei community and neighborhoods. *(OP Exhibit 3).*

The Urban Growth Boundary

The vision for Ewa's future includes designation of an Urban Growth Boundary (UGB) to preserve prime agricultural lands. By identifying areas for urban growth, the Ewa Development Plan further protects the highest value prime agricultural lands in Ewa from urban development through designation of the UGB. These high value lands are located in two areas: lands mauka of H-1 Freeway and on the Waianae side of Kunia Road, and lands in the Blast Zone of the West Loch Naval Magazine, and have been rated as potentially among the most productive lands for diversified agriculture in the State. *(OP Exhibit 3, 3a & 3b)*

According to the Ewa Development Plan, the UGB was drawn to give long-range protection from urbanization for over 3,000 acres of prime agricultural land and for preservation of open space, while providing adequate land for urban development in Ewa for the future.

The UGB contains urban growth within a boundary along Kunia Road and within the West Loch Naval Magazine Blast Zone for diversified agriculture. The UBG Preserves prime agricultural lands above H-1 and on the Waianae side of Kunia road for use in diversified agriculture, to help retain open space and views, and to support economic diversification. (OP Exhibit 3a & 3b)

The Petition Area is located well within the City and County of Honolulu's UGB, west of the master-planned City of Kapolei, and areas proposed to develop the University of Hawai`i at West Oahu and residential and commercial uses for East Kapolei. According to the Ewa Development Plan, the Petition Area is located within an area designated for low, medium and high residential development and golf courses. (OP Exhibit 3b)

On April 7, 1994, the new planned city of Kapolei was officially opened on the 890 acres of former sugar cane land set aside by the Estate. Oahu's "Second City", located between Makakilo, Kalaeloa, and Ewa Beach, is planned to accommodate approximately 7 million sq. ft. of office and retail space. When completed it will compete with downtown Honolulu's 8 million sq. ft. The city of Kapolei includes the Kapolei Business Park, an industrial park for light manufacturing, wholesalers, warehouses, and distribution companies. Other projects completed include the Kapolei Shopping Center, the State Office Building 1, City and County of Honolulu Office Building, Kapolei Regional Park, the Hawaiian Waters Adventure Park, a 16-screen

entertainment complex. In addition, downtown Kapolei includes offices for some of the major banks in Hawaii, a private school, childcare center, an office complex, a state library facility, and State and County offices.

East of the Petition Area and the City of Kapolei, the University of Hawaii will develop approximately 500.327 acres of land within the State Land Use Urban District located makai of the H-1 Freeway. The land area is bounded by Farrington Highway to the north, Kapolei Golf Course on the west, Kapolei Parkway on the south, the proposed alignment for the North-South Road, and Phase I and Phase II of the East Kapolei residential development to the east. The University of Hawaii West Oahu Campus (UHWOC) is a portion of a 1,300-acre land area that was reclassified from the State Land Use Agricultural District to the Urban District. According to the Petitioner (Housing and Community Development Corporation of Hawaii), the purpose of the reclassification was to establish a land bank from which to develop a master planned community of land uses that would generate income to support the UHWOC. At that time, the UHWOC was to be located mauka of the H-1 Freeway on approximately $991^{\pm}$ acres originally designated by the Board of Regents in 1996 for the West Oahu Campus.

The land uses envisioned for the land bank included:

- A mix of single-family, multi-family, commercial, public facility (i.e. school);
- A sports complex to provide a venue for recreational activities and economic benefits to the State;
- Open space, recreational land uses within walking distance of each other and future adjoining land uses; and
- Provision of two hundred (200) acres to the Department of Hawaiian Home Lands.

Some of the major existing, ongoing and planned residential development projects within the region include:

- **Ko Olina Resort and Marina.** The resort is west and adjacent to the Project Area. The Ko Olina Resort & Marina is a master-planned, resort community on 642 acres west of the Project Area. The Resort includes a mix of single-family homes, and townhouses, an 18-hole golf course, a 43-acre marina with 270 full-service slips. Plans are underway for the construction of more hotel rooms, single, multifamily and timeshare units, an aquarium, commercial center, new hotel and timeshare complex. Two million square feet

(msf) of residential uses and approximately 1.8 msf of commercial, office, retail, civic and mixed used residential are planned for construction over the next 10 years.

- **Honokai Hale and Nanakai Gardens.** Two residential communities adjacent to the Project Area's northern boundary.

- **The Kalaeloa Community Development District** (KCDD) Kalaeloa is composed of about 3,700 acres of land including approximately 1,052 acres of Navy-retained land and approximately 2,646 acres for conveyance to various federal, state and City and County agencies. KCDD does not have a formal plan for its reuse. The Navy is nearing completion of a $1.8 million study to determine whether it could base an aircraft carrier and its air wing in Hawaii. Kalaeloa could be a home for the aircraft. The Marine Corps Base Hawaii, Wheeler Army Airfield, as well as the Pacific Missile Range Facility on Kauai are also being considered as possible areas to host the air wing.

- **The Hawaii Community Development Authority (HCDA)** updated a redevelopment plan in August 2005 that could produce 6,500 homes, new schools, a 7,000-job business district and mass transit depot over 20 years.

- **The Urban Center of Kapolei**, consisting of approximately 32,000 acres, planned to become Oahu's "second city". The Kapolei master plan encompasses residential communities, office/commercial buildings, a civic center, heavy and light industrial park, a deep-draft commercial harbor, a resort and several golf courses, medical facilities, park, schools and other public facilities.

- **Parcel B.** The Department of Hawaiian Home Lands (DHHL) proposes to develop approximately 92.1 acres of land adjacent to the University Parcel within the State Land Use Urban District identified within the East Kapolei Development Master Plan as Parcel B. Development of the 92.1-acre site includes approximately 67.6 acres for 400 single-family lots, 9.3 acres for a building with 40,000 square feet of office space for approximately 150 DHHL employees, 10.7 acres for a community center to be developed and operated by the Salvation Army, and approximately 4.5 acres for a park.

- **UH West Oahu Campus.** The University of Hawaii has developed two Alternatives for its West Oahu campus site – a Residential/Commercial alternative and a Campus Expansion Alternative. Each alternative provides acreage to develop a campus for approximately 1,520 students, a University Village that will include a mix of residential units and commercial space, and areas for an elementary school, parks, commercial uses, and open-space/retention basins.

- **The Villages of Kapolei**. The Villages are spread over approximately 888 acres. The Villages of Kapolei are eight (8) privately developed residential villages, supporting three schools, a senior housing center, a golf course, neighborhood parks and two recreation centers. Already completed are Village One, Kumu Iki; Village Three, Malanai; Village Four, Kekuilani, Village Two, Aeloa, Village Five, Iwalani, Village Six, Malu'ohai and Village Seven, Kapolei Kai. Soon to be constructed, the eighth Village, Kaupe'a, will have 326 homes. Additional infill projects are also yet to be constructed. Approximately 5000 units are planned.

- **Gentry Homes.** The 1,000-acre master planned community, consisting of approximately 7,200 homes. A final phase of development will add another 1,865 residential units.
- **Ocean Pointe.** The 1,100-acre master-planned residential development is a 15- to 20-year project that will include Ewa Marina and more than 4,800 residential units. When the development is completed, it will include commercial buildings, retail and office space, neighborhood parks, and a marina that will be the largest in the state with approximately 1000 slips. The project's first two phases include approximately 1,400 homes.
- **West Loch Estates**. This development by the City's Department of Housing and Community Development is located on the shores of Pearl Harbor, northeast of the Ewa by Gentry project and consists of 1,599 homes.
- **East Kapolei.** This development will accommodate approximately 8,000 residential units over approximately 750 acres. The Development Plan for the Kapolei Region plans for up to 9,300 residential units for the East Kapolei Area.
- **Makakilo**. The community will accommodate approximately 2,330 residential units over approximately 317 acres of fill-in areas.
- **Makaiwa Hills.** This future projected growth area within the Ewa region will have the potential to accommodate approximately 4000 residential units on approximately 1,623 acres. (*OP Exhibit 3*)

2. WATER

Potable and Non-Potable Water Demand for Ewa Region

The Ewa Development plan states that an additional 35 million gallons per day (mgd) of potable water will be needed in Ewa by 2020 to meet projected growth in residential and commercial demand.

The Board of Water Supply (BWS) provides potable water to the Ewa/Kapolei region from wells located in Waipahu. The source for these wells (Hoaeae, Kunia Wells, EP 15 and EP16) is the Waipahu-Waiawa Aquifer System Area. (*OP Exhibit 4b*) The BWS does not currently serve the Project Area (Petition Area and Urban parcel). The Board of Water Supply Kunia 1 and Hoaeae well fields in the Waipahu-Waiawa Aquifer System Area provide averages of 4.8 and 6.6 mgd respectively.

The demand for non-potable water for existing and new urban irrigation and other urban purposes is estimated to be approximately 26 mgd. Meeting this demand will require reallocation of water within the island-wide system, the possible development of new sources, and the use of reclaimed water from the Honouliuli Wastewater Treatment Plant.

Water Demand for Project Area (Est.)

Using the Board of Water supply formula of 400 gallons per day per unit for the 255.75 multi-family low-rise residential units, the projected potable water use for the Project Area is 1,023,000 gpd: 461,600 gpd for the Petition Area and 486,400 for the urban area. Water demand based on the BWS formula of 3,000 gpd/acre for the 25-acre commercial area planned within the Urban Area is projected to be 75,000 gpd.

The Commission on Water Resource Management recommended that the Petitioner provide a breakdown and identify the source for the potable and non-potable demands for the proposed project.

Groundwater and Surface Water Resources

A report by the Commission on Water Resource Management (CWRM) *Reevaluation of the Ground-Water Resources and Sustainable Yield of the Ewa Caprock Aquifer (Glenn R. Bauer, 1996)* describes Groundwater in the Ewa Plain as consisting of a freshwater lens overlying a brackish zone transitioning through volcanic rock to a saltwater body. Near the coast, the flow is impeded by a wedge of caprock that overlies the volcanic rock.

Groundwater in the Project Area is non-potable and brackish, but suitable to use for golf course and landscape irrigation. The Project Area is within the Ewa Caprock and Pearl Harbor Ground Water Management Areas. The Project Area straddles both the Ewa-Kunia and Malakole Aquifer System Areas. Approximately 90% of the Petition Area overlies the caprock limestone aquifer in the Malakole Aquifer System Area, and approximately 75% of the urban area overlies the Ewa-Kunia Aquifer System Area. (*OP Exhibits 4a and 4b*)

Awanui Gulch, Palailai Gulch, and an unnamed gulch serve as natural drainage ways through the Project Area. Stream flow from these gulches is minimal or non- existent.

The Ewa Kunia Aquifer System Area has a sustainable yield of 16.0 million gallons per day (mgd). From the 16 mgd, 15.457 mgd has been allocated by CWRM leaving 543,000 gallons of unallocated supply. The allocated portion includes 957,000 gallons per day (gpd) to Aina Nui, sufficient to maintain a 100 to 200-acre golf course. (*OP Exhibits 4a & 4b*)

Ground water from the Waipahu-Wahiawa Aquifer System Area also serves the Kapolei-Ewa region. The sustainable yield for the Waipahu-Wahiawa Aquifer System Area is 104 mgd

of which 82.91 mgd have been allocated, leaving 21.09 mgd of unallocated supply. (*OP Exhibits 4a & 4b*)

According to the EIS, the available supply from both the Ewa-Kunia (543,000 gallons) and Waipahu-Wahiawa Aquifer (21,090,000 gallons) System Areas will be sufficient to support the water needs for the Kapolei West Expansion Area (Petition Area). Together, the unallocated portions from the Ewa-Kunia and Waipahu Aquifer System Areas constitute 21,633,000 gallons that could be used to support development in the Petition Area. The CWRM regulates ground water withdrawn from Ground Water Management Areas. However, the CWRM commented that although the BWS has the authority to allocate the use of water from their system within the limits approved by the CWRM for municipal purposes, the Petitioner should not assume that any unused municipal allocation would be available for the Petition Area. (*OP Exhibits 4a and 4b*). (EP 15,16, with an allocation of 12.154 mgd was transferred from The Estate of James Campbell to the BWS and we understand that there is an agreement in place for the water from EP 15,16 to provide for future urban developments on Campbell lands.)

More recent water studies completed by Mink and Yuen in March 2005 show water requirements for the project area based on the Petitioner's proposal to provide a dual water system. The non-potable water would be used to irrigate the park and golf course area purposes. According to the EIS, non-potable water will be available from the BWS through construction of a non-potable water line that would connect the City of Kapolei systems to existing tanks above Farrington Highway. The following table is based on information provided in the Petitioner EIS pages 6-26 to 6-29. It was prepared to better illustrate the non-potable and potable water use and distribution within the Urban Area and Petition Area (Project Area).

OP's Breakdown of Petitioner's Proposed Water Use Between Urban Area & Petition Area*

	Non-Potable Water			Potable Water			
Uses	**Petition Area**	**Urban Area**	**Sub-total**	**Petition Area**	**Urban Area**	**Sub-total**	**Total Water Use**
Golf Course	244,800	624,240	**869,000**				**869,000**
Open Space Parks	69,360	32,640	**102,000**				**102,000**
Domestic				469,880	772,486	**1,242,366**	**1,242,366**
Commercial					75,000	**75,000**	**75,000**
Total	314,160	656,880	**971,000**	**469,880**	**847,486**	**1,317,366**	**2,288,366**

***Based on information provided on pages 6-26 through 6-28 of the Petitioner's FEIS**

Potable Water Source

Total potable water demand for the Project Area is estimated at 1,242,366 gpd, or 1.24 mgd (0.77mgd for the Urban Area and 0.47 mgd for the Petition Area The existing potable water system serving the adjacent areas would be used and would be extended to serve the Urban Area and Petition Area via connection of the main distribution lines now serving the region. Further, if required, additional storage would be coordinated with BWS.

Non-potable Water Source

A well pumping station identified as Pump 10 containing several wells numbered 2006-01 to 11 is located within the Project Area. The station is located near the western boundary of the project area west of the Project's proposed Road F (*OP Exhibit 4b and Petitioner's Development Concept Plan*). Well No. 2006-12 is located outside of the Project south of Farrington Highway and not included with the battery of wells with Pump 10 as indicated in the Petitioner's DEIS. (*OP Exhibit 4b*)

The project's non-potable water may come from Pump 10 or reclaimed wastewater from the Board of Water Supply. Pump 10 is permitted for agricultural use only. The Petitioner has an allocation of 957,000 gpd from Pump 10. A water use permit modification would be required to change the permitted use from agriculture to non-agricultural purposes (i.e. golf courses and parks).

The total average daily demand for non-potable water to irrigate the golf course and park areas proposed for the Project Area is 971,040 gpd or approximately 1 mgd (Petition Area golf course and park areas would require 314,160 gpd and Urban Area golf course and park areas 656,880 mgd). The project would require a storage tank capable of storing 1mgd.

Additional Future Water Sources: Kalaeloa Sea Water Desalination Facility

The Honolulu Board of Water Supply will contract to build Hawaii's first major desalination facility. The proposed 5 mgd desalination plant - expandable to as much as 35 mgd will provide potable water for the Ewa area. Source water will be provided through a network of three aquifer wells on the site.

3. AFFORDABLE HOUSING

General Housing Demand on Oahu

According to the Department of Housing and Community Development Corporation of Hawaii, a 2003 Hawaii Housing Study projected that the City and County of Honolulu will require an additional approximately 15,600 housing units from 2005 to 2010, for households earning up to 80 percent of the Area median income; and an additional 11,500 housing units for households earning from 81 to 140% of the area median income.

According to the Petitioner's market study, if no more land areas on Oahu were approved for residential development, Oahu could have a shortage of about 37,400 primary resident housing units by 2020, or 56,600 units by 2025. With Ewa historically demonstrating a 55% share of Oahu's new housing market, the Ewa Development Planning Area is projected to experience a housing deficit of 9,520 units by 2010, or 20,570 units by 2020. Further, the demand for resort, second and retirement homes at golf communities outside of Waikiki is increasing due to the growing number of people in their home buying years, and investors looking for opportunities in stable locations like Hawaii.

Housing Proposed in the Project Area and Petition Area

Of the 2,370 total residential units planned for the Project Area, 1,150 would be in the Petition Area. Of these units, 510 could be generally oriented toward primary residents and 640 units generally oriented toward resort/second homebuyers. The 520 primary residential units proposed for the Petition Area and the 930 primary residential units proposed for the urban area would meet 7% of the housing shortage projected for the 2020 Ewa Development Planning Area. Similarly, the 1,450 primary residential units proposed for the Project Area could absorb

approximately 3.8% of Oahu's projected 2020 demand for 37,400 primary residential units. It is not stated within the EIS how many of these units will be within the affordable range. Currently the City and County requires the Developer to agree to a unilateral agreement of 30% affordable housing.

Prior LUC Affordable Housing Condition on Reclassification of Urbanized Area of Project

The affordable housing condition (Condition 1) applied to the Urbanized Area of the Project Area covered under LUC Docket A90-655 was amended in March 6, 1997. Condition 1 for LUC Docket A90-655 was revised to dispense with State affordable housing requirements, and to require compliance with the applicable City and County of Honolulu affordable Housing requirements. Prior to the amendment, the condition stated that the Petitioner make 30% of the housing units affordable for sale or lease to families within an income range of up to 120% of the medium income, and another 30% of the housing units affordable for sale or lease to families earning 140% of the medium income. The condition now reads:

> *Condition 1: Petitioner shall provide affordable housing opportunities for low to moderate income residents of the State of Hawai`i to the satisfaction of the City and County of Honolulu. The location and distribution of the affordable housing shall be under such terms as are mutually agreeable between the Petitioner and the City and County of Honolulu.*

The above applies only to the urbanized portion of the Project Area, which under current project master plans will have 1,190 residential units

Status of City and County of Honolulu's Affordable Housing Condition

Currently, developer's unilateral agreements with the City and County of Honolulu require developers to provide up to 30 per cent of their units as affordable housing. If the Petitioner abides by the County's "unilateral agreement policy", of the 2,370 residential units proposed for the project area, about 711 units should be affordable and thirty percent or 354 of the 1,180 residential units proposed for the Petition Area would be affordable.

4. TRANSPORTATION

General Transportation Information for Oahu

The provision of adequate transportation infrastructure to accommodate on-going and future development and to facilitate commute time within, out of and into the region remains an outstanding concern for the Ewa community. New roads, road improvements, and related infrastructure have not been able to keep pace with housing and commercial development in the

region. With or without build-out of West Kapolei, traffic congestion will remain a major concern within the Ewa Region.

According to a study conducted by Kaku and Associates for the Oahu Metropolitan Planning Organization, if nothing is done to improve Oahu's transportation by 2030, peak hour travel time for the average commuter is likely to increase by 30%. In the most congested areas – the Leeward Coast, Kapolei and the Ewa Plain areas, commuters could be spending more than 4 hours a day on the road. (*OP Exhibit 6a, & 6b*)

The results the study completed February 2005 by Kaku and Associates for the Oahu Metropolitan Planning Organization (OMPO) are presented in the report *Draft Analysis of Baseline Conditions for the 2030 Oahu Regional Transportation Plan* (ORTP). The ORTP is reviewed and revised every five years by OMPO. Additions/modifications to the highway and transit networks made by OMPO are used for the Year 2000 Travel Demand Forecasting Model for the Baseline Year 2030. The Kaku study summarizes the year 2000 and year 2030-land use and socioeconomic data used in OMPO's travel demand forecasting model, the projected increases in trip making and an analysis of projected network performance under 2030 baseline conditions. (*OP Exhibit 6b*)

Of the highway baseline projects added to the network and used in the study, three are within the Ewa region. They include the Fort Weaver Road Widening from 4 to 6 lanes (Aawa Drive to Geiger Road), the new North-South Road to include two northbound lanes and one southbound lane with a new interchange at H-3, and the Kamokila Boulevard Extension to Roosevelt Avenue. Transit baseline projects added within the Ewa Region to facilitate travel within the region included service between Kapolei Transit Center and Makakilo via Makakilo Drive (#414), and service between Kapolei Transit Center and Kalaeloa via Fort Barrette Road (#415).

Significant overall projections for Oahu from the study showed little growth from 2000 to 2030 in transit rider-ship during the AM and PM peak hours. Of the estimated 3,502,000 total daily resident person trips in 2030, 84% are projected to be in private automobiles, 5% are projected to be in public transit, and the remaining 11% of trips made by bicycle/walking.

The study further concluded that by 2030 Oahu peak-hour commuting time for the average commuter would increase by more that 30 percent. According to the study, a.m. peak

hour travel east for the Ewa screenline showed a projected average level of service (LOS) going from A in 2002 to F in 2030. The most congested screenline in 2030, during the p.m. peak hour travel west, is projected to be Ewa with the average LOS going from B in 2002 to F.

Department of Transportation Comments on the Petition

The Department of Transportation commented that the project proposed by Aina Nui is one of several developments underway or proposed for the area, and although individual review and assessments of traffic and roadways will be undertaken for each project, there remains a need to review the collective impact from all of these projects.

1. Kapolei Parkway which is planned as a major east-west corridor, connecting the eastern parts of Ewa with the City of Kapolei and employment areas to the west.

2. A new North-South Road which will link Kapolei Parkway with Farrington Highway and the H-1 Freeway and extend on mauka of the H-1 Freeway interchange to become part of Makakilo Drive.

3. Improvements to existing H-1 Freeway interchanges at Palailai, Makakilo, and Kunia.

4. New H-1 Freeway interchanges at Kapolei and Makaiwa Hills, and

5. Extension of Hanua Street parallel to Kalaeloa Boulevard to enhance truck access between the H-1 Freeway and Campbell Industrial Park.

The Kapolei West project will be subject to the impact fees for specific regional highway improvements designated under the Ewa Highway Master Plan.

DOT commented further that design of the Leeward Bikeway in the OR&L ROW between Ewa and Lualualei may begin within a year, and construction for the bikeway may begin in 2007. Since the OR&L ROW traverses the Petition Area, DOT has requested that the Petitioner/developer consider participating in improvements in and/or connecting to the Right of Way along common boundaries. Any work planned within the OR&L ROW will also require review by the Railroad Society and Historic Preservation Office.

Ewa Highway Master Plan & Impact Fee Agreement

A group of major Hawaii landowners and developers within the Ewa Region, as well as the State of Hawaii Housing and Community Development Corporation of Hawaii (HCDCH) worked with the State Department of Transportation to develop the Ewa Highway Master Plan (EHMP). Development of the Plan was part of a process to determine what Ewa highway

improvements will be needed, and how much of the costs each developer should pay. The developers and landowners participating in the Ewa highway plan and identified as the Ewa Highways Master Plan Group (EHMPG), include Castle & Cooke Kunia Inc., Campbell Estate, Finance Realty Ltd., Gentry Homes Ltd., Haseko (Ewa) Inc., Ko Olina Development LLC, Land Use Research Foundation, Schuler Homes and the State Housing & Community Development Corporation of Hawaii (HCDCH). Chapter 33A, Revised Ordinances of Honolulu, (Ord. 02-52) determines impact fees for traffic and roadway improvements in Ewa. *(OP Exhibit 7)*

The EHMP identifies six major highway projects that are needed to accommodate the projected growth in the area resulting from private development. They are as follows:

- Construction of the North-South Road and Interchange
- Widening of Fort Weaver Road
- Widening of Fort Barrette Road
- Construction of a new Kapolei Interchange
- Completion of Kapolei Parkway
- Improvements to the existing Makakilo Interchange

(*OP Exhibits 6a & 7*)

The EHMP was adopted into law by the City and County of Honolulu. In addition, the state legislature passed a law authorizing the City and County of Honolulu to assess, collect and transfer fees for improvements to the State public highways to the State Department of Transportation with the approval of its Director. The law requires a six-year review by the City and County Department of Planning and Permitting, with the input of the City Department of Transportation Services and State Department of Transportation to assess the needed transportation improvements, the level of fees collected, and to recommend any revisions.

North-South Road

The groundbreaking ceremonies for the North-South Road occurred February 9, 2005, but construction has not begun for the 2.2-mile North-South Road that will eventually connect Makakilo and Kalaeloa. The North-South Road will link Makakilo Drive on the north with an extended Kapolei Parkway on the south and provide Ewa residents a new H-1 freeway entrance ramp. The road is needed to help accommodate the increasing traffic resulting from new residential developments, government offices, businesses and schools. Phase I will create the first three lanes from Kapolei Parkway to the H-1 Freeway and the North-South Road Interchange. The target date for completion of Phase I is the end of 2008. Phase II will complete the road to its final six-lane configuration.

Fort Weaver Road Widening

The first phase of a five-year Fort Weaver Road widening project began July 2004. Two new lanes will be added and two bridges will be widened. The project will widen Fort Weaver Road from four lanes to six between Farrington Highway and West Loch Golf Course. The first $6.3 million phase of the construction project should have been completed in June 2005. This phase will include work between the Farrington Highway and Laulaunui Street. The second phase of the project between Laulaunui Street and Geiger Road will begin in 2005 with an anticipated completion date by 2008 and will cost about $20 million. The Fort Weaver widening was proposed to coincide with work on the first phase of the 2.2-mile North-South Road. The DOT hopes to complete both the Fort Weaver Road widening and interim Ewa North-South Road before the end of calendar 2008."

Fort Barrette Road Widening

Fort Barrette Road is a major north-south arterial that provides access to the H-1 Freeway and Farrington highway from the Villages of Kapolei, City of Kapolei and Kalaeloa. North of Farrington Highway, Fort Barrette Road becomes Makakilo Drive. Two new lanes will be added. DOT expects the design phase to begin by summer 2005 with a completion date anticipated by 2009.

HCDA sent a letter to DOT on April 15 requesting that DOT reconsider and revise the scope of the Fort Barrette Road Widening Project to include improvements to the intersection at Roosevelt Avenue. DOT has thus far maintained that the widening project will terminate on the mauka-side of the railroad tracks.

Makakilo Interchange

The plans for this interchange include an on-ramp from Makakilo Drive to the H-1 Freeway Waianae bound, and an off-ramp from H-1 Honolulu bound to Makakilo Drive. Campbell Estate is fronting the $5.3 million for this project and working with the State Department of Transportation to realign the ramps in a way that will reduce the number of new traffic lights required. Assuming that State and Federal approvals are received by year-end, construction could begin in 2006.

Kapolei Interchange

The design for this improvement includes new on- and off-ramps from the City of Kapolei to H-1 both Waianae and Honolulu bound.

Kapolei Parkway

New four-lane and two-lane roadways will be built for several sections of Kapolei Parkway in this City project. The completed portion of the Kapolei Parkway ends at the railroad crossing. Construction for portions of the Parkway will be developer driven and reliant on development schedules. For example, to implement the Department of Hawaiian Home Lands' Parcel B project, the extension of Kapolei Parkway from Kapolei Villages to the Parcel B access Road would be required. Engineering and off-site improvements for Parcel B are scheduled to begin May 2006 and continue to January 2007. Development of the project area (Kapolei West) will include a new segment of Kapolei Parkway connecting Aliinui Drive to the west and Kalaeloa Boulevard to the east. *(OP Exhibit 6a)*

Other Identified Regional Transportation Improvements

Other projects planned to facilitate projected traffic increases within the region include the Kamokila Boulevard Extension to Roosevelt Avenue, the Manawai Street and Kamaaha Avenue Extensions, the Hanua Street extension, and new transit lines.

Kamokila Boulevard Extension to Roosevelt Avenue

The project involves the extension of Kamokila Boulevard to Roosevelt Avenue to provide another alternative route through the City of Kapolei. The extension to Roosevelt Avenue will allow residents to drive from Ewa Beach to Campbell Industrial Park without going through the City of Kapolei. The Estate is donating the land, and more than $5 million of Federal, State and City funds has been appropriated for the project that is being coordinated by the City. The project is currently in the planning and design phase with the start of construction planned for 2005–2006.

When completed, Kamokila Boulevard, the Makakilo Interchange, and the design of the Kapolei Interchange will provide access into and out of the City of Kapolei via H1 Freeway for both east-and westbound traffic.

Manawai Street and Kamaaha Avenue Extensions

Planning and design of this project has been completed. This project will allow traffic to bypass Farrington Highway and provide an alternate route through the City of Kapolei.

Hanua Street Extension

The Hanua Street Extension, parallel to Kalaeloa Boulevard, is planned to bisect the property on the east side, will provide an additional access point to West Kapolei and enhance truck access between the H-1 Freeway and Campbell Industrial Park. (*OP Exhibit 6a*)

According to the Petitioner's TIAR, roadway improvements anticipated by 2014 that would most affect the project are the widening of Kalaeloa Boulevard to six lanes, Kapolei Interchange, completion of the Kapolei Parkway through the City of Kapolei between Fort Barrette Road and Kamokila Boulevard, and the Kamokila Boulevard Extension to Roosevelt Avenue.

Petitioner's Traffic Impact Analysis Report (TIAR)

The Petitioner's TIAR estimates that at full build-out, the Project Area would generate 1,881 vehicle trips during the AM peak hours and 2,835 vehicle trips during the PM peak hours. Vehicle trips generated from the Petition Area during the AM and PM peak hours would represent 24% and 18.5% respectively of the total trips to and from the Project Area.

The Petitioner analyzed conditions at 10 key intersections (*OP Exhibit 6c*). As the results in Table 16, p. 6-24 of the EIS illustrate, 6 of the 10 intersections analyzed (including the Regional Commercial Driveway intersection with Kapolei Boulevard) are proposed to have improvements that would mitigate 2020 project impacts at these intersections. Four intersections show improvements in Level of Service (LOS) from F or E to LOS D and C during AM peak hours, and four intersections show improvements from LOS F to LOS D and C for the PM peak hours. In urban areas, a LOS "D" is generally considered an acceptable LOS.

According to the Petitioner's Traffic Impact Assessment Report, development and occupancy of the Project Area is planned to begin in 2008, with the initial development progressing from the east and west towards the center. Development is expected to extend over 13 years, with full occupancy by the end of 2020. DOT commented on May 6, 2005 that the Petitioner's assumption that various roadway improvements will be in place by project opening is overly optimistic.

5. SCHOOLS

The Department of Education (DOE) has six schools in the Kapolei Public School Complex (four elementary, one intermediate, and one high school). Enrollment in Kapolei Schools is close to or exceeding facility capacity, although, with the exception of the high school, projected enrollment is anticipated to increase very slightly or decrease. The DOE's long-term enrollment projections are based upon anticipated population increases in the area, which, as the designated "Second City", includes the planned implementation of developments such as this petition. (*See Table below*).

Capacity & Enrollment Projections for Kapolei Area Schools 2004 – 2009

School	04-05 Enroll.	04-05 Capacity	Projected 2009 Enroll.	Amt. over/under Capacity 2004	2009
Makakilo Elementary	524	589	483	-65	-106
Mauka Lani Elementary	586	669	623	-83	-46
Barbers Point Elementary	510	659	426	-149	-233
Kapolei Elementary	1,187	1,200	1,246	-13	46
Kapolei Middle	1,699	1,435	1,715	264	280
Kapolei High	2,162	2,053	2,712	-109	659
Total	**6,668**	**6,605**	**7,205**	**-155**	**600**

Source: Hawaii State Department of Education, June 2005

Four (4) of these schools are within the service area of the Petition Area and include Barbers Point Elementary School, Kapolei Elementary School, Kapolei Middle School, and Kapolei High School. The Department of Education (DOE) commented that enrollments at Kapolei Middle and Kapolei High schools are currently higher than school facilities, and that enrollment at Kapolei Elementary is expected to exceed capacity in the next few years. As shown in the table above, of the four (4) Schools within the service area of the Project Area, three are projected to have student populations exceeding capacity (Kapolei Elementary, Kapolei Middle, and Kapolei High).

According to the EIS, residential units planned for the Petition Area would generate 261 students, and residential units planned for the Urban Area would generate 566 students.

New facilities currently planned to meet the growing demand in the Ewa region include an elementary school at the Mehana subdivision within the City of Kapolei, an elementary school at Ko Olina, and a new high school complex within the Ewa Plains area. The EIS concluded that these facilities would satisfy the long-term k-12 needs of the Ewa region.

DOE commented that there is a significant need for a middle school in the area. Consultation with DOE resulted in Petitioner agreements to increase the acreage to be set aside in the Petition Area for a Middle School from 10 acres to 15.5 acres.

The Office of Planning has been informed that the Petitioner and the DOE are entering into a stipulated agreement regarding the contributions the Petitioner will make towards the DOE K-12 schools in the area. OP's position is that when a party stipulates to a contribution the permitting authority, and OP, do not have to make an independent determination of the need or address the relationship between the permit and the contribution. Accordingly, OP has not requested information regarding the stipulated agreement or made an independent assessment of the need in the area. If the Land Use Commission is inclined to address this matter in detail, OP would request an opportunity to provide additional information, witnesses and testimony, and written statements.

IMPACTS UPON THE RESOURCES OF THE AREA

Kapolei West by Aina Nui Corporation is only one of several developments proposed for the Ewa Plain that will require careful examination of its impact at build-out on traffic, groundwater resources and recharge, wastewater treatment/disposal, drainage and flooding and public services and facilities. However, there remains a need to review the collective and cumulative impacts from all of the projects either underway or proposed within the Ewa Development Planning Area. Timing for development, and the placement and phasing of necessary infrastructure improvements to accommodate these developments requires evaluation and coordination with State and County programs.

Archaeological, Cultural and Historic Resources

Cultural Survey Hawaii concluded that the Project Area is not associated with traditional cultural practices for subsistence and religious purposes and does not provide access to other areas for practitioners to exercise those rights.

Cultural Survey Hawaii identified significant historical and archeological sites within the Petition Area. These include:

- The O'ahu Railroad and Land Company Railroad Right of Way (Site 50-80-12-9714)
- A fenced in burial preserve protecting a burial cave containing a human burial, rock piles and part of a canoe (Site 50-80-12-9633)

- A smaller protected burial preserve and large sinkhole with cultural remains indicating its use as a permanent Hawaiian habitation site ((50-80-12-9545).
- The Gilbert Trig Station A geographic marker for a train stop for a small plantation camp located near the marker in the early twentieth century (Site 50-80-12-6688).
- Two large sinkholes with cultural remains indicating its use for temporary habitation (50-80-12-4896).
- A site with an upright stone structure and wall enclosure that may have been used as a shrine (Site 50-80-12-6687).
- Temporary habitation site located near permanent site 9545 with limestone boulders and upright slabs. Test unit excavation yielded marine shell fragments charcoal deposits, avifaunal remains and a basalt hammer stone. (Site 80-50-9617)

According to the EIS, the OR&L ROW and other significant historic sites identified within the Petition Area would not be affected by the proposed development. The Master Plan for the Project Area and *OP Exhibit 6b* show that Roads G, F, and C will cross the OR&L ROW. Any plans for any road crossing of the OR&L ROW must be reviewed by the Railroad Society and the State Historic Preservation Division prior to review and approval by the Department of Transportation. Further, because the proposed subject development abuts the OR&L ROW, DOT requests that the developer consider participating in improvements in and/or connecting to the ROW along their common boundary.

Flora Fauna

An Avifaunal and feral mammal survey conducted by Phillip L. Brunner in August 1989 for the Kapolei Business-Industrial Park Final Environmental Statement included all of the Petition Area south of the OR&L ROW. Based on this study and other faunal surveys conducted for areas adjacent to the Project Area, it was determined that no endemic, rare or endangered species of wildlife or habitat and breeding areas exist within the Petition Area. However, in a May 2005 update of the Brunner study it was noted that the Hawaiian Owl, endemic to Hawai`i and listed as endangered, has been sighted in other areas of Kapolei. The Brunner update concluded that development of the Petition Area could result in loss of potential foraging and perhaps nesting habitat for the Hawaiian Owl.

Botanical surveys for the Petition Area north of the OR&L ROW (November 2003) and another for the Petition Area south of the OR&L ROW (April 2004) were conducted by Char and Associates. The surveys included a reconnaissance-level survey for the endangered red

ilima/ko'oloa'ula (Abutilon menziesii) and an intensive search for any remnants of the endangered Ewa Plains akoko (chamaesyce skottsbergii var. skottsbergii formerly var. kalaeloana). No akoko plants or any other threatened, rare or endangered species or species of concern were found during those surveys. Vegetation within the Petition Area is dominated by introduced or alien species.

The EIS concluded that the proposed development would not impact threatened or endangered species. The Brunner update (May 16, 2005) noted that development of the Petition Area could result in loss of potential foraging and perhaps nesting habitat for the Hawaiian Owl, and the EIS states that "mitigation is proposed". The document does not appear to present any mitigation measures to lessen the impact of the proposed development on potential owl habitat.

Agricultural Resources

According to the Petitioner's FEIS, only approximately 10 acres or 6% of the soils are rated prime. The Petitioner's lease with Aloun Farms is scheduled to terminate in 2007, before the anticipated start date for project construction. The area within the Petition Area that would be irrevocably converted to urban land uses is too small to make an overall difference on Oahu's Agriculture industry and the growth of diversified agriculture. Decreasing land supply is not the deterrent restricting the growth of diversified agriculture. According to the EIS, it is the demand for crops that can be grown profitably in Hawaii. The Department of Agriculture commented that reclassification of the Petition Area will not negatively affect the agricultural activities and resources of the area or DOA's programs, activities or plans.

The Project Area is within the Urban Growth Boundary that is drawn to protect 3,000 acres of prime agricultural land and for the preservation of open space. The boundary protects prime agricultural lands along Kunia Road from urban development, provides an incentive for landowners to give long-term leases to farmers, and forgoes consideration of proposals for urban uses outside of the Urban Growth Boundary. (*OP Exhibits 3a and 3b*)

Air and Aural Quality

The project Area is not within the airport noise contours of Honolulu International Airport, therefore the project will not require noise mitigation or avigation easements. However, the site is subject to over flights and future residents should be advised of these aircraft occurrences and disclosures made in all sales and lease documents. The impact of the airport at Kalaeloa should also be discussed.

The Department of Transportation (DOT) commented that the Petitioner's placement of a portion of the residential units next to the harbor would subject the residents and tenants to noise, odors, fumes and industrial security lights from the maritime and related activities associated with the harbor's industrial activities and in close proximity to a coral stockpile. The DOT believes locating commercial or industrial uses next to the harbor would be more compatible. Otherwise, mitigation measures should be incorporated into the ownership, use or lease agreement. Mitigation measures include:

- The use of special materials in the design of construction of improvements,
- Proper disclosure by the developer/seller to prospective buyer and users, and
- The provision of a covenant, to run with the land, that indemnifies the State of Hawaii of the effects of harbor operations on the project.

The DOT plans to develop a buffer zone around the coral stockpile. However, the Petitioner should provide additional mitigation measures to protect future occupants within the subdivision.

ADEQUACY OF PUBLIC SERVICES AND FACILITIES

Drainage Facilities

The drainage pattern over the Project Area flows from the Waianae mountain range above Makakilo within two watersheds. According to Petitioner's Appendix L, Civil Engineering Report, the western watershed (drained by Makaiwa Gulch) discharges through the Ko Olina Resort and the resort's existing golf course. The eastern watershed (drained by Palailai Gulch and Awanui Gulch) discharges through the West Kalaeloa area adjacent to Barbers Point Harbor.

A majority of the Petition Area (area above the ROW) falls within western watershed, which discharges as planned through the Ko Olina Resort through the existing golf course. According to the EIS, drainage from portions of the Urban Area and the Petition Area that are within the western watershed can be accommodated by the existing Ko Olina drainage system because the original hydrologic study for the resort included the increase in runoff for the Kapolei West Project Area.

The remainder of the Petition Area (below the ROW) and the eastern portion of the Urban Area discharges runoff through the West Kalaeloa area. Plans are underway to construct a major drainage channel as part of the development for West Kalaeloa. Until the regional

drainage channel, planned to capture runoff from mauka developments including Kapolei West and Makaiwa Hills, is constructed, interim detention basins will be incorporated into the phasing of the Kapolei West if development of the Project Area precedes construction of the drainage channel through West Kalaeloa.

The Department of Transportation commented that storm and surface water runoff from the area has already affected the harbor at Barbers Point. The drainage systems proposed by the Petitioner will need to prevent and/or control further runoff and flooding into the harbor. The Department of Transportation has requested that drainage plans for Kapolei West be submitted to the DOT for approval.

The Department of Environmental Services, City and County of Honolulu commented that in order to avoid having Kalaeloa Harbor added to the State's Clean Water Act Section 303(d) list of impaired water bodies, there is a need to master plan to for drainage and pollution control over the complete area. The plan would include mitigation of sediment deposition and other pollution to the harbor during construction and after full build-out.

After development, the peak runoff generated from the Project Area (urbanized area and Petition Area) is expected to increase by 18 percent from 562 cubic feet/second (cfs) and 680 cfs to 665 cfs and 805 cfs for the 10 and 50-year storms.

The Department of the Army commented that if changes in the development plan consider options for flood control that require the construction of structures to provide a surface connection to the ocean the Petitioner should consult with the Regulatory Branch of the U.S. Army Engineer.

The Land Use Planning Review Program of the Department of Health (DOH) coordinates departmental evaluations on mitigative measures for proposed developments statewide and provides standard comments to be used by developers in their preparation of environmental reports and assessments. DOH's standard comments from the Department's Clean Water Branch are attached as (*OP Exhibit 5*)

Sanitary Wastewater Treatment and Disposal

The Honouliuli wastewater treatment plant is located approximately four miles east of the Kapolei West Project Area. Currently, the liquid side of the treatment plant has a capacity to process approximately 38 million gallons per day (mgd) and the solid processing side of the

plant handles approximately 27–29 mgd. There is a plan to increase the solids handling capacity of the Honouliuli wastewater treatment plant.

Wastewater to be generated from the Project Area is estimated to be approximately 98 mgd. Wastewater generated from the Petition Area is estimated at approximately 30 mgd, or 31% of total generated from the Project Area. Sewer lines would need to be extended from the existing Ko Olina interceptor line to serve the proposed on-site wastewater collection system that will consist of gravity sewer lines and manholes within the project's roadways. The Ko Olina Relief Interceptor will run parallel to the West Interceptor from its beginning near Kalaeloa Boulevard to Fort Barrette Road. From Fort Barrette Road the line will be upsized to 54-inches and run parallel to the existing interceptor to Honouliuli Sewage Treatment Plant in Ewa Beach. The 54-inch line is referred in the Sewer Master Plan as the Kapolei Interceptor.

The Kapolei Interceptor Sewer Line is currently under construction and will provide sewer line connections for the permanent University of Hawaii West Oahu campus in Kapolei. With the construction of the Kapolei Interceptor Sewer, adequate conveyance capacity is available from the Project Area to the Honouliuli Waste water Treatment Plant.

The DOH concerns related to wastewater plans are that the plans must conform to applicable provisions of the Department of Health's Administrative Rules Chapter 11-62, "Wastewater Systems". DOH reserves the right to review the detailed wastewater plans for conformance to applicable rules.

Solid Waste Disposal

Municipal solid waste (residential and commercial) solid waste from the proposed development is estimated to be 22 tons per day. Solid waste generated by the residential components within the Project Area (Urbanized Area and Petition Area) will be collected by the City and County. A private company will service the commercial components proposed within the Urbanized Area.

The Office of Solid Waste Management (OSWM) recommends the development of a solid waste management plan that encompasses all project phases including demolition, construction, and occupation/operation of the completed project. Specific examples of elements that the plan should address include:

- The recycling of green-waste during clear and grub activities;
- Recycling construction and demolition wastes, if appropriate;
- The use of locally produced compost in landscaping;

- The use of recycled content building materials;
- The provision of recycling facilities in the design of the project.

The OSWM comments further require the developer to ensure that all solid waste generated during project construction is directed to a Department of Health permitted solid waste disposal or recycling facility. The developer should consider providing space/recycling bins in the development for recycling paper, glass, and food/wet waste to encourage the recycling of solid waste(s) generated by building occupants.

Finally, pursuant to Hawaii Revised Statutes Chapter 103D-407, all highway and road construction and improvement projects funded by the State or a county, or roadways that are to be accepted by the State or a county as public roads, shall utilize a minimum of ten per cent crushed glass aggregate as specified by the department of transportation in all base-course (treated or untreated) and sub-base when the glass is available to the quarry or contractor at a price no greater than that of the equivalent aggregate.

Police

The Project Area is located within District 8 for coverage from the Kapolei Police Station. District 8 services the communities of Ewa, Ewa Beach, Westloch, Barbers Point, Kapolei, Makakilo, Campbell Industrial Park, Honokai Hale, Ko Olina, Nanakuli, Maili, Waianae, Makaha, Makua and Kaena. Comments from the Police Department, City and County of Honolulu, indicate that the project will result in a need for increases in staffing and facilities.

Fire Protection

The Makakilo Fire Station (three miles northeast) and the Kapolei Fire Station (one mile southeast would provide fire protection services to the Project Area.

Emergency Services

Ambulance services located in Kapolei, Waipahu, and Nanakuli would provide emergency medical services to the Project Area. St. Francis Medical Center-West serves the Leeward coast with a full range of medical and surgical services, including 24-hour emergency care complete with a helipad to facilitate the rapid transport of patients and Express Care services for treatment of minor medical emergencies. Additionally, city ambulance services are augmented by the US Army's 68th Medical Detachment, Military Assistance to Safety and Traffic program located at Wheeler Air Force Base.

Hurricane shelters within the Kapolei region are inadequate to safely accommodate the existing population and increase resulting from the development Kapolei West. The Petitioner will coordinate the specifications for warning sirens and hurricane shelters with the City and County of Honolulu O'ahu Civil Defense Agency as development plans for the Kapolei West Community are finalized.

Electrical and Telephone Service

The Hawaiian Electric Company and Hawaiian Telecom, Inc. will provide the necessary electrical and telephone service to the Petition Area. Hawaiian Telecom commented that existing telecommunication facilities nee to be augmented to support the anticipated demands for the project. Easements may be required to install the necessary electronic equipment and cable facilities.

The Department of Transportation commented that use and occupancy agreements would be required for all project utilities within DOT's highway right of ways, and the railroad right-of-way.

CONFORMANCE WITH THE STATE LAND USE COMMISSION RULES

The proposed reclassification of the Petition is in general conformance with §15-15-18 of the Land Use Commission rules, Standards for Determining "U" Urban District boundaries. The Project Area is located east of the existing resort, residential subdivision and golf course at the (Ko Olina Resort), south of the residential communities of Nanakai Gardens and Honokai Hale and west of the City and Villages of Kapolei. The Project Area is also in close proximity to centers of trading, employment, and industrial uses in Kalaeloa and Campbell Industrial Park to the south.

CONFORMANCE WITH STATE PLANS

The Hawaii State Plan

According to the Petition, the reclassification of the Petition Area from the State Land Use Agricultural District to the Urban District and subsequent subdivision of the Property as conditioned will be consistent with the following objectives and policies of the Hawaii State Plan:

Sec. 226-5 Objectives and policies for population.

(b) (1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.

(b) (7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.

Sec. 226-6 Objectives and policies for the economy—in general.

(a) (1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.

(b) (10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.

Sec. 226-8 Objectives and policies for the economy—visitor industry.

(b) (4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.

Sec. 226-11 Objectives and policies for the physical environment—land-based, shoreline, and marine resources.

(b) (3) Take into account the physical attributes of areas when planning and designing activities and facilities.

Sec. 226-12 Objectives and policies for the physical environment -- scenic, natural beauty, and historic resources

(b) (1) Promote the preservation and restoration of significant natural and historic resources.

(b) (3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

Sec. 226-13 Objectives and policies for the physical environment--land, air, and water quality

(b) (7) Encourage urban developments in close proximity to existing services and facilities.

Sec. 226-14 Objectives and policies for facility systems—in general.

(b) (3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.

Sec. 226-15 Objectives and policies for facility systems—solid and liquid wastes.

(b) (2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.

(b) (3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.

Sec. 226-16 Objectives and policies for facility systems—water.

(b) (1) Coordinate development of land use activities with existing and potential water supply.

(b) (6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

Sec. 226-17 Objectives and policies for facility systems—transportation.

(b) (1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;

(b) (6) Encourage transportation systems that serve to accommodate present and future development needs of communities.

Sec. 226-19 Objectives and policies for socio-cultural advancement—housing.

(b) (3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.

(b) (5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.

(b) (6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.

Sec. 226-23 Objectives and policies for socio-cultural advancement—leisure.

(b) (2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.

CONFORMANCE WITH COUNTY PLANS

The Ewa Development Plan

The Project Area is within the Urban Growth Boundary designated in the Ewa Development Plan. The Urban Growth Boundary was drawn to protect over 3,000 acres of prime agricultural land from urbanization. No urban uses will be considered for developments that are proposed outside of the Urban Growth Boundary.

The proposed development is in conformance with the general policies and guidelines provided in the Ewa Development Plan regarding land use, the development of new communities and the expansion or renovation of existing communities. Reclassification of the Petition Area from the Agricultural District to the Urban District will provide the expansion area required to implement the Petitioner's development concept for Kapolei West. The uses proposed for Kapolei West are consistent with the land uses in the Ewa Development Plan: Low and medium density residential; commercial/industrial, parks and golf courses, community and recreational facilities; and open space.

The reclassification and development of the Petition Area is consistent with the Ewa Development Plan objectives to promote the Ewa Region as Oahu's second city.

General Plan

The General Plan sets out the basic growth policies for Oahu including development of the Secondary Urban Center at Kapolei and the Ewa and Central Oahu urban-fringe areas. Reclassification and development of the Petition Area as represented in the Petition is consistent with the General Plan's population policy that encourages development within the secondary urban center at Kapolei and the Ewa urban fringe areas to relieve development pressures in rural areas and to meet housing needs not readily provided in the Primary Urban Center. In addition, development of the Petition Area would support construction, business growth with professional and personal services.

PETITIONER'S FINANCIAL CAPABILITY TO UNDERTAKE THE PROPOSED DEVELOPMENT

Construction of the 2,370 residential units is anticipated to occur between 2008 and 2020 at the rate of 183 units per year. The Petitioner intends to use proceeds from the sales of its properties, borrowing from within the James Campbell corporate group, or capital contributions from the Campbell Estate to fund the development of Kapolei West. Petitioner's Exhibit 13 - *Consolidated Financial Statements and Consolidating Schedules* provides evidence of Petitioner's financial capability to undertake development of the Project Area.

RECOMMENDATION

Based on the foregoing information, the Office of Planning recommends that the Petition by Aina Nui Corporation to reclassify approximately 174.209 acres identified by tax map key nos. 9-1-14: 33 por. and 9-1-15: 04, and 20 por. from the Agricultural District to the Urban District, be approved with conditions. The property will be developed together with the adjacent Urban Area, which is undeveloped (LUC Docket A90-655) identified by tax map key nos. 9-1-15: 18, 4 por., 9-1-56: 11 por., and 12 por. to create the Kapolei West Project Area in the Ewa District, Island of Oahu, City and County of Honolulu. We therefore recommend that to facilitate development of the adjoining properties and to achieve consistency in incorporating the Petition Area into the master plan for Kapolei West, the Petition Area be conditioned as follows:

1. **Transportation Improvements**

Petitioner shall submit a revised TIAR for review and approval by the DOT and the City and County of Honolulu prior to submittal of a change of zone application with the City and

County. The revised TIAR shall include the technical comments that were requested by DOT in their letter to the Petitioner dated May 6, 2005.

Based on an analysis of traffic-related impacts, Petitioner shall fund, design, construct and/or make fair-share payments toward the construction of necessary local and regional roadway improvements necessitated by the Project in designs and schedules accepted by the DOT and the City and County of Honolulu in addition to the Ewa Highway Master Plan and Impact Fee Agreement.

2. **Civil Defense**

The developer and/or landowner shall fund and construct or provide its fair share of adequate civil defense measures serving the Property as required by the State of Hawaii Department of Defense, Office of Civil Defense and County Civil Defense Agency.

3. **Unidentified Archaeological Finds**

The developer and/or landowner shall immediately notify the Historic Preservation Division, and comply with the requirements of Chapter 6E, HRS, and applicable regulations should any archaeological or burial sites be found.

4. **Archaeological Inventory Survey and Historic Preservation Mitigation Plan**

The developer and/or landowner shall comply with the conditions recommended by the State of Hawaii Department of Land and Natural Resources, Historic Preservation Division in the Historic Preservation Mitigation Plan.

5. **Notification of Potential Nuisances**

a) The developer and/or landowner shall notify all prospective buyers and/or lessees of the Property that residences located next to Barbers Point Harbor will be subject to noise, dust, fumes and lights from the maritime and related activities associated with the harbor's industrial activities.

b) The developer and/or landowner shall notify all prospective buyers and/or lessees of the Property that the property is subject to aircraft over-flights and shall provide covenants in the deed to initial purchases releasing the State of Hawaii and the United States Government from all liability.

6. **Affordable Housing**

The developer and/or landowner shall provide affordable housing opportunities for low, low-moderate and gap-group-income residents of the State of Hawaii to the satisfaction

of the City and County of Honolulu, acting in accordance with its affordable housing policy.

7. **Drainage Improvements**

The developer and/or landowner shall comply with drainage improvements as required by appropriate State and County agencies.

8. **Water Resources Allocation**

The developer and/or landowner shall provide adequate potable and non-potable water source, storage and transmission facilities and improvements to accommodate the proposed development on the Property, which shall be approved by appropriate State and County agencies.

9. **Water Conservation Measures**

The developer and/or landowner shall implement water conservation measures and best management practices, such as use of indigenous and drought tolerant plants and turf, and the use of non-potable alternatives such as wastewater reuse from the Honouliuli wastewater reclamation facility and incorporate such measures into landscape planting for common areas.

10. **Air Quality**

Petitioner shall implement soil erosion and dust control measures during all phases of the development in compliance with the applicable rules and regulations of the City and County of Honolulu and the State Department of Health.

11. **Solid Waste**

The developer and/or landowner shall comply with solid waste disposal as required by the City and County of Honolulu and the program goals and objectives of the Integrated Solid Waste Management Act, Chapter 342G, Hawaii Revised Statutes.

12. **Wastewater Facilities**

The developer and/or landowner shall comply with wastewater system improvements as required by the State Department of Health.

13. **Golf Course**

The developer and/or landowner of the Property shall comply with the principles of the State Department of Health's "*Guidelines Applicable to Golf Courses in Hawai`i,* "

including, but not limited to, irrigating the course with non-potable water. (July 2002, Version 6)

14. <u>Best Management Practices</u>

The developer and/or landowner shall implement Best Management Practices (BMPs) to protect surface and groundwater resources. The BMPs shall be designed to minimize infiltration and runoff from construction and vehicle operations, reduce or eliminate soil erosion and groundwater pollution, and implement dust control measures during and after the development process in accordance with the State Department of Health guidelines.

DATED at Honolulu, Hawaii, this 26 day of September, 2005.

LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

DOCKET NO. A04-753
CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Testimony, Witness List, Exhibit List and OP Exhibits 1, 2, 3, 3a, 3b, 4a, 4b, 5, 6a, 6b, 6c, and 7 were served upon the following by either hand delivery or depositing the same in the U.S. Postal Service.

BENJAMIN A. KUDO 2262-0
NAOMI U. KUWAYE 6648-0
Attorneys for Aina Nui Corporation
Imanaka, Kudo, Fujimoto
A Limited Liability Law Company
745 Fort Street Mall, 17th Floor
Honolulu, Hawaii 96813

AINA NUI CORPORATION
Petitioner
1001 Kamokila Boulevard, Suite 255
Kapolei, Hawaii 96707

STEPHANIE AVEIRO
Executive Director
Housing and Community Development
Corporation of Hawaii
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

RODNEY K. HARAGA
Director
Department of Transportation
869 Punchbowl Street
Honolulu Hawaii 96813

HENRY ENG
Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

CORPORATION COUNSEL
Department of the Corporation Counsel
City and County of Honolulu
530 South King Street
Honolulu, Hawaii 96813

PLANNING COMMISSION
Chair
City and County of Honolulu
650 South King Street, 8th Floor
Honolulu, Hawaii 96813

DEPARTMENT OF THE NAVY
Commander Naval Base Pearl Harbor
Box 110
Pearl Harbor, Hawaii 96860-5020

DATED at Honolulu, Hawaii, this 26 day of September, 2005.

LAURA H. THIELEN
Director
Office of Planning
State of Hawaii

LUC DOCKET NO. A04-753/AINA NUI CORPORATION

PARTY: **OFFICE OF PLANNING (OP)**

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4:54

LIST OF WITNESSES

NAME/ORGANIZATION/POSITION (List in Order of Appearance)	TO BE QUALIFIED AS AN EXPERT IN:	SUBJECT MATTER	WRITTEN TESTIMONY (Yes or No)	EXHIBIT NUMBER(S)	LENGTH OF DIRECT
LAURA H. THIELEN Director Office of Planning AND/OR		OP Testimony	Yes	1	20 min.
ABE E. MITSUDA Division Head Land Use Division Office of Planning		OP Testimony	Yes	1	20 min.
REPRESENTATIVE Highways Division State Department of Transportation	Traffic Engineering	Traffic	No	--	20 min.
REPRESENTATIVE Housing and Community Development Corporation of Hawaii	Affordable Housing	Affordable Housing	No	--	20 min.
REPRESENTATIVE Commission on Water Resource Mgmt. Department of Land and Natural Resources	Water	Potable and Non-potable Water Resources	No	--	20 min.

DOCKET NO. A04-7753/AINA NUI DEVELOPMENT CORPORATION

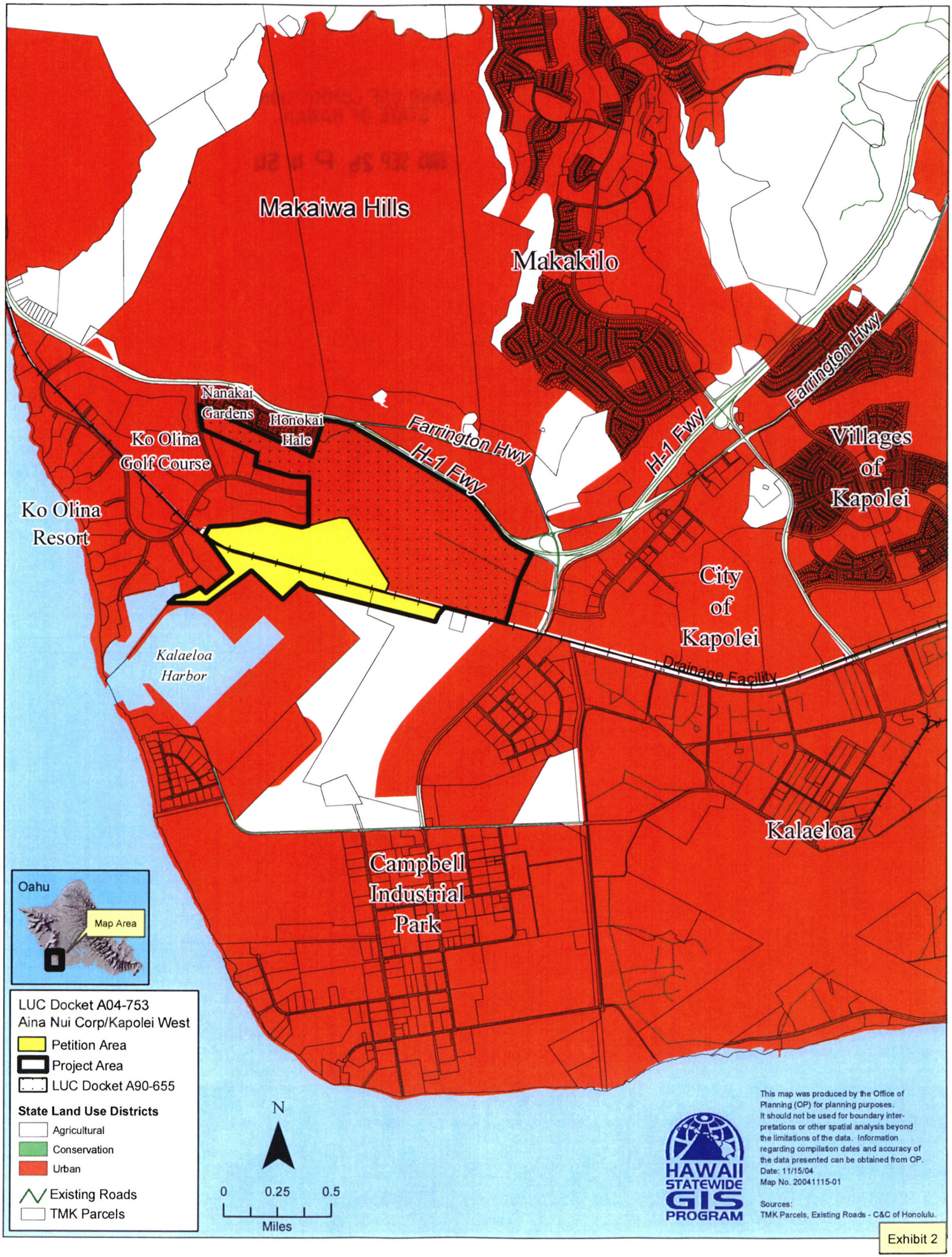
PARTY: OFFICE OF PLANNING

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4: 54

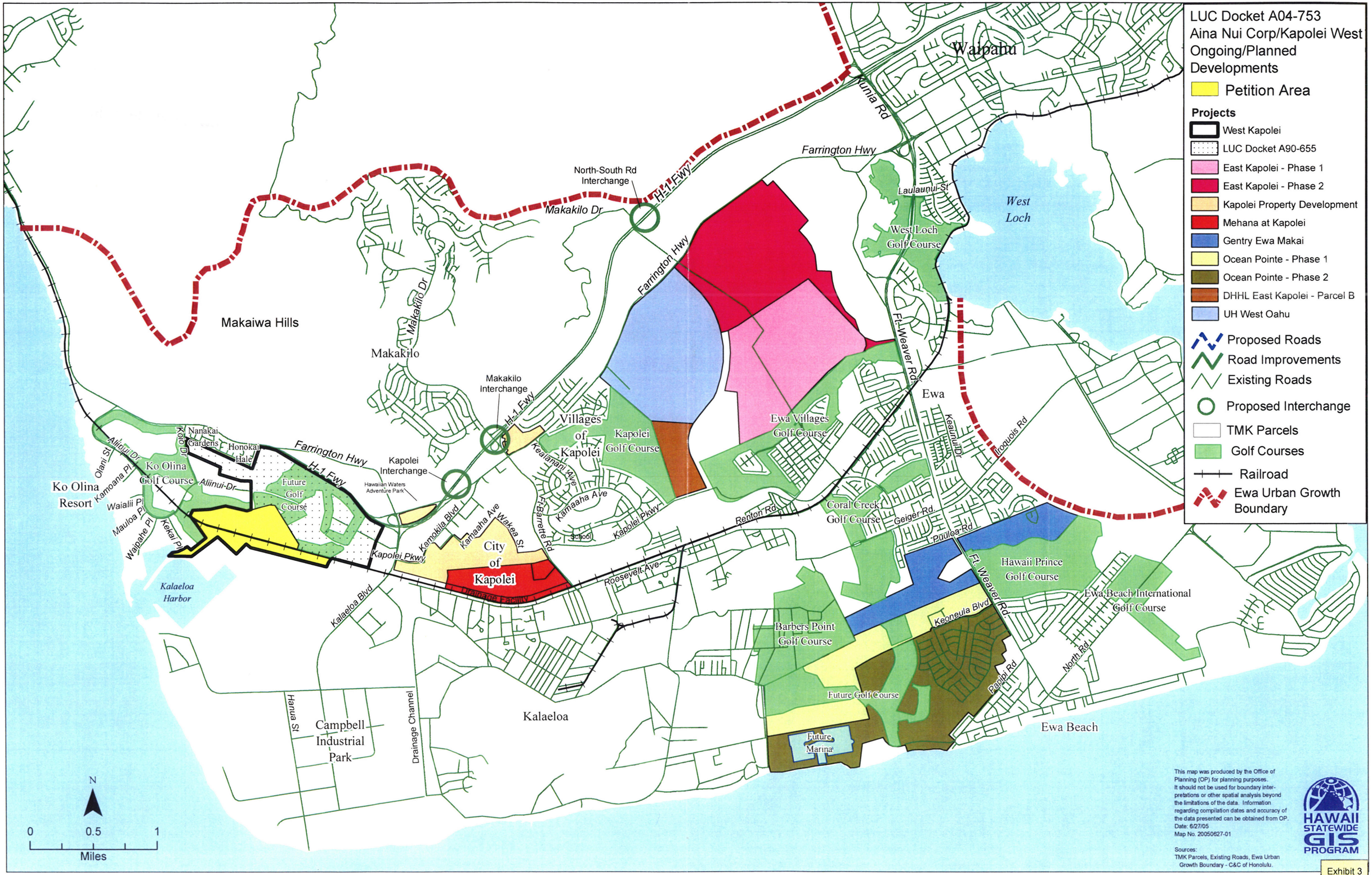
LIST OF EXHIBITS

EXHIBIT NUMBER	DESCRIPTION	PARTY: OBJECTIONS	ADMIT
1	Office of Planning Testimony		
2	Petition Area Location Map		
3	Existing and Proposed Developments		
3a	Urban Growth Boundary		
3b	Ewa Development Plan		
4a	Oahu Aquifer Sectors		
4b	Wells		
5	DOH Clean Water Branch Standard Comments		
6a	Existing and Proposed Roads		
6b	*Draft Analysis of Baseline Conditions for the 2030 Oahu Regional Transportation Plan*, Kaku and Associates, February 2005		
6c	Intersection Locations within Project Area		
7	Revised Ordinances of Honolulu, Chapter 33A, Impact Fees and Roadway Improvements in Ewa		


Makaiwa Hills
Makakilo
Nanakai Gardens
Honokai Hale
Ko Olina Golf Course
Ko Olina Resort
Farrington Hwy
H-1 Fwy
Villages of Kapolei
City of Kapolei
Kalaeloa Harbor
Drainage Facility
Kalaeloa
Campbell Industrial Park
Oahu
Map Area
LUC Docket A04-753
Aina Nui Corp/Kapolei West
Petition Area
Project Area
LUC Docket A90-655
State Land Use Districts
Agricultural
Conservation
Urban
Existing Roads
TMK Parcels
N
0 0.25 0.5
Miles
HAWAII STATEWIDE GIS PROGRAM
This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 11/15/04
Map No. 20041115-01
Sources:
TMK Parcels, Existing Roads - C&C of Honolulu.
Exhibit 2

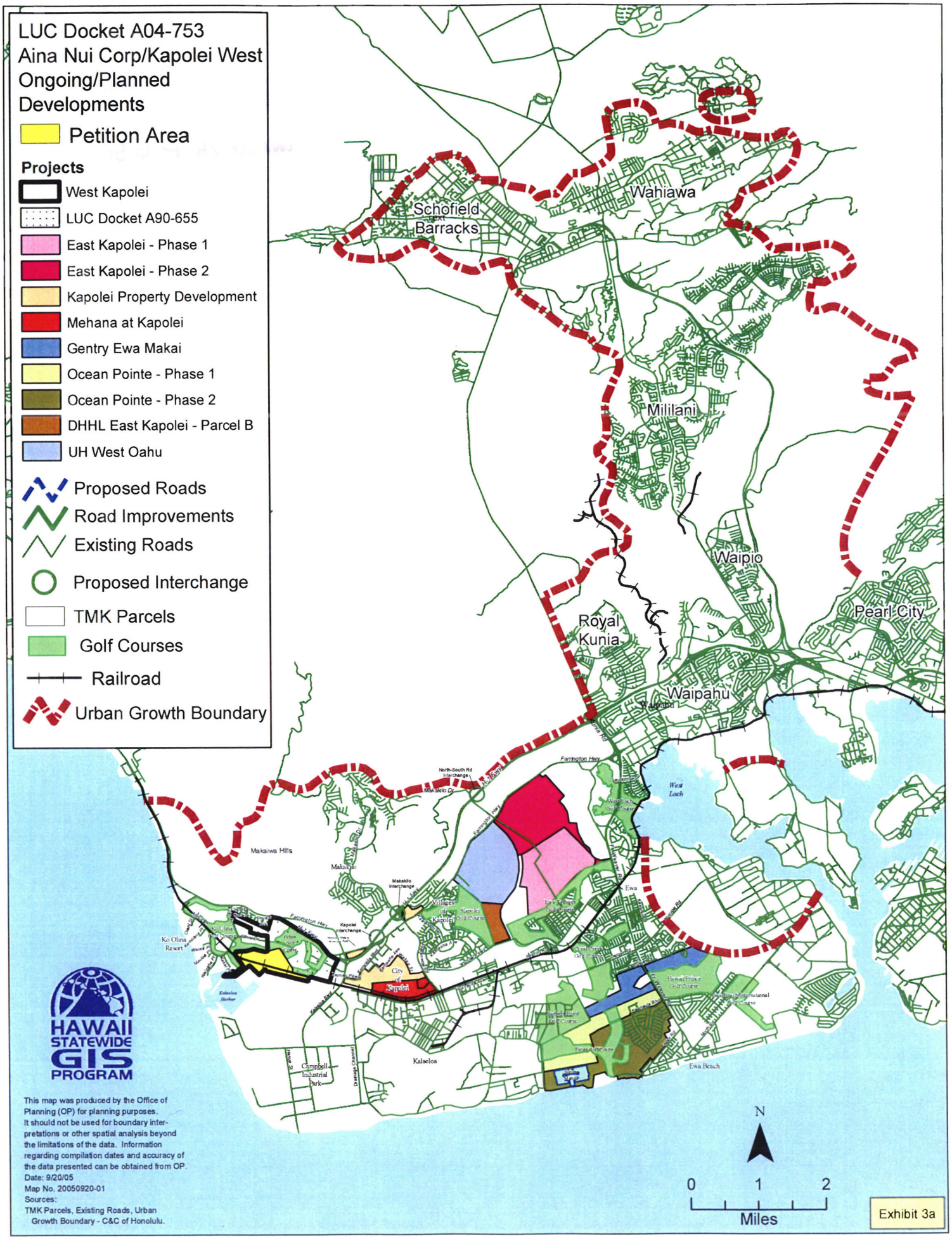
LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4:54


LUC Docket A04-753
Aina Nui Corp/Kapolei West
Ongoing/Planned Developments
Petition Area
Projects
West Kapolei
LUC Docket A90-655
East Kapolei - Phase 1
East Kapolei - Phase 2
Kapolei Property Development
Mehana at Kapolei
Gentry Ewa Makai
Ocean Pointe - Phase 1
Ocean Pointe - Phase 2
DHHL East Kapolei - Parcel B
UH West Oahu
Proposed Roads
Road Improvements
Existing Roads
Proposed Interchange
TMK Parcels
Golf Courses
Railroad
Ewa Urban Growth Boundary
Waipahu
Kunia Rd
Farrington Hwy
North-South Rd Interchange
H-1 Fwy
Makakilo Dr
Laulaunui St
West Loch
West Loch Golf Course
Ft. Weaver Rd
Ewa
Ewa Villages Golf Course
Keaunui Dr
Iroquois Rd
Makaiwa Hills
Makakilo
Makakilo Interchange
Villages of Kapolei
Kapolei Golf Course
Nanakai Gardens
Honokai Hale
Ko Olina Resort
Ko Olina Golf Course
Aliinui Dr
Olani St
Kamoana Pl
Waialii Pl
Mauloa Pl
Waipahe Pl
Kekai Pl
Future Golf Course
Hawaiian Waters Adventure Park
Kapolei Interchange
Kamokila Blvd
Kamaaha Ave
Wakea St
Kealaniani Ave
H-Barrette Rd
School
Kapolei Pkwy
City of Kapolei
Drainage Facility
Renton Rd
Coral Creek Golf Course
Geiger Rd
Puuloa Rd
Roosevelt Ave
Kalaeloa Blvd
Kalaeloa Harbor
Hawaii Prince Golf Course
Ewa Beach International Golf Course
Barbers Point Golf Course
Keoneula Blvd
North Rd
Papipi Rd
Future Golf Course
Future Marina
Ewa Beach
Kalaeloa
Campbell Industrial Park
Hanua St
Drainage Channel
N
0
0.5
1
Miles
This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 6/27/05
Map No. 20050627-01
Sources:
TMK Parcels, Existing Roads, Ewa Urban Growth Boundary - C&C of Honolulu.
HAWAII STATEWIDE GIS PROGRAM
Exhibit 3

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4:54


LUC Docket A04-753
Aina Nui Corp/Kapolei West
Ongoing/Planned
Developments
Petition Area
Projects
West Kapolei
LUC Docket A90-655
East Kapolei - Phase 1
East Kapolei - Phase 2
Kapolei Property Development
Mehana at Kapolei
Gentry Ewa Makai
Ocean Pointe - Phase 1
Ocean Pointe - Phase 2
DHHL East Kapolei - Parcel B
UH West Oahu
Proposed Roads
Road Improvements
Existing Roads
Proposed Interchange
TMK Parcels
Golf Courses
Railroad
Urban Growth Boundary
Schofield Barracks
Wahiawa
Mililani
Waipio
Pearl City
Royal Kunia
Waipahu
Makaiwa Hills
Kalaeloa
Ewa Beach
West Loch
Ko Olina Resort
Campbell Industrial Park
HAWAII STATEWIDE GIS PROGRAM
This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 9/20/05
Map No. 20050920-01
Sources:
TMK Parcels, Existing Roads, Urban Growth Boundary - C&C of Honolulu.
N
0 1 2
Miles
Exhibit 3a

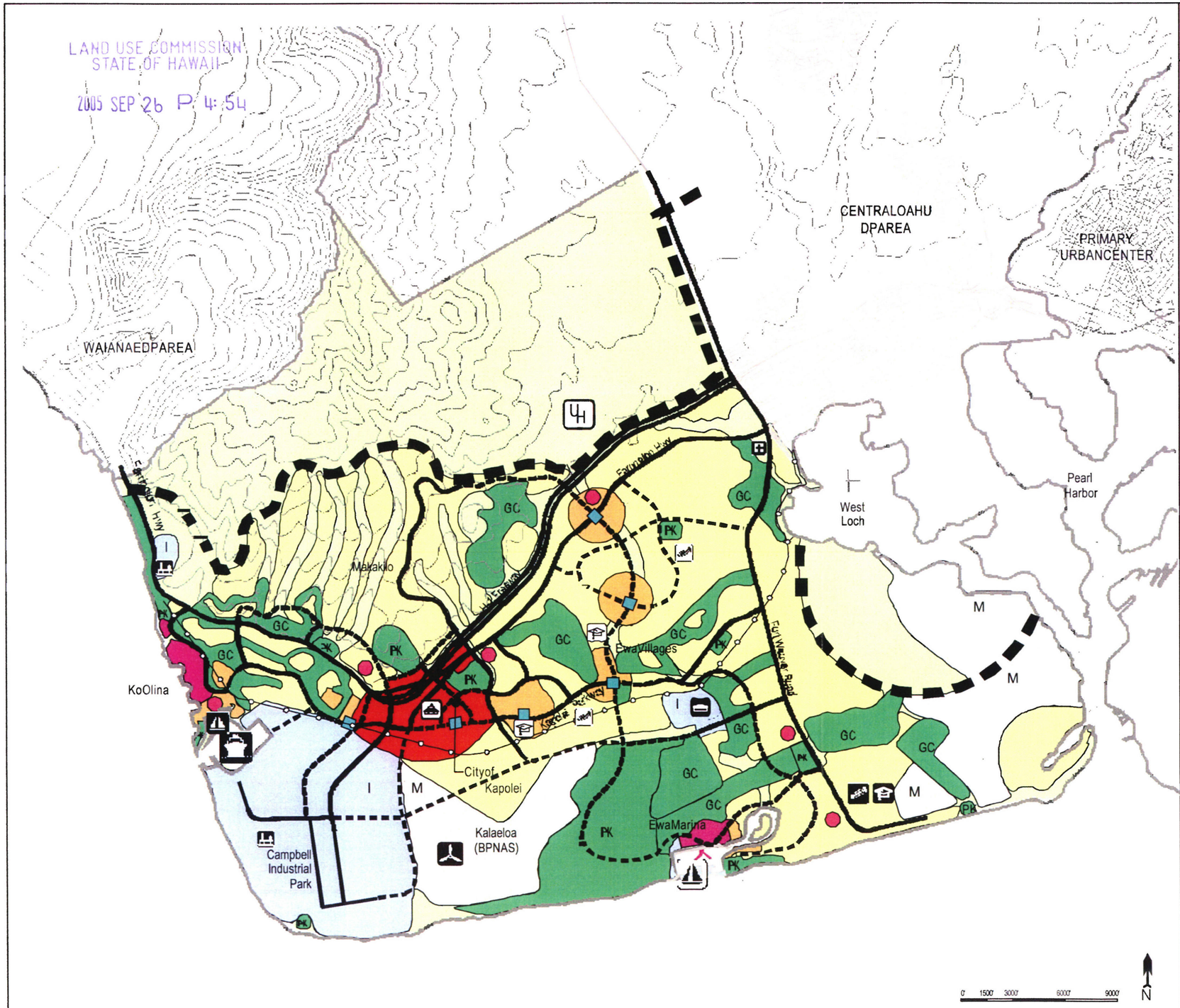
LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4:54

LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 26 P 4:54

EWA DEVELOPMENT PLAN

Urban Land Use Map



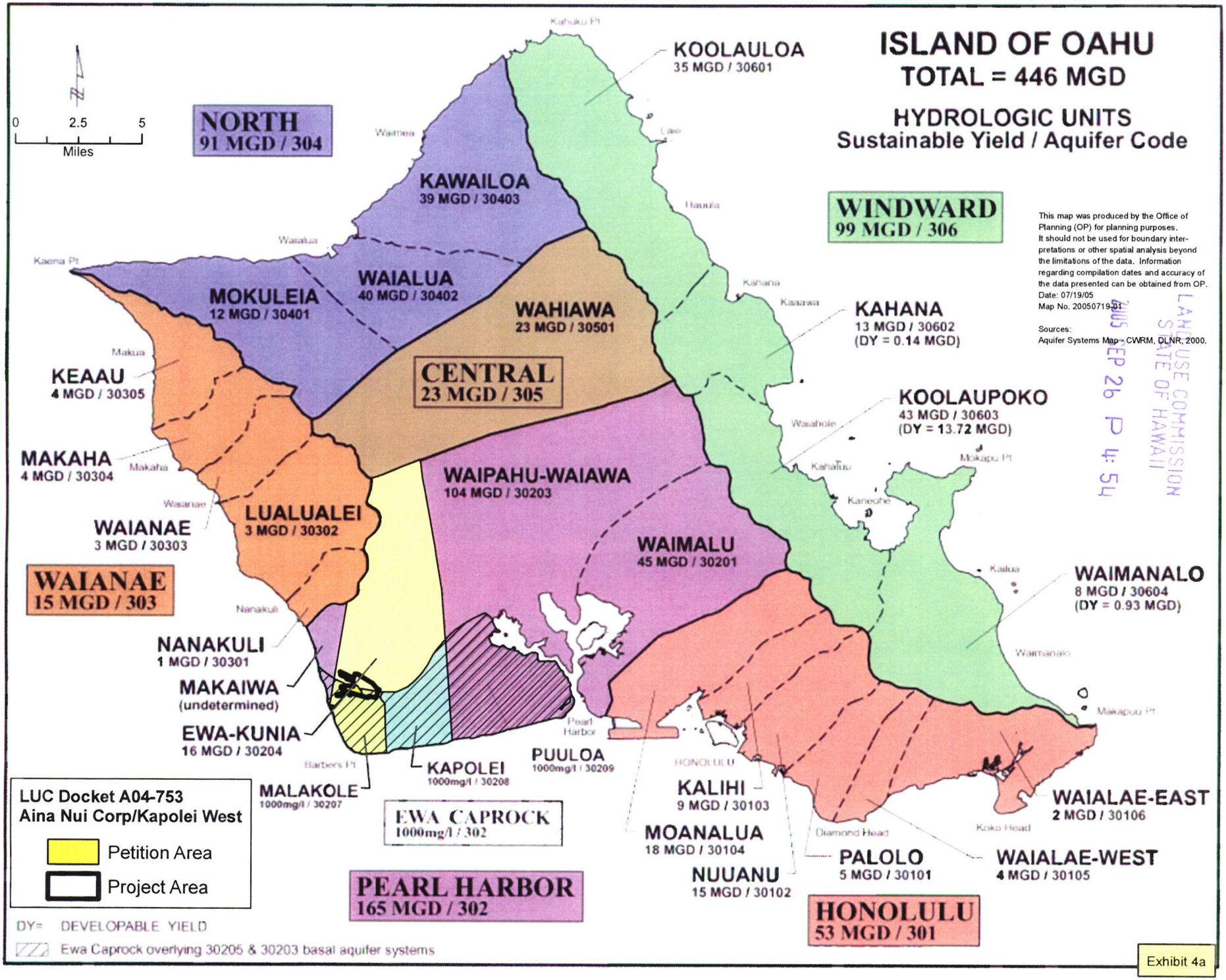
- LowandMediumDensityResidential
- HighDensityResidential
- CommunityCommercialCenter
- CityofKapolei(HighDensityResidentialandCommercial)
- Resort/RecreationArea
- I Industrial
- M Military
- PublicInstitution
- AgriculturalandPreservation
- PK/GC ParksandGolfCourses
- TransitNode(HighDensityResidentialandCommercial)
- UrbanGrowthBoundary

EXISTING FUTURE

- Civic Center
- Electric PowerPlant
- Wastewater T.P.
- IntermediateSchool
- HighSchool
- U.H. West Oahu
- Hospital
- Small BoatMarina
- CommercialHarbor
- Airfield
- Highways, Arterial & Major Streets
- Historic Railway

PlanningDepartment
City&CountyofHonolulu
August 1997

Exhibit 3b


ISLAND OF OAHU
TOTAL = 446 MGD
HYDROLOGIC UNITS
Sustainable Yield / Aquifer Code
0 2.5 5
Miles
NORTH
91 MGD / 304
KOOLAULOA
35 MGD / 30601
KAWAILOA
39 MGD / 30403
WAIALUA
40 MGD / 30402
MOKULEIA
12 MGD / 30401
WAHIAWA
23 MGD / 30501
CENTRAL
23 MGD / 305
WINDWARD
99 MGD / 306
KAHANA
13 MGD / 30602
(DY = 0.14 MGD)
KOOLAUPOKO
43 MGD / 30603
(DY = 13.72 MGD)
WAIMANALO
8 MGD / 30604
(DY = 0.93 MGD)
KEAAU
4 MGD / 30305
MAKAHA
4 MGD / 30304
WAIANAE
3 MGD / 30303
LUALUALEI
3 MGD / 30302
WAIPAHU-WAIAWA
104 MGD / 30203
WAIMALU
45 MGD / 30201
WAIANAE
15 MGD / 303
NANAKULI
1 MGD / 30301
MAKAIWA
(undetermined)
EWA-KUNIA
16 MGD / 30204
MALAKOLE
1000mg/l / 30207
KAPOLEI
1000mg/l / 30208
PUULOA
1000mg/l / 30209
EWA CAPROCK
1000mg/l / 302
PEARL HARBOR
165 MGD / 302
KALIHI
9 MGD / 30103
MOANALUA
18 MGD / 30104
NUUANU
15 MGD / 30102
PALOLO
5 MGD / 30101
HONOLULU
53 MGD / 301
WAIALAE-EAST
2 MGD / 30106
WAIALAE-WEST
4 MGD / 30105
LUC Docket A04-753
Aina Nui Corp/Kapolei West
Petition Area
Project Area
DY= DEVELOPABLE YIELD
Ewa Caprock overlying 30205 & 30203 basal aquifer systems
This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 07/19/05
Map No. 20050719-01
Sources:
Aquifer Systems Map - CWRM, DLNR, 2000.
2005 SEP 26 P 4:54
LAND USE COMMISSION
STATE OF HAWAII
Exhibit 4a

LUC Docket A04-753
Aina Nui Corp/Kapolei West
Petition Area
Project Area

AQUIFER SYSTEM
EWA-KUNIA
KAPOLEI
MAKAIWA
MALAKOLE
PUULOA
WAIPAHU-WAIAWA
EWA CAPROCK
Existing Roads
TMK Parcels
Wells

LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 26 P 4:54

Hoaeae Wells
Kunia I Wells
Well Ep 15,16
Waipahu Wells
Well 2006-12
Wells 2006-01 to 11

WAIPAHU-WAIAWA AQUIFER SYSTEM
PUULOA AQUIFER SYSTEM
EWA-KUNIA AQUIFER SYSTEM
MAKAIWA AQUIFER SYSTEM
MALAKOLE AQUIFER SYSTEM
KAPOLEI AQUIFER SYSTEM

Kunia Rd
Waipahu
West Loch
Ewa
Makaiwa Hills
Makakilo
Nanakai Gardens
Honokai Hale
Farrington Hwy
H-1 Fwy
Ko Olina Resort
Kalaeloa Harbor
Kalaeloa Blvd
Kamokila Blvd
Villages of Kapolei
City of Kapolei
Renton Rd
Roosevelt Ave
Drainage Facility
Kalaeloa
Campbell Industrial Park
Ft. Weaver Rd
Ewa Beach

Oahu
Map Area

N
0 0.5 1
Miles

This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 05/18/05
Map No. 20050518-01
Sources:
TMK Parcels, Existing Roads - C&C of Honolulu.
Aquifer Systems - CWRM, DLNR, 2000.
Wells - CWRM, DLNR, 2005.

HAWAII STATEWIDE GIS PROGRAM

Exhibit 4b

LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 26 P 4:54

Standard Comments from the Clean Water Branch

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of the subject document on (insert received date). The CWB has reviewed the limited information contained in the subject document and offers the following comments:

1. The Army Corps of Engineers should be contacted at (808) 438-9258 for this project. Pursuant to Federal Water Pollution Control Act (commonly known as the AClean Water Act≅ (CWA)), Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for A[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters...≅ (emphasis added). The term Adischarge≅ is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40, Code of Federal Regulations, Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

2. In accordance with HAR, Sections 11-55-04 and 11-55-34.05, the Director of Health may require the submittal of an individual permit application or a Notice of Intent (NOI) for general permit coverage authorized under the National Pollutant Discharge Elimination System (NPDES).

    1. An application for an NPDES individual permit is to be submitted at least 180 days before the commencement of the respective activities. The NPDES application forms may also be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.

    2. An NOI to be covered by an NPDES general permit is to be submitted at least 30 days before the commencement of the respective activity. A separate NOI is needed for coverage under each NPDES general permit. The NOI forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

        1. Storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi). [HAR, Chapter 11-55, Appendix B]

        2. Construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.** [HAR, Chapter 11-55, Appendix C]

OP Exh. 5

3. Discharges of treated effluent from leaking underground storage tank remedial activities. [HAR, Chapter 11-55, Appendix D]

4. Discharges of once through cooling water less than one (1) million gallons per day. [HAR, Chapter 11-55, Appendix E]

5. Discharges of hydrotesting water. [HAR, Chapter 11-55, Appendix F]

6. Discharges of construction dewatering effluent. [HAR, Chapter 11-55, Appendix G]

7. Discharges of treated effluent from petroleum bulk stations and terminals. [HAR, Chapter 11-55, Appendix H]

8. Discharges of treated effluent from well drilling activities. [HAR, Chapter 11-55, Appendix I]

9. Discharges of treated effluent from recycled water distribution systems. [HAR, Chapter 11-55, Appendix J]

10. Discharges of storm water from a small municipal separate storm sewer system. [HAR, Chapter 11-55, Appendix K]

11. Discharges of circulation water from decorative ponds or tanks. [HAR, Chapter 11-55, Appendix L]

3. In accordance with HAR, Section 11-55-38, the applicant for an NPDES permit is required to either submit a copy of the new NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD. If applicable, please submit a copy of the request for review by SHPD or SHPD=s determination letter for the project.

4. Any discharges related to project construction or operation activities, with or without a Section 401 WQC or NPDES permit coverage, shall comply with the applicable State Water Quality Standards as specified in HAR, Chapter 11-54.

Hawaii Revised Statutes, Subsection 342D-50(a) requires that A[n]o person, including any public body, shall discharge any water pollutants into state waters, or cause or allow any water pollutant

to enter state waters except in compliance with this chapter, rules adopted pursuant to this chapter, or a permit or variance issued by the director.≅

If you have any questions, please contact Mr. Alec Wong, Supervisor of the Engineering Section, CWB, at (808) 586-4309.

LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 26 P 4:54

LUC Docket A04-753
Aina Nui Corp/Kapolei West
Proposed Road Improvements

- Petition Area
- Project Area
- LUC Docket A90-655
- EHMP Proposed Roads
- EHMP Road Improvements
- Other Proposed Roads
- Existing Roads
- Proposed Interchange
- TMK Parcels
- Golf Courses
- Railroad

Makaiwa Hills
Makakilo
Ko Olina Resort
Kalaeloa
Ewa
Ewa Beach
Kalaeloa Harbor
Campbell Industrial Park
City of Kapolei
Villages of Kapolei
West Loch

Makakilo Dr
North-South Rd Interchange
H-1 Fwy
Farrington Hwy
Makakilo Interchange
Kapolei Interchange
Hawaiian Waters Adventure Park
Kapolei Pkwy
North-South Rd
Ft. Weaver Rd
Laulaunui St
West Loch Golf Course
Ewa Villages Golf Course
Kapolei Golf Course
Coral Creek Golf Course
Ko Olina Golf Course
Future Golf Course
Barbers Point Golf Course
Hawaii Prince Golf Course
Ewa Beach International Golf Course
Future Marina
Nanakai Gardens
Honokai Hale
Aliinui Dr
Olani St
Kamoana Pl
Waialii Pl
Mauloa Pl
Waipahe Pl
Kekai Pl
Kamokila Blvd
Kamaaha Ave
Wakea St
Kealanani Ave
Fort Barrette Rd
School
Drainage Facility
Kalaeloa Blvd
Hanua St
Drainage Channel
Renton Rd
Geiger Rd
Puuloa Rd
Keaunui Dr
Iroquois Rd
Keoneula Blvd
Papipi Rd
North Rd

N

0 0.5 1
Miles

This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 07/19/05
Map No. 20050719-02
Sources:
Proposed Roads - State of Hawaii DOT, UH, Kapolei West Dev Concept Plan, Aina Nui Corp (Helber Hastert & Fee).
TMK Parcels, Existing Roads - C&C of Honolulu.

HAWAII STATEWIDE GIS PROGRAM

Exhibit 6a

LAND USE COMMISSION
STATE OF HAWAII

2005 SEP 26 P 4:54

Deliverable 6.4

DRAFT ANALYSIS OF BASELINE CONDITIONS FOR THE 2030 OAHU REGIONAL TRANSPORTATION PLAN

FEBRUARY 2005

PREPARED FOR:

OAHU METROPOLITAN PLANNING ORGANIZATION

PREPARED BY:

KAKU ASSOCIATES
A Corporation

IN ASSOCIATION WITH

BELT COLLINS HAWAII LLC
PB CONSULT
THE LIMTIACO COMPANY
ZANE CONSULTANTS

OP Exh. 66

Deliverable 6.4

DRAFT ANALYSIS OF BASELINE CONDITIONS FOR THE 2030 OAHU REGIONAL TRANSPORTATION PLAN

February 2005

Prepared for:

OAHU METROPOLITAN PLANNING ORGANIZATION

Prepared by:

KAKU ASSOCIATES, INC.
Pauahi Tower
1001 Bishop Street, Suite 1520
Honolulu, Hawaii 96813
(808) 541-9916

In association with:

BELT COLLINS HAWAII LLC
PB CONSULT
THE LIMTIACO COMPANY
ZANE CONSULTANTS

Ref: 1751.03

TABLE OF CONTENTS

1.0 Introduction 1

2.0 Baseline Year 2030 Street/Highway Network and Transit System 3
- 2.1 Highway Network 3
- 2.2 Transit Network 4

3.0 Socioeconomic Forecasts 7

4.0 Baseline Year 2030 Service Effectiveness Analysis 15
- 4.1 Trip Production and Modal Choice 15
- 4.2 Transit Ridership 15
- 4.3 Auto Occupancy 18
- 4.4 Vehicle Miles Traveled and Vehicle Hours Traveled 18

5.0 Baseline Year 2030 Congestion Analysis 21
- 5.1 Screenline Level of Service 21
- 5.2 Congested Lane Miles 27
- 5.3 Vehicle Hours of Delay 27

Appendix A: School Enrollment
Appendix B: 2030 Socioeconomic Data
Appendix C: Transit Ridership
Appendix D: Screenline Volumes and Level of Service Analysis

LIST OF FIGURES

NO.		
1	Population Changes by Transportation Analysis Areas (Year 2000-2030)	9
2	Employment Changes by Transportation Analysis Areas (Year 2000-2030)	11
3	Year 2000 Daily Resident Person Trips	16
4	Baseline Year 2030 Daily Resident Person Trips	16
5	Transit Ridership on Oahu	17
6	Vehicle Miles Traveled	19
7	Vehicle Hours Traveled	20
8	Baseline Year 2030 Screenline Locations	24
9	Baseline Year 2030 AM Peak Hour Screenline Average Levels of Service (Inbound)	26
10	Baseline Year 2030 PM Peak Hour Screenline Average Levels of Service (Outbound)	28
11	Year 2000 Lane Miles in Morning Peak Period	30
12	Year 2030 Lane Miles in Morning Peak Period	30
13	Hours of Delay	31

LIST OF TABLES

NO.		
1	Population by TAA for Oahu (Year 2000 and Forecast Year 2030)	8
2	Employment by TAA for Oahu (Year 2000 and Forecast Year 2030)	10
3	Employment by Category for Oahu (Year 2000 and Forecast Year 2030)	12
4	Housing and Visitor Units for Oahu (Year 2000 and Forecast Year 2030)	14
5	Mode Split Estimates (Year 2000 and Baseline Year 2030)	16
6	Transit Ridership for Oahu (Year 2000 and Baseline Year 2030)	17
7	Changes in VMT on Classified System (Year 2000 and Year 2030 Baseline)	19
8	Changes in VHT on Classified System (Year 2000 and Year 2030 Baseline)	20
9	Capacity Values by Area Type and Facility Type	21
10	Level of Service Definitions for Arterial Street Segments	23
11	Year 2002 and Baseline Year 2030 Screenline Level of Service Analysis AM Peak Hour Inbound	25
12	Year 2002 and Baseline Year 2030 Screenline Level of Service Analysis PM Peak Hour Outbound	29
13	Year 2000 Lane Miles in the Two-Hour Morning Peak Period	30
14	Year 2030 Lane Miles in the Two-Hour Morning Peak Period	30
15	Change in Lane Miles in Morning Peak Period	30
16	Changes in Delay on Classified System (Year 2000 and Year 2030 Baseline)	31

GLOSSARY OF ACRONYMS

AVO	Average Vehicle Occupancy
DPP	City and County of Honolulu Department of Planning and Permitting
HBW	Home-Based Work Trip
LOS	Level of Service
MOE	Measure of Effectiveness
ORTP	Oahu Regional Transportation Plan
PUC	Primary Urban Center
TAA	Transportation Analysis Area
TAZ	Traffic Analysis Zone
TDFM	Travel Demand Forecasting Model
V/C	Vehicle to Capacity Ratio
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled

1.0 INTRODUCTION

The Draft Analysis of Baseline Conditions Report for the 2030 Oahu Regional Transportation Plan (ORTP) has been prepared to respond to the requirements of Task 6 of the project's work program. This document serves as Deliverable 6.4.

This report documents the changes made to the Base Year 2000 OMPO travel demand forecasting model (TDFM) to produce Baseline Year 2030 conditions. It presents the results of the travel demand forecasts for the Baseline Year 2030 and identifies deficiencies of the system that will be used to inform the subsequent analysis in Task 7/Identify Transportation Improvement Projects.

The report summarizes the Year 2000 and Year 2030 land use and socioeconomic data inputs to the model, the projected increases in trip making, and an analysis of projected network performance under 2030 baseline conditions. The information from the 2030 baseline model forecast will be used to establish a baseline condition against which the performance measures described in Subtask 4.2/Identification of Performance Measures will be gauged when ORTP improvement alternatives are evaluated in Subtask 8.3/Conduct System Performance Analysis. The two performance measures that the travel demand forecasting model will be most effective in evaluating are: service effectiveness and congestion relief effectiveness.

This report is divided into the following sections:

- Chapter 1 represents an introduction to Deliverable 6.4.
- Chapter 2 documents the changes made to the 2000 highway and transit system in the travel demand forecasting model.
- Chapter 3 provides an analysis of 2000 and 2030 socioeconomic and land use data.
- Chapter 4 analyzes the 2030 baseline forecast conditions in terms of service effectiveness.
- Chapter 5 analyzes the 2030 baseline forecast conditions in terms of congestion.

2.0 BASELINE YEAR 2030 STREET/HIGHWAY NETWORK AND TRANSIT SYSTEM

The Year 2000 OMPO TDFM highway and transit networks were taken as the starting point for the development of the Baseline Year 2030 model. The networks were modified to bring them into line with existing Year 2004 conditions and to add the baseline projects that were developed as part of Task 6 and documented in Deliverable 6.1. This chapter subdivides the changes into highway additions/modifications and changes to the transit line services.

2.1 HIGHWAY NETWORK

Changes made by OMPO to modify the highway network from 2000 to 2004:

- Punchbowl Street, Vineyard Boulevard to Lusitana Street (mauka bound)
  Nodes: 1336-1603
  Change from one lane to two lanes mauka bound

- Kuala Street, Acacia Road to Waimano Home Road
  Nodes: 2062-2749
  New road - two lanes in each direction, 25 mph
  Distance: 3,830 feet

- Salt Lake Boulevard, Kahuapaani Street to Bougainville Drive
  Nodes: 2031-2002-1903
  Change from one lane to three lanes in each direction

- Mililani Interchange
  Nodes: 2485-2487
  Change from one lane to two lanes

- Kunia Road, Anonui Street to Kupuna Loop (South)
  Nodes: 3569-2571
  Change from one lane to two lanes in each direction
  Nodes: 2571-2151
  Change from one lane to two lanes (2151-2571 is already two lanes in the Year 2000 network)

- Punahou Street Off-ramp (eastbound)
  Nodes: 1075-1074
  Change from one lane to three lanes

- Nimitz Highway Contraflow Lane, H-1 to Hilo Hatties (before Pacific Street)
  HOV 2+, Diamond Head-bound
  Added new links: 1765-1239-3885-3886-3887-3889-3890-1725
  Changed number of lanes on Nimitz Highway Ewa-bound from three to two lanes
  Nodes: 1725-3376-1732-3816-1735-1755-1758-1783-1784

Changed number of lanes on Nimitz Highway Ewa-bound from four to three lanes
Nodes: 1784-1765

Additional modifications to update the highway network from 2000 to 2004:

- Queen Street extension added to the network (Kamakee Street to Piikoi Street)
  Opened September 2004
  One lane in each direction
  Nodes: 1409-2708

Baseline projects added:

- Fort Weaver Road widening (Aawa Drive to Geiger Road)
  Roadway widened from four lanes to six lanes
  Nodes: 2111-2553-2168-2152

- H-1 AM Zipper lane extension
  Extend zipper lane from Pearl Harbor Interchange to Junction H-1 and Nimitz Highway (92)
  One Lane
  Nodes: 2219-2218-2217-2216-2215-2214-2213-2212-2826

- North/South Road (Kapolei Parkway to Interstate H-1)
  New three-lane road added with two northbound lanes and one southbound lane; new diamond interchange at H-1
  Nodes: 3885-3892-3886-3887-3888-3889
  Interchange Nodes: 3890, 3891, 2163, and 2164

- Kamokila Boulevard Extension
  Road extension from Kamokila Boulevard to Franklin D. Roosevelt Avenue in Kapolei
  Two lanes in each direction
  Nodes: 2536-2179

- Salt Lake Boulevard widening (Phase 2B)
  Widen Salt Lake Boulevard from one lane to three lanes from Maluna Street to Ala Lilikoi Street
  Nodes: 1904-3813-3662-2560-1906-2813

2.2 TRANSIT NETWORK

Modifications to update transit network coding from year 2000 to 2004:

Deleted:
- Line 12

Added:
- Line 303 - Service between Waikiki and Kaimuki via Kuhio Avenue and Waialae Avenue, including UH-Manoa

303AE Nodes: 3165-1207-3153-2208-3161-3488-3690-1144-3157-1141-3149-3150-3151-1137-1288-1135-3140-1136-1125-1124-1037-2690-2688-1043-1042-1178-3069-3670-1115-1114-1113-1112-1104-2682-3065-3066

303AW Nodes: 3066-3065-2682-1104-1112-1113-1114-1115-3670-3069-1178-1179-3789-3844-1180-3078-1180-3844-3789-1179-1178-1042-1043-2688-2690-1037-1124-1125-1136-3140-1135-1288-1137-3151-3150-3149-1141-3157-1144-3690-3488-3161-2208-3153-1207-3165

- Line 414 - Service between Kapolei Transit Center and Makakilo via Makakilo Drive

414AN Nodes: 2536-3596-2114-2115-2118-2544-3647-2542-3603
414AS Nodes: 3603-2542-3647-2544-2118-2115-2114-3596-2536

- Line 415 - Service between Kapolei Transit Center and Kalaeloa via Fort Barrette Road

415AE Nodes: 2536-3596-2114-2170-2807-2113
415AW Nodes: 2113-2807-2170-2114-3596-2536

- Line 434 - Service between Waipahu Transit Center and Village Park

434AE Nodes: 2094-2091-2763-3505-2092-2153-2580-2579-2578-3804-3501-3499

434AW Nodes: 3499-3501-3804-2578-2579-2580-2153-2092-3505-2763-2091-2094

- Line 503 - Service between Mililani and Waipio Acres via Kamehameha Highway

503AN Nodes: 2488-3535-3534-3532-3531-2566-3545-3544-3007-2253-2765-2766-2767

503AS Nodes: 2767-2766-2765-2253-3007-3544-3545-2566-3531-3532-3534-3535-2488

Baseline project added:

- E-Transit Project - Limited stop, express service between Downtown Honolulu and Waikiki, including Kakaako and Ala Moana

EE Nodes: 1468-1471-1465-1462-3306-1461-1455-1448-1442-1430-1418-1419-1420-1421-1422-1423-1402-3294-1401-1382-3782-3293-1345-3783-3277-2710-3278-3779-1355-1354-3273-1483-3271-3272-3845-1361-1362-1376-3179-3180-1377-3181-3182-2694-3843-1213-3183-1148-3166-2880-3805-1145-3158-1140-3762-3144-3145-1139-3143

EW Nodes: 3143-1137-3151-3150-3149-1141-3157-1144-3690-3488-3161-2208-3153-1207-3165-1146-3169-1211-1210-1212-1213-3843-2694-3182-3181-1377-3180-3179-1376-1362-1361-3845-3272-3271-1483-3273-1354-1355-3779-3278-2710-3277-3783-1345-

3293-3782-1382-1401-3294-1402-1403-1404-1405-1407-1408-1520-1521-1418-1430-1442-1448-1455-1461-1466-1505-1504-1468

3.0 SOCIOECONOMIC FORECASTS

The travel demand model subdivides Oahu into 762 traffic analysis zones (TAZs). It is responsible for producing estimates on trip making based on key socioeconomic and land use characteristics. These include the following categories:

- Population (household and group quarters)
- Employment (retail, service and other categories)
- Housing Units
- Occupied Households by Size
- Number of Hotel Rooms
- Resort Condominiums

The travel demand forecasts were developed for the Year 2030 based on socioeconomic projections provided by the City and County of Honolulu Department of Planning and Permitting (DPP). In addition to the aforementioned, the school enrollment data from the Year 2000 base year model needed updating to 2030. In order to undertake this, a methodology was developed to create 2030 school enrollment forecasts for ORTP modeling purposes. Appendix A presents the methodology and results of this undertaking.

Table 1 summarizes the population projections and compares the data for the whole of Oahu by transportation analysis area (TAA) between the Year 2000 and forecast Year 2030. Figure 1 summarizes the projected population changes between the two years. By Year 2030 it is projected that there will be about 1,117,000 residents on Oahu. The projected growth is approximately 241,000 residents, amounting to a 28% increase over Year 2000. Areas of high growth include Kakaako, Honoulilui-Ewa Beach, Kapolei-Ko Olina-Kalaeloa, and Waiawa-Koa Ridge. A full summary of the 2030 socioeconomic data by TAZ (as used in the model) can be seen in Appendix B.

Employment for the Year 2000 and 2030 is displayed in Table 2, with the overall change by TAA displayed in Figure 2. The table shows the 2030 projections and compares the data for the whole of Oahu by TAA between the Year 2000 and forecast Year 2030. By Year 2030, it is projected that total employment islandwide will have risen by approximately 134,000 from the Year 2000. This amounts to a total employment of approximately 633,000 islandwide, a 27% increase over Year 2000. Areas of high growth on a percentage basis include Kapolei-Ko Olina-Kalaeloa, Makakilo-Makaiwa, and Waiawa-Koa Ridge. Areas of high growth on an actual basis include Kapolei-Ko Olina-Kalaeloa, Kakaako, and Punchbowl-Sheridan-Date.

The employment projections for Oahu are subdivided by 10 different categories. The categories are listed below and forecast data by category is presented in Table 3.

- Military/Armed Forces
- Public Administration
- Hotel
- Agriculture
- Transportation/Communications/Utilities
- Industrial
- Fiscal
- Service
- Retail
- Construction

TABLE 1
POPULATION BY TAA FOR OAHU (YEAR 2000 AND FORECAST YEAR 2030)

Transportation Analysis Area (TAA)	Population		Population Change (Year 2000 to Year 2030)	
	Year 2000	Year 2030 Forecast	Difference	Percentage Difference
1. Ward-Chinatown	9,900	17,700	7,800	78.8%
2. Kakaako	7,500	33,800	26,300	350.7%
3. Punchbowl-Sheridan-Date	72,000	87,100	15,100	21.0%
4. Waikiki	19,700	24,000	4,300	21.8%
5. Kahala-Tantalus	74,100	78,000	3,900	5.3%
6. Pauoa-Kalihi	78,200	83,200	5,000	6.4%
7. Iwilei-Mapunapuna-Airport	15,200	19,700	4,500	29.6%
8. Hickam-Pearl Harbor	18,900	21,000	2,100	11.1%
9. Moanalua-Halawa	55,100	56,000	900	1.6%
10. Aiea-Pearl City	68,700	68,500	-200	-0.3%
11. Honouliuli-Ewa Beach	43,500	97,100	53,600	123.2%
12. Kapolei-Ko Olina-Kalaeloa	11,800	62,100	50,300	426.3%
13. Makakilo-Makaiwa	13,300	25,800	12,500	94.0%
14. Waipahu-Waikele-Kunia	52,100	61,300	9,200	17.7%
15. Waiawa-Koa Ridge	12,000	40,400	28,400	236.7%
16. Mililani-Melemanu-Kipapa	47,900	52,800	4,900	10.2%
17. Wahiawa-Whitmore-Schofield	36,200	35,100	-1,100	-3.0%
18. East Honolulu	46,700	51,100	4,400	9.4%
19. Kaneohe-Kahaluu-Kualoa	54,400	53,600	-800	-1.5%
20. Kailua-Mokapu-Waimanalo	63,600	61,800	-1,800	-2.8%
21. Koolauloa	14,500	16,700	2,200	15.2%
22 North Shore	18,400	20,000	1,600	8.7%
23. Waianae Coast	42,300	50,600	8,300	19.6%
Total	**876,200**	**1,117,300**	**241,100**	**27.5%**

Note: Individual TAA numbers may not sum to totals due to rounding.

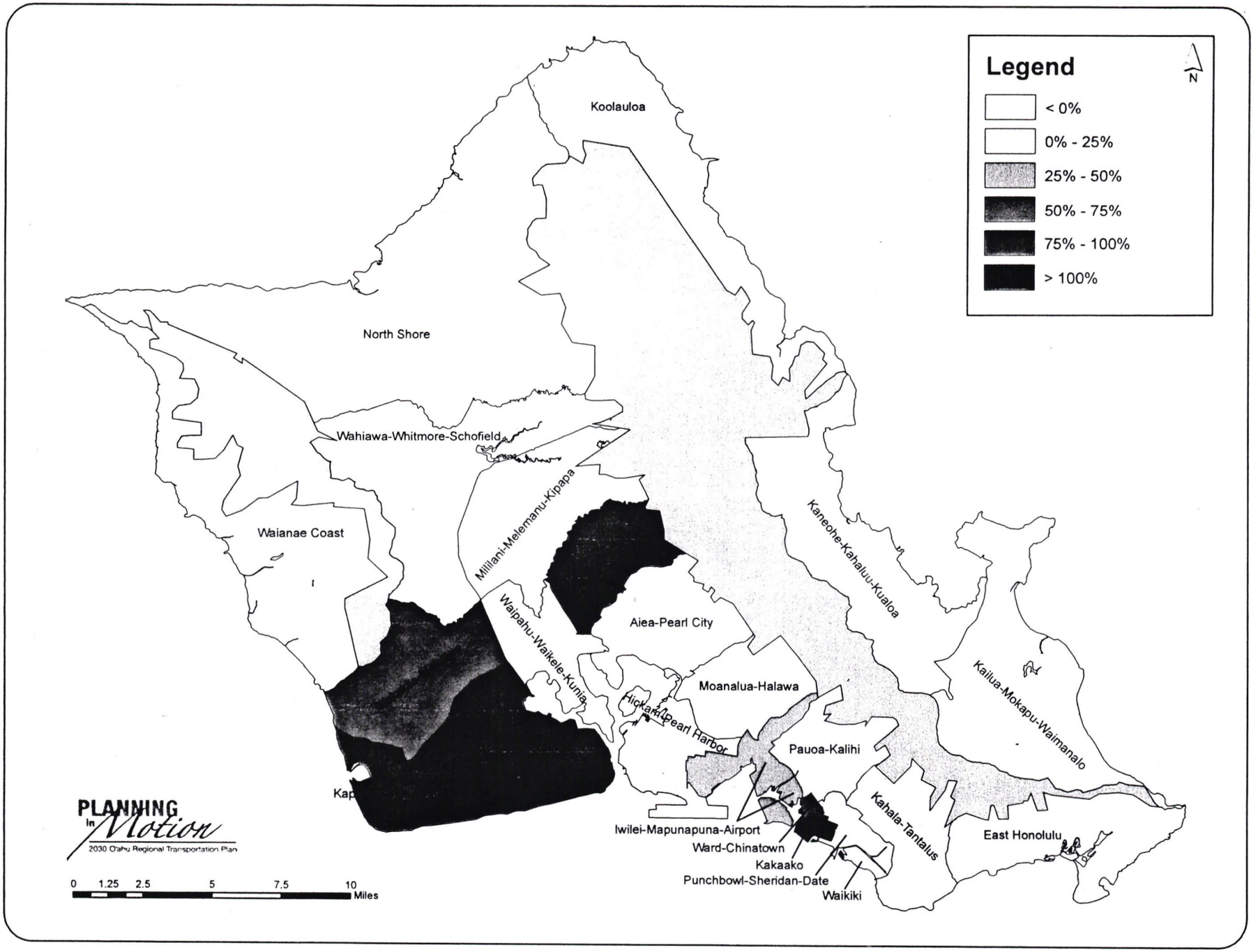


FIGURE1

POPULATION CHANGES BY TRANSPORTATION ANALYSIS AREAS (YEAR 2000 - 2030)

TABLE 2
EMPLOYMENT BY TAA FOR OAHU (YEAR 2000 AND FORECAST YEAR 2030)

Transportation Analysis Area (TAA)	Employment		Employment Change (Year 2000 to Year 2030)	
	Year 2000	Year 2030 Forecast	Difference	Percentage Difference
1. Ward-Chinatown	55,700	61,200	5,500	9.9%
2. Kakaako	30,400	46,100	15,700	51.6%
3. Punchbowl-Sheridan-Date	47,000	60,500	13,500	28.7%
4. Waikiki	35,600	43,200	7,600	21.3%
5. Kahala-Tantalus	34,500	40,700	6,200	18.0%
6. Pauoa-Kalihi	19,100	23,900	4,800	25.1%
7. Iwilei-Mapunapuna-Airport	70,200	73,200	3,000	4.3%
8. Hickam-Pearl Harbor	25,000	25,900	900	3.6%
9. Moanalua-Halawa	29,800	31,000	1,200	4.0%
10. Aiea-Pearl City	21,200	24,100	2,900	13.7%
11. Honouliuli-Ewa Beach	7,700	15,400	7,700	100.0%
12. Kapolei-Ko Olina-Kalaeloa	9,800	41,900	32,100	327.6%
13. Makakilo-Makaiwa	1,300	8,100	6,800	523.1%
14. Waipahu-Waikele-Kunia	12,500	21,500	9,000	72.0%
15. Waiawa-Koa Ridge	2,900	12,400	9,500	327.6%
16. Mililani-Melemanu-Kipapa	10,900	15,300	4,400	40.4%
17. Wahiawa-Whitmore-Schofield	22,500	23,100	600	2.7%
18. East Honolulu	7,600	7,000	-600	-7.9%
19. Kaneohe-Kahaluu-Kualoa	12,600	13,100	500	4.0%
20. Kailua-Mokapu-Waimanalo	25,000	24,500	-500	-2.0%
21. Koolauloa	5,900	6,800	900	15.3%
22 North Shore	4,600	4,100	-500	-10.9%
23. Waianae Coast	7,600	9,700	2,100	27.6%
Total	**499,300**	**632,900**	**133,600**	**26.8%**

Note: Individual TAA numbers may not sum to totals due to rounding.

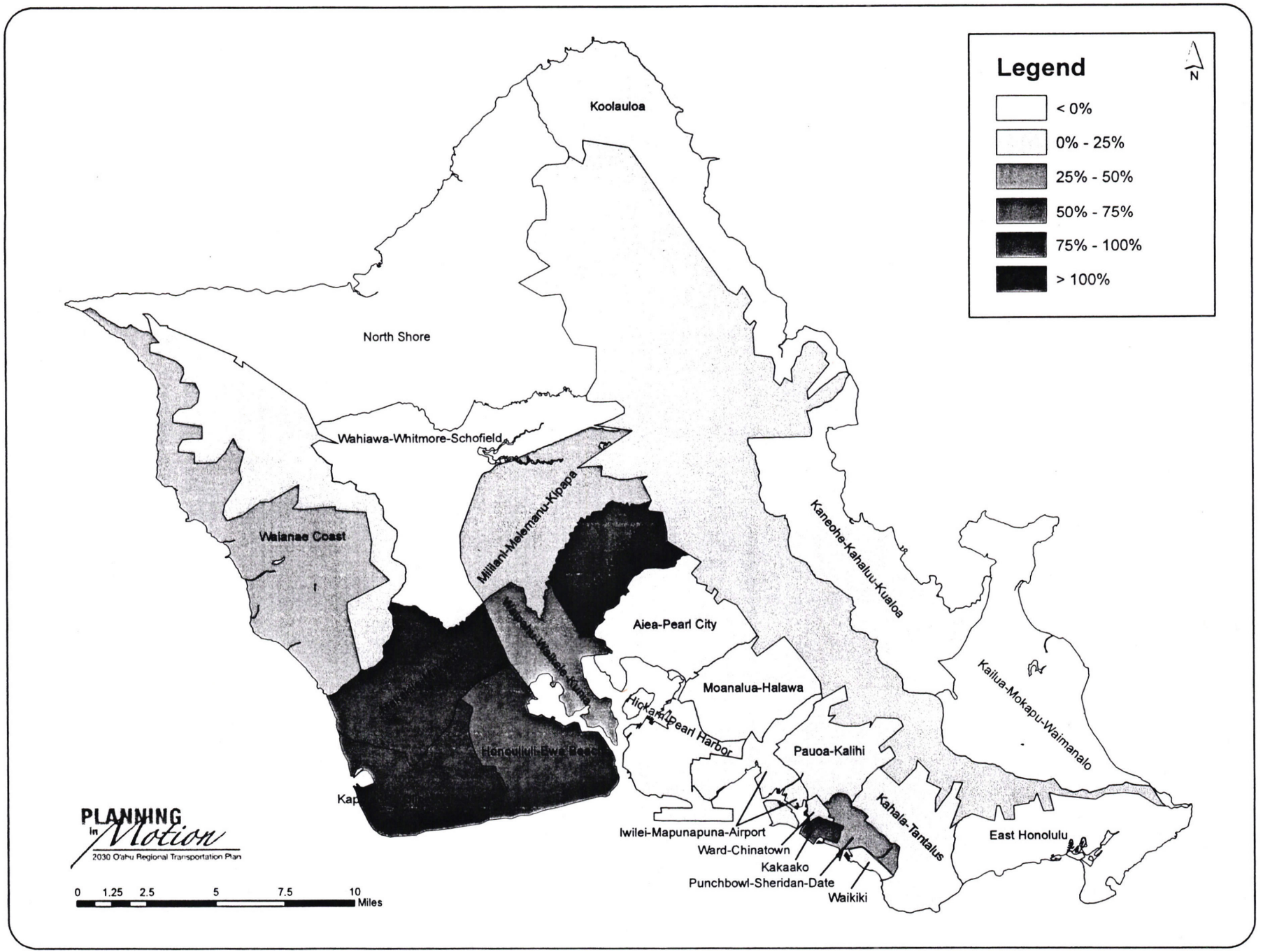


FIGURE 2

EMPLOYMENT CHANGES BY TRANSPORTATION ANALYSIS AREAS (YEAR 2000 - 2030)

TABLE 3
EMPLOYMENT BY CATEGORY FOR OAHU (YEAR 2000 AND FORECAST YEAR 2030)

Employment Category	Year 2000	Forecast Year 2030	Difference	Percentage Difference
Armed Forces	40,400	40,400	0	0.0%
Public Administration	35,000	41,300	6,300	18.0%
Hotel	16,600	19,500	2,900	17.5%
Agriculture	4,700	5,400	700	14.9%
Transportation/Communications/Utilities	40,200	50,000	9,800	24.4%
Industrial	31,000	34,700	3,700	11.9%
Fiscal	32,700	42,300	9,600	29.4%
Service	182,500	252,800	70,300	38.5%
Retail	93,100	119,100	26,000	27.9%
Construction	23,100	27,500	4,400	19.0%
Total Employment	**499,300**	**632,900**	**133,600**	**26.8%**

Note: Individual categories may not sum to totals due to rounding.

Approximately 72% of the growth in employment between 2000 and 2030 is projected to be in the retail and service sectors (with service being almost 53%). The next three largest increases are in Transportation/Communications/Utilities, Fiscal, and Public Administration. In calculating the growth rate for each employment category it can be seen in Table 3 that the service and fiscal sectors are projected to grow at the fastest rate.

Table 4 shows the projections for housing and hotel/resort condominiums for the Year 2030. Housing units and occupied households are both projected to grow by approximately 35%. Hotel rooms are projected to increase by 37%, while resort condominiums show the largest percentage increase (approximately 48%).

TABLE 4
HOUSING AND VISITOR UNITS FOR OAHU (YEAR 2000 AND FORECAST YEAR 2030)

Category	Year 2000	Forecast Year 2030	Difference	Percentage Difference
Housing Units	316,000	428,800	112,800	35.7%
Occupied Households	286,500	387,000	100,500	35.1%
Hotel Rooms	27,700	38,000	10,300	37.2%
Resort Condominiums	8,600	12,700	4,100	47.7%

4.0 BASELINE YEAR 2030 SERVICE EFFECTIVENESS ANALYSIS

The OMPO TDFM model is a standard four-stage travel demand-forecasting model. These four stages are: (1) trip generation, (2) trip distribution, (3) mode choice, and (4) trip assignment. The model generates person trip productions and attractions for each TAZ through application of trip generation factors to the land use and socioeconomic data for each TAZ. The trip distribution process then matches the person trip productions to the person trip attractions, thereby defining TAZ to TAZ trip making. The trip distribution is based on the relative attractiveness of the productions and attractions in each TAZ and the estimated travel times between the TAZs.

Once this has been determined, the mode-split algorithms in the model estimate the number of persons that will use transit, automobiles, or other non-motorized modes. An auto occupancy algorithm also converts the person trips by automobile into an estimated number of vehicles. The vehicle and transit trips are then assigned to the highway and transit networks to produce travel demand forecasts islandwide on Oahu.

4.1 TRIP PRODUCTION AND MODAL CHOICE

Table 5 details the mode split estimates for the Year 2000 and Year 2030 baseline models. It can be seen from the table that an overall growth of approximately 713,000 daily person trips (approximately 26%) is projected to be made by residents over the 30-year plan period. Of the estimated 3,502,000 total daily resident person trips in 2030, 84% are projected to be in private automobiles, 5% are projected to be made by transit, and the remaining 11% are projected to be made by bicycle/walking. The resident person trips by mode are projected to remain relatively proportional to each other over the 30-year plan time frame. Figures 3 and 4 presents the modal data in pie chart form.

4.2 TRANSIT RIDERSHIP

In general terms, transit ridership statistics reveal the effectiveness of improvements made to the transit system as a whole. The differences in the transit network between Year 2000 and Baseline Year 2030 are described in Chapter 2. The travel demand forecasting model projects for both the peak (four-hour a.m. and p.m.) and off-peak (16-hour off peak) periods amounting to a daily forecast of system ridership on Oahu. Daily transit ridership forecasts by line are detailed in Appendix C.

Table 6 and Figure 5 show a summary of ridership statistics for 2000 and 2030. There is little growth forecast in the a.m. and p.m. peak periods, for which there may be a variety of reasons. The most likely reason is that portions of the system may currently be near capacity, and the system capacity has not been assumed to be increased in the baseline scenario to keep up with the increases in population and land use development. In the off-peak period, transit ridership is projected to grow by approximately 16% in the baseline condition. The overall net daily increase in system ridership is approximately 6% or 14,000 additional riders.

TABLE 5
MODE SPLIT ESTIMATES (YEAR 2000 AND BASELINE YEAR 2030)

Mode	Year 2000 Daily Resident Person Trips	Percentage	Baseline Year 2030 Daily Resident Person Trips	Percentage	Difference Between 2000 & 2030	Percentage Difference Between 2000 & 2030
Automobile Trips	2,333,000	83.7%	2,950,000	84.2%	617,000	26.4%
Transit Trips	157,000	5.6%	170,000	4.9%	13,000	8.3%
Bicycle and Walk Trips	299,000	10.7%	382,000	10.9%	83,000	27.8%
Total Daily Resident Person Trips	**2,789,000**	**100%**	**3,502,000**	**100%**	**713,000**	**25.6%**

Figure 3: Year 2000 Daily Resident Person Trips

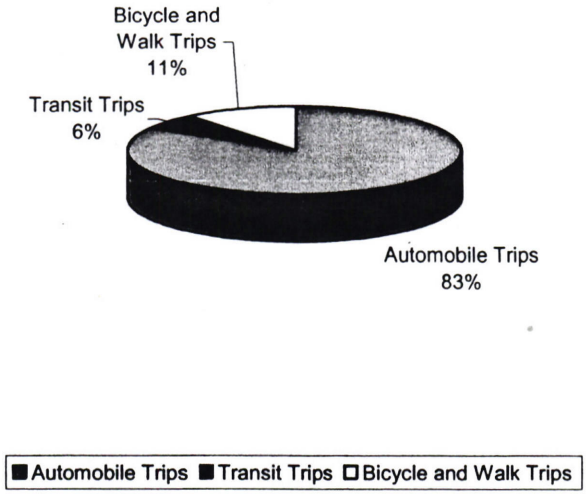


Figure 4: Baseline Year 2030 Daily Resident Person Trips

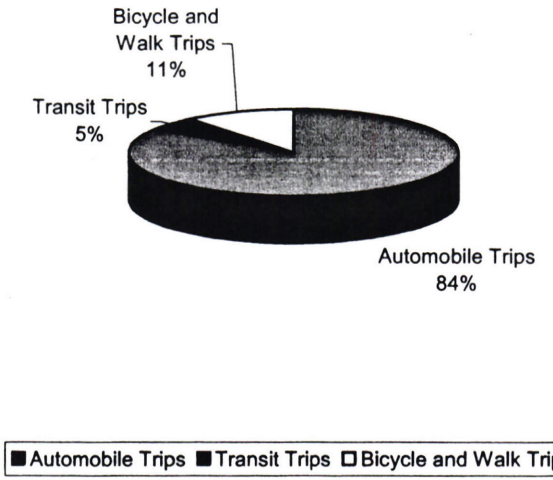
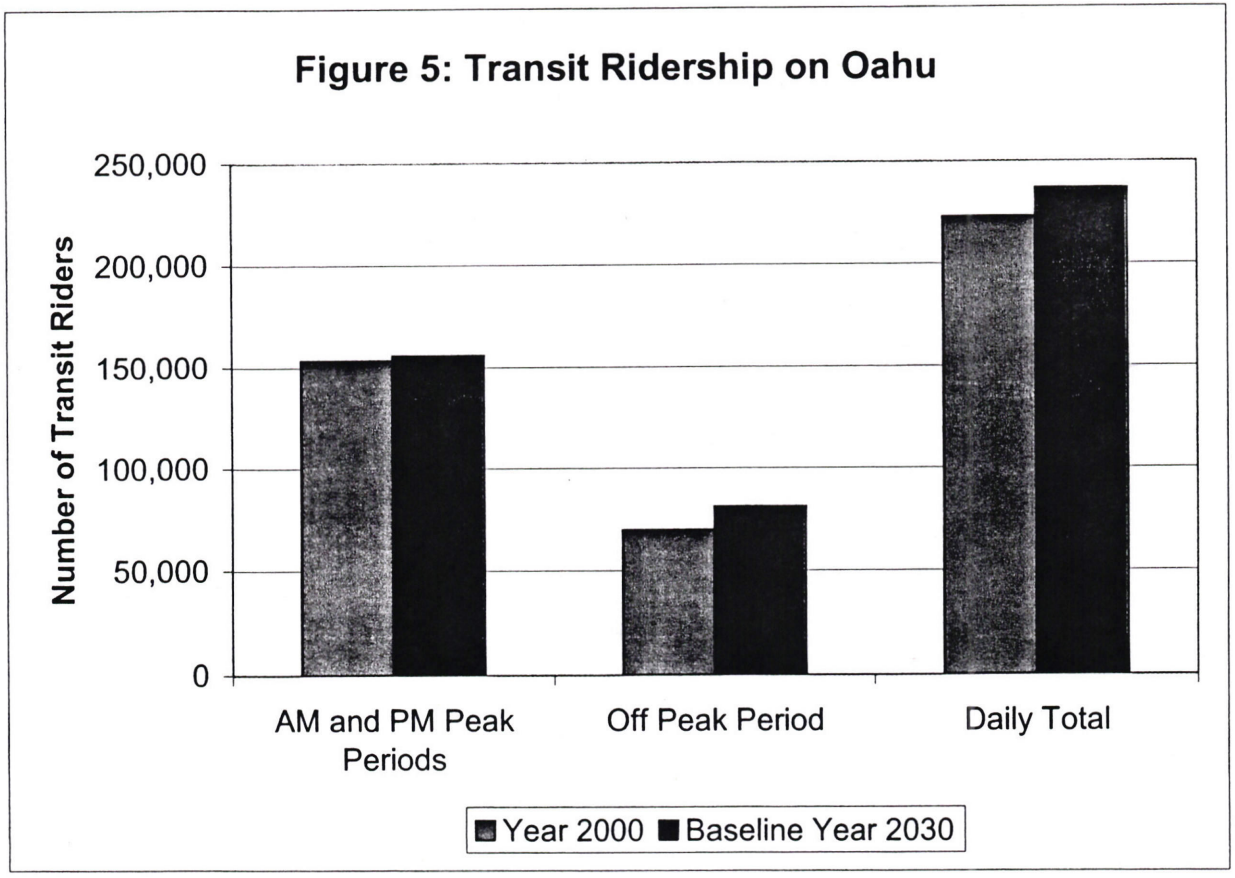


TABLE 6
TRANSIT RIDERSHIP FOR OAHU (YEAR 2000 AND BASELINE YEAR 2030)

Time Period	Year 2000	Baseline Year 2030	Difference	Percentage Difference
AM and PM Peak Periods	153,349	155,879	2,530	1.6%
Off Peak Period	69,437	80,844	11,407	16.4%
Daily Total	**222,786**	**236,723**	**13,937**	**6.3%**



4.3 AUTO OCCUPANCY

Average vehicle occupancy (AVO) is often used in travel demand forecasting as a measure of travel efficiency. In order to compute AVO, the total number of persons traveling in private vehicles is divided by the total number of private vehicle trips undertaken. The AVO produced by the Oahu travel demand model in Year 2000 was 1.15 rising to 1.16 for the Baseline Year 2030. This measure was computed for resident only home-based work (HBW) trips, typically when highway conditions are the most congested.

Average vehicle ridership (AVR) is another measure of travel efficiency that can be derived from the travel demand forecasts, and is often used in air quality analyses. The AVR is calculated by dividing the total person trips by total private vehicles and was again evaluated for the HBW trip purpose. AVR for the Year 2000 was calculated to be 1.37, falling to 1.35 in the Year 2030 baseline conditions.

4.4 VEHICLE MILES TRAVELED AND VEHICLE HOURS TRAVELED

Vehicle miles traveled (VMT) is another travel statistic measuring service effectiveness. The islandwide daily VMT is projected to increase by about 32% or 3.6 million between 2000 and 2030. Table 7 and Figure 6 show that the travel demand model forecasts VMT increases of approximately 2 million (38%) on the freeway system, 188,000 (13%) on expressways, 1.21 million (35%) on arterials, and 312,000 (26%) on collectors.

Vehicle hours traveled (VHT) is an indicator of how additional travel demand influences congestion in the system from a travel time standpoint. The travel demand model forecasts an increase in islandwide daily VHT of approximately 435,000 hours (152% overall) between 2000 and 2030. The model estimates that over three-quarters of the VHT occurs on the freeway and arterial systems, and the freeway and arterial systems are similarly projected to experience the greatest increases in VHT. Table 8 and Figure 7 present a full breakdown of these results.

TABLE 7
CHANGES IN VMT ON CLASSIFIED SYSTEM
(YEAR 2000 AND YEAR 2030 BASELINE)

Facility Type	Daily VMT			
	Year 2000	Year 2030	Difference	Percentage Difference
Freeways	5,091,000	7,021,000	1,930,000	38%
Expressways	1,461,000	1,649,000	188,000	13%
Arterial	3,467,000	4,676,000	1,209,000	35%
Collector	1,196,000	1,508,000	312,000	26%
Total	**11,215,000**	**14,854,000**	**3,639,000**	**32%**

Figure 6: Vehicle Miles Traveled

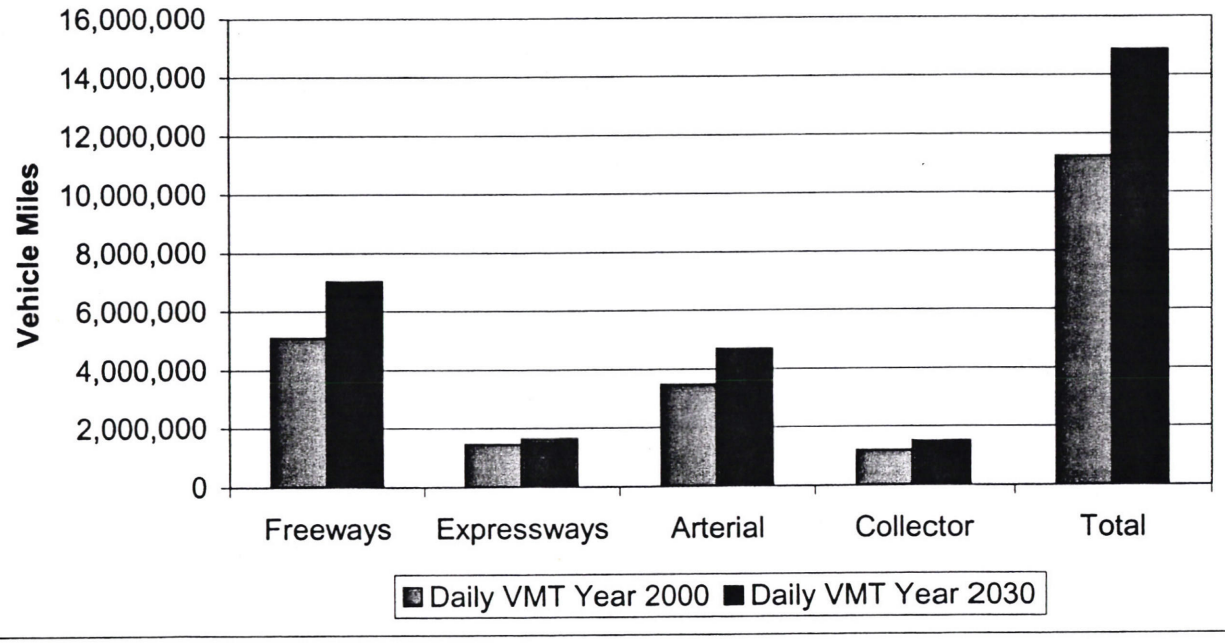
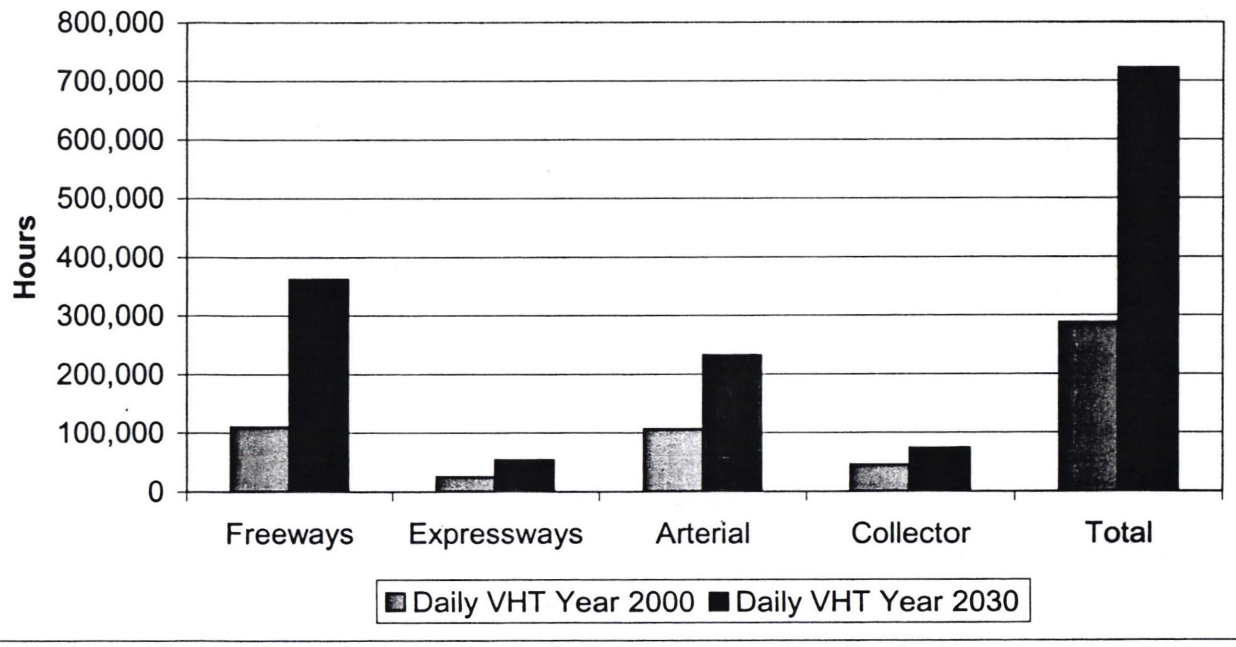


TABLE 8
CHANGES IN VHT ON CLASSIFIED SYSTEM
(YEAR 2000 AND YEAR 2030 BASELINE)

Facility Type	Daily VHT			
	Year 2000	Year 2030	Difference	Percentage Difference
Freeways	110,000	362,000	252,000	229%
Expressways	26,000	54,000	28,000	108%
Arterial	106,000	232,000	126,000	119%
Collector	45,000	74,000	29,000	64%
Total	**287,000**	**722,000**	**435,000**	**152%**

Figure 7: Vehicle Hours Traveled



5.0 BASELINE YEAR 2030 CONGESTION ANALYSIS

Congestion is defined as the condition when demand for a facility exceeds a desired service capacity. Congestion can be measured through volume-to-capacity ratio and level of service and through travel delay. In presenting the results of the baseline condition, the scene is being set for the comparison of transportation improvement alternatives to the baseline condition. The way in which this will be achieved will be through assessing congestion relief effectiveness by comparison of the following measures of effectiveness (MOE).

5.1 SCREENLINE LEVEL OF SERVICE

The operating conditions of a roadway are represented by the volume-to-capacity (V/C) ratio and level of service (LOS). The key components to a roadway's V/C ratio are the volume of traffic traversing the roadway and the physical capacity of the roadway. Capacity is expressed in vehicles per hour per lane and varies depending on the functional class and physical characteristics of the facility in question. Factors affecting capacity include roadway widths, posted speed limits, gradient, degree of curvature, and area type (e.g., urban versus rural). In urban areas, capacity is heavily influenced by traffic signal spacing, green time allocation, and level of access control. The capacity values used in the computation of operating conditions are stratified by area type and facility type, as listed in Table 9 below.

TABLE 9
CAPACITY VALUES BY AREA TYPE AND FACILITY TYPE
(Vehicles per Hour per Lane)

Facility Type	Area Type			
	1 & 2 CBD	3 & 4 Urban	5 & 6 Suburban	7 & 8 Rural
1 Freeways	2,200	2,200	2,200	2,200
2 Expressways	1,450	1,450	1,650	1,850
3 Class I Arterials	850	900	1,150	1,400
4 Class II Arterials	800	850	900	1,250
5 Class III Arterials	750	800	850	1,200
6 Class I Collectors	700	750	800	1,000
7 Class II Collectors	650	700	750	850

Source: Adapted from Transportation Research Board, *Highway Capacity Manual*, 2000.

The facility type and area type for each roadway link crossing the screenlines of interest were obtained from the Baseline Year 2030 database of the OMPO travel demand forecasting model. The facility type relates to the functional class of the facility. The area type is estimated by the

model as a function of the population and employment densities within the traffic analysis zone containing the link.

The total capacity on each facility is computed by multiplying the capacity of a single travel lane by the number of travel lanes at the point the traffic count is measured. The resulting value represents the roadway's effective capacity. V/C is then computed by dividing the traffic count by the total capacity in each direction on the road in question. The V/C ratio thus represents the percent of a roadway's capacity that is being utilized. For example, a roadway with a V/C ratio of 0.85 indicates that the roadway is operating at 85% of its capacity.

LOS is a grading system used in transportation planning that assigns a grade to a roadway based on the V/C ratio; the grade scale is represented by the letters A through F, with LOS A representing the best condition and LOS F representing the worst. LOS A through LOS D is generally considered an acceptable operating condition, while LOS E and LOS F are not. Descriptions of the six LOS grades are summarized in Table 10.

Level of service (LOS) was calculated for existing conditions (Deliverable 5.4) along all the major arterials crossing the screenline locations in order to identify which locations were severely impacted from a congestion perspective. The two conditions that represent the worst traffic scenarios are generally that of the a.m. inbound (towards the PUC) peak hour and the p.m. outbound (from the PUC) peak hour. Baseline 2030 conditions for LOS were assessed by extracting morning and afternoon peak period volumes from the TDFM 2030 model run and then converting this data to peak hour volumes using the post processor developed as part of Deliverable 5.3. The 22 screenlines used for the LOS analysis are displayed by location in Figure 8. Baseline 2030 daily vehicle trip assignments across all screenlines and a full analysis of 2030 peak hour LOS by facility crossing each screenline can be seen in Appendix D.

5.1.1 AM Peak Hour Level of Service

Table 11 and Figure 9 summarize the calculated V/C ratios and estimated LOS grades of each facility at each screenline for the a.m. peak direction. The analysis for 2030 indicates that two of the most congested screenlines are projected to be the Kapalama Drainage Canal in Kalihi (Screenline 4) and Kalauao in Pearl City (Screenline 5). These screenlines increase to an average LOS F from E under existing conditions with V/C ratios in excess of 1.00. Screenline 6 – Waikele Stream in Waipahu exhibits the largest projected increase in congestion in 2030, with the average V/C projected to increase from 0.67 to 1.55 in 2030. Screenline 8 in Ewa also shows a large projected increase in congestion from a V/C of 0.55 in Year 2000 to 1.40 in Year 2030. The change here is attributable to the large growth in employment and population forecast in the Ewa/Kapolei area.

Other screenlines worth noting for increases in LOS are Screenline 7 at Kahe Point in the Waianae area with a change from LOS C to LOS E (0.96) and screenlines 20 and 22 in Ainakoa and Kapolei, also showing LOS E in 2030.

TABLE 10

LEVEL OF SERVICE DEFINITIONS FOR ARTERIAL STREET SEGMENTS

Level of Service	Volume / Capacity Ratio	Definition
A	0.00 - 0.60	EXCELLENT. Completely free flow conditions. Vehicle operation is virtually unaffected by presence of other vehicles. Minor disruptions are easily absorbed without causing significant delays.
B	0.61 - 0.70	VERY GOOD. Reasonably unimpeded flow, the presence of other vehicles begins to be noticeable. Disruptions are still easily absorbed, although local deterioration in LOS will be more obvious.
C	0.71 - 0.80	GOOD. The ability to maneuver and select an operating speed is clearly affected by the presence of other vehicles. Minor disruptions may be expected to cause serious local deterioration in service and queues may form behind any significant traffic disruption.
D	0.81 - 0.90	FAIR. Conditions border on unstable flow. Speed and ability to maneuver are severely restricted due to traffic congestion. Only the most minor disruptions can be absorbed without the formation of extensive queues and deterioration of service to LOS F.
E	0.91 - 1.00	POOR. Conditions become unstable. Represents operation at or near capacity. Any disruption, no matter how minor, will cause queues to form and service to deteriorate to LOS F.
F	> 1.00	FAILURE. Represents forced or breakdown flow. Operation within queues is unstable and characterized by short spurts of movement followed by stoppages.

Source: Adapted from *Highway Capacity Manual 2000,* Transportation Research Board, 2000.

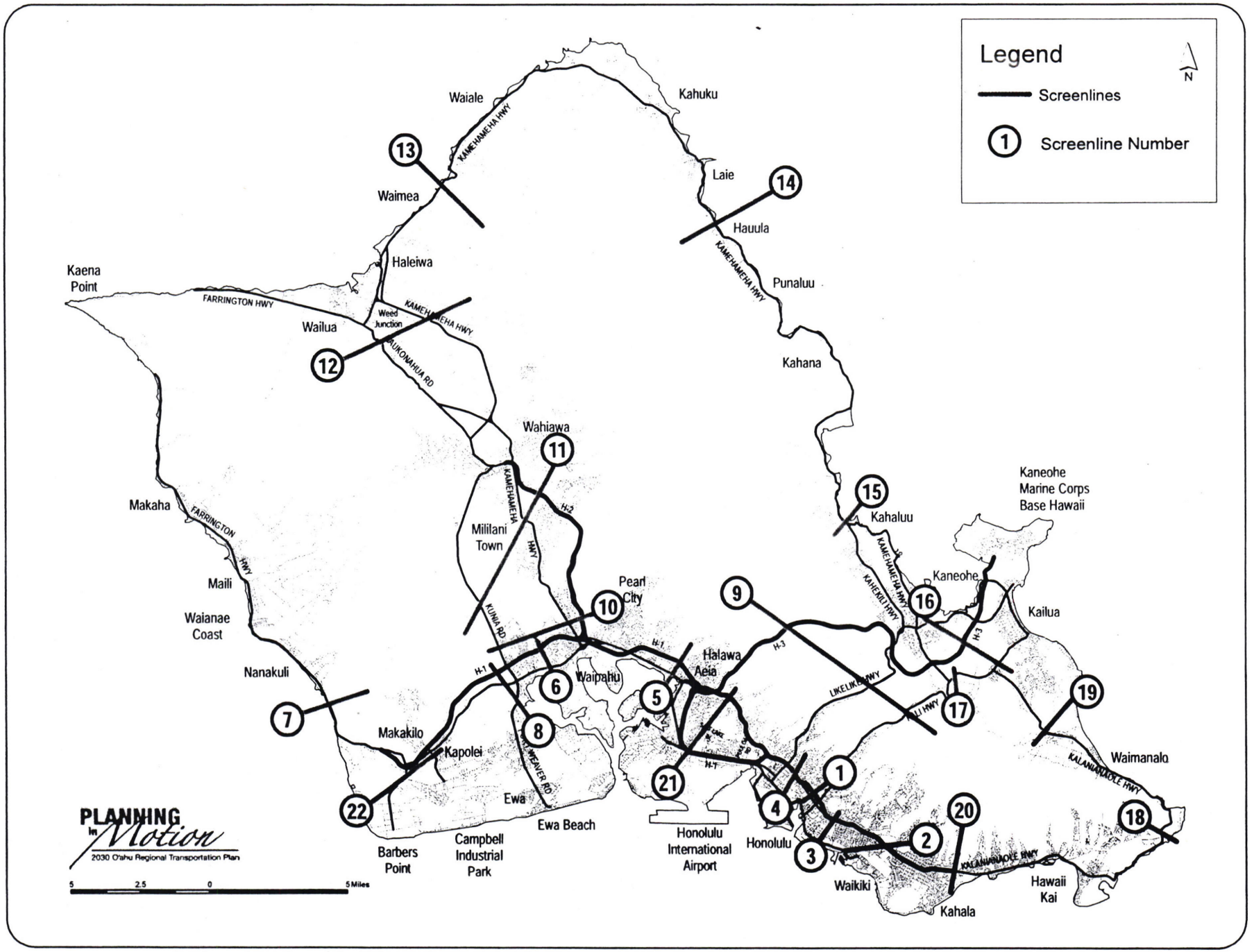


FIGURE 8
BASELINE YEAR 2030 SCREENLINE LOCATIONS

TABLE 11
YEAR 2002 AND BASELINE YEAR 2030 SCREENLINE LEVEL OF SERVICE ANALYSIS
AM PEAK HOUR INBOUND

SCREENLINE / FACILITY	EXISTING CONDITIONS				BASELINE YEAR 2030			
	Total Capacity (vph)	Total Volume (vph)	Volume/Capacity Ratio	Level of Service	Total Capacity (vph)	Total Forecast Volume (vph)	Volume/Capacity Ratio	Level of Service
1. NUUANU STREAM BRIDGE Eastbound	20,450	15,369	0.75	C	20,450	19,240	0.94	E
2. MANOA-PALOLO DRAINAGE CANAL / ALA WAI CANAL Westbound	20,850	13,960	0.67	B	21,000	14,182	0.68	B
3. EAST OF WARD AVENUE Eastbound	16,600	14,053	0.85	D	17,900	16,984	0.95	E
4. KAPALAMA DRAINAGE CANAL Eastbound	15,900	15,881	1.00	E	15,650	17,338	1.11	F
5. KALAUAO Eastbound	18,350	18,021	0.98	E	18,350	26,579	1.45	F
6. WAIKELE STREAM Eastbound	11,850	7,933	0.67	B	11,850	18,385	1.55	F
7. KAHE POINT Southbound	2,500	1,809	0.72	C	2,500	2,405	0.96	E
8. EWA Eastbound	12,400	6,775	0.55	A	12,400	17,335	1.40	F
9. TRANS KOOLAU Westbound	11,800	7,793	0.66	B	11,000	8,414	0.76	C
10. WAIPIO Southbound	13,250	7,916	0.60	A	14,800	10,170	0.69	B
11. MILILANI Northbound	8,700	3,734	0.43	A	8,200	5,654	0.69	B
12. HALEIWA Southbound	2,650	994	0.38	A	2,650	1,023	0.39	A
13. WAIMEA BRIDGE Northbound	1,250	531	0.42	A	1,250	751	0.60	A
14. HAUULA (KAIPAPAU BRIDGE) Southbound	1,250	491	0.39	A	1,250	1,109	0.89	D
15. KAHALUU (KAHEKILI HIGHWAY) Southbound	1,250	872	0.70	B	1,250	1,120	0.90	D
16. KAMEHAMEHA HIGHWAY Westbound	8,500	4,029	0.47	A	8,500	3,195	0.38	A
17. MAUNAWILI Westbound	3,700	2,185	0.59	A	3,300	2,386	0.72	C
18. SANDY'S BEACH PARK Westbound	1,250	373	0.30	A	1,250	593	0.47	A
19. OLOMANA (WAIMANALO BRIDGE) Southound	1,250	923	0.74	C	1,250	1,121	0.90	D
20. AINAKOA Westbound	4,950	1,493	0.30	A	5,800	5,794	1.00	E
21. SALT LAKE Eastbound	17,600	12,447	0.71	C	38,800	22,591	0.58	A
22. FARRINGTON Southbound	4,500	2,929	0.65	B	3,600	3,296	0.92	E

Note: All sreenlines are inbound to the PUC with the exception of screenlines 11, 13 & 22

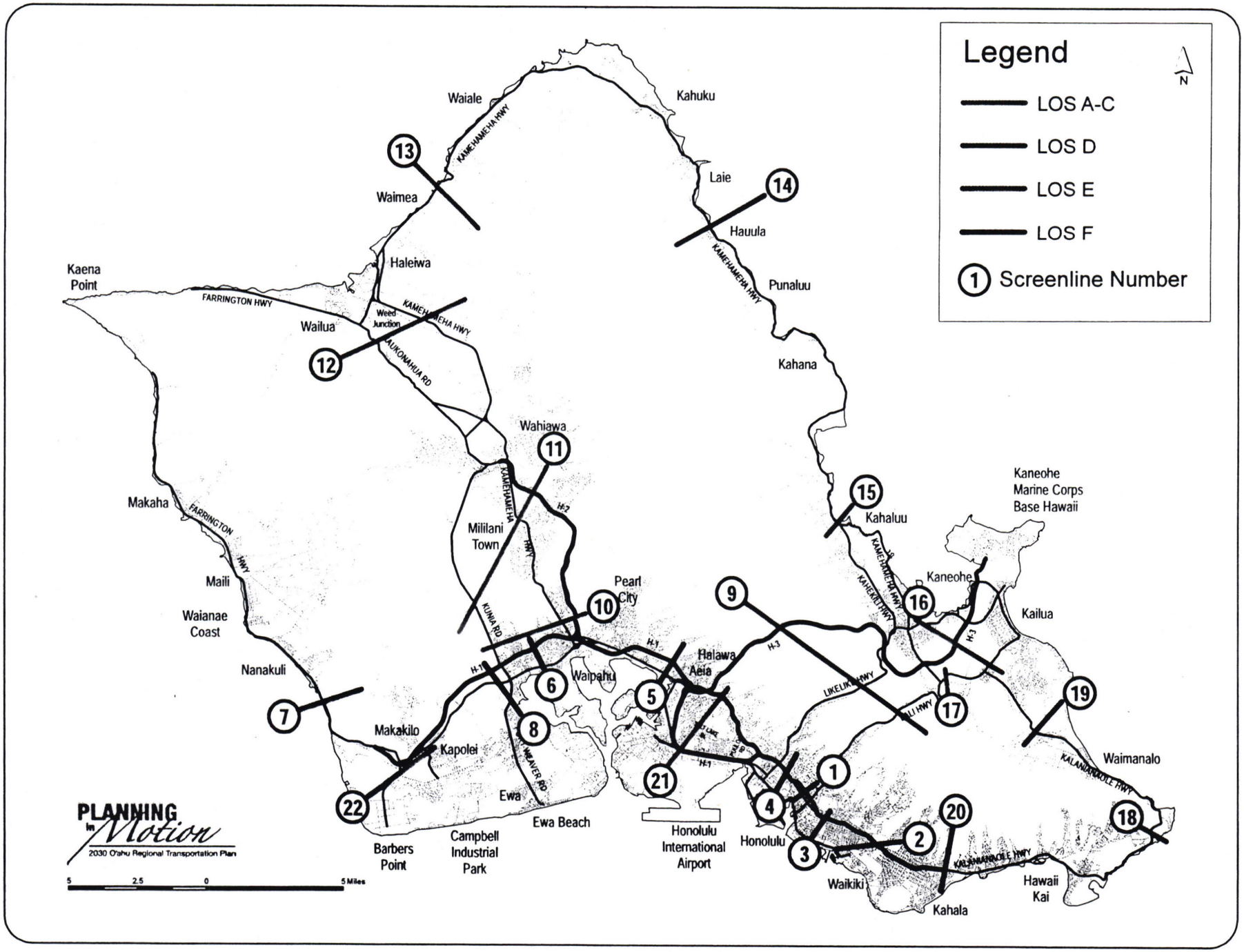


FIGURE 9

BASELINE YEAR 2030 AM PEAK HOUR SCREENLINE AVERAGE LEVELS OF SERVICE (INBOUND)

5.1.2 PM Peak Hour Level of Service

The most congested screenline in 2030, during the p.m. peak hour, is projected to be Ewa (Screenline 8) with an overall V/C ratio of 1.16 and an average LOS F. In 2002, the same screenline was at V/C 0.61 and an average LOS B. Kalauao in Pearl City (Screenline 5) and Kapalama Drainage Canal in Kalihi (Screenline 4) are the next most congested locations both with V/C ratios exceeding 1.00 and an average LOS F. Kalauao and Kapalama Drainage Canal were at LOS C and D respectively in Year 2000. The final two screenlines projected at LOS F under 2030 conditions are Waikele Stream (Screenline 6) in Waipahu and Ainakoa (Screenline 20). Waikele Stream congestion is attributable to the same set of socioeconomic and land use conditions as in the a.m. peak hour (higher density of population and employment in the surrounding areas). Ainakoa suffers predominately due to geography, with Kalanianaole Highway the sole highway connecting the PUC to the Hawaii Kai area.

Another notable screenline where congestion is projected to occur during the p.m. peak hour is at Kahe Point (Screenline 7) in the Waianae area. This area has limited access via one major facility (Farrington Highway) and as a result the screenline V/C ratio is 0.89 and an average LOS D, and increase from V/C 0.75 (LOS C) in 2000. Figure 10 and Table 12 show all the results of the p.m. peak hour outbound analysis.

5.2 CONGESTED LANE MILES

Congested lane miles represent the total number of system lane miles operating under congested conditions and have been calculated for the morning two-hour peak period. Tables 13 and 14 present the lane miles traveled at congested conditions for the morning peak period. Table 15 shows that with the increase in vehicle trips forecast for 2030 there is a projected increase in congested lane miles traveled. Congested conditions are defined as LOS E and F, while LOS A through D are defined to represent uncongested conditions.

An increase in congested lane miles is projected to occur on all facility types reported from the model. Figures 11 and 12 show Year 2000 and 2030 lane miles by facility type and congestion level.

5.3 VEHICLE HOURS OF DELAY

Vehicle hours of delay is defined as the difference between vehicles hours traveled under congested conditions and vehicle hours of travel that would otherwise be expected under free-flow conditions. These were calculated directly from the 2000 and 2030 model forecasts and are an indicator of congestion in the system. Table 16 and Figure 13 show that overall; there is a projected systemwide increase in daily delay of about 357,000 hours, amounting to a percentage change between 2000 and 2030 of almost 800%. Delay is projected to increase on all facility types in the model. The two largest increases occur on the freeways and arterials (221,000 hours and 93,000 hours respectively). The largest percentage change occurs on the expressways (1200%). This delay is attributable to the projected changes in land use and socioeconomic data with relatively little being improved on the highways and transit system between 2000 and 2030 in the baseline scenario.

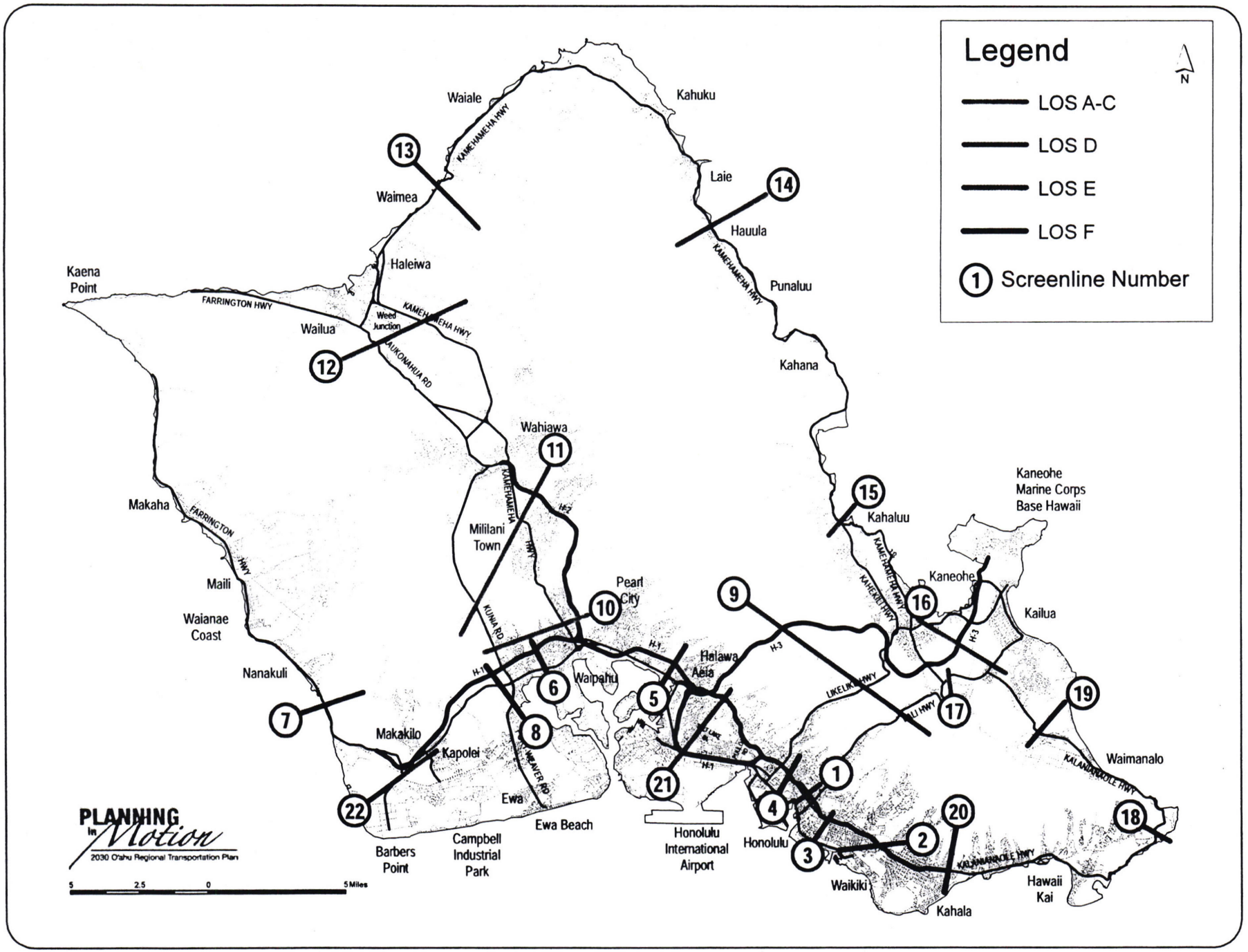


FIGURE 10

BASELINE YEAR 2030 PM PEAK HOUR SCREENLINE AVERAGE LEVELS OF SERVICE (OUTBOUND)

TABLE 12
YEAR 2002 AND BASELINE YEAR 2030 SCREENLINE LEVEL OF SERVICE ANALYSIS
PM PEAK HOUR OUTBOUND

SCREENLINE / FACILITY	EXISTING CONDITIONS				BASELINE YEAR 2030			
	Total Capacity (vph)	Total Volume (vph)	Volume/Capacity Ratio	Level of Service	Total Capacity (vph)	Total Forecast Volume (vph)	Volume/Capacity Ratio	Level of Service
1. NUUANU STREAM BRIDGE Westbound	19,800	14,846	0.75	C	19,800	17,172	0.87	D
2. MANOA-PALOLO DRAINAGE CANAL / ALA WAI CANAL Eastbound	20,350	14,147	0.70	B	20,500	15,872	0.77	C
3. EAST OF WARD AVENUE Eastbound	20,450	14,683	0.72	C	21,300	18,573	0.87	D
4. KAPALAMA DRAINAGE CANAL Westbound	16,000	14,341	0.90	D	14,900	16,472	1.11	F
5. KALAUAO Westbound	18,350	13,510	0.74	C	18,350	21,164	1.15	F
6. WAIKELE STREAM Westbound	13,000	7,458	0.57	A	13,000	13,845	1.07	F
7. KAHE POINT Northbound	2,500	1,882	0.75	C	2,500	2,224	0.89	D
8. EWA Westbound	11,150	6,761	0.61	B	11,150	12,883	1.16	F
9. TRANS KOOLAU Eastbound	11,800	6,646	0.56	A	11,000	6,771	0.62	B
10. WAIPIO Northbound	13,250	7,326	0.55	A	13,650	8,916	0.65	B
11. MILILANI Southbound	8,700	4,250	0.49	A	8,200	5,627	0.69	B
12. HALEIWA Northbound	2,650	1,111	0.42	A	2,650	1,018	0.38	A
13. WAIMEA BRIDGE Southbound	1,250	685	0.55	A	1,250	879	0.70	B
14. HAUULA (KAIPAPAU BRIDGE) Northbound	1,250	604	0.48	A	1,250	962	0.77	C
15. KAHALUU (KAHEKILI HIGHWAY) Northbound	1,250	854	0.68	B	1,250	1,017	0.81	D
16. KAMEHAMEHA HIGHWAY Eastbound	8,500	3,549	0.42	A	8,500	3,400	0.40	A
17. MAUNAWILI Eastbound	3,700	2,373	0.64	B	3,300	2,271	0.69	B
18. SANDY'S BEACH PARK Eastbound	1,250	582	0.47	A	1,250	781	0.62	B
19. OLOMANA (WAIMANALO BRIDGE) Northbound	1,250	1,011	0.81	D	1,250	1,116	0.89	D
20. AINAKOA Eastbound	4,950	1,073	0.22	A	4,350	4,627	1.06	F
21. SALT LAKE Westbound	19,800	10,794	0.55	A	31,800	17,477	0.55	A
22. FARRINGTON Northbound	4,500	2,649	0.59	A	3,600	2,667	0.74	C

Note: All sreenlines are outbound from the PUC with the exception of screenlines 11, 13 & 22

TABLE 13
YEAR 2000 LANE MILES IN THE TWO-HOUR MORNING PEAK PERIOD

Facility Type	Lane Miles at Level of Service	
	LOS E (Congested)	LOS F (Congested)
Freeways	25	210
Expressways	2	63
Arterials	18	278
Total	**45**	**551**

Figure 11: Year 2000 Lane Miles in Morning Peak Period

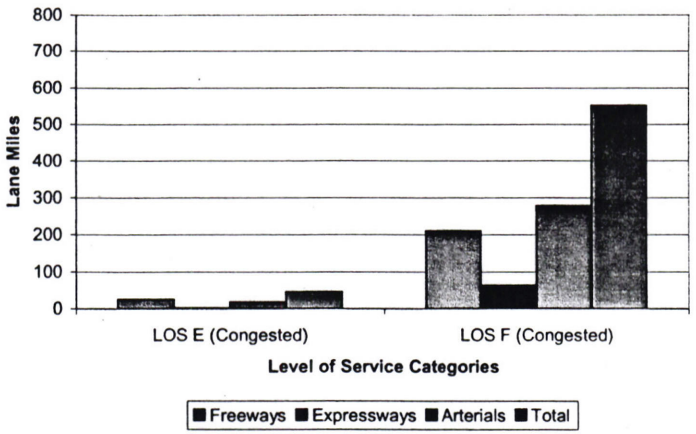


TABLE 14
YEAR 2030 LANE MILES IN THE TWO-HOUR MORNING PEAK PERIOD

Facility Type	Lane Miles at Level of Service	
	LOS E (Congested)	LOS F (Congested)
Freeways	10	283
Expressways	7	72
Arterials	39	357
Total	**56**	**712**

Figure 12: Year 2030 Lane Miles in Morning Peak Period

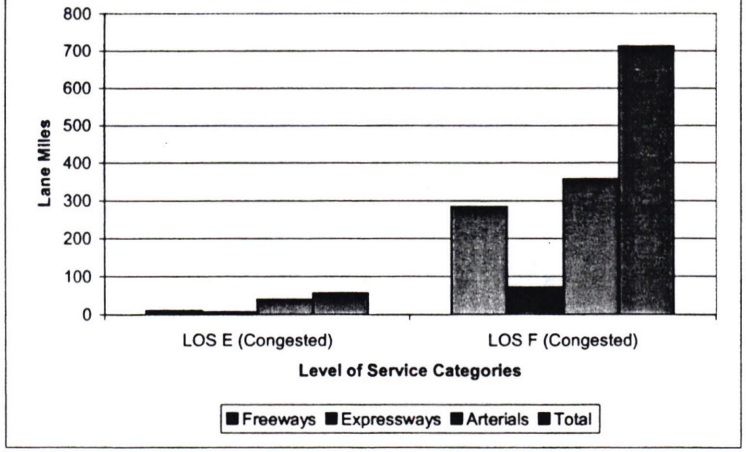


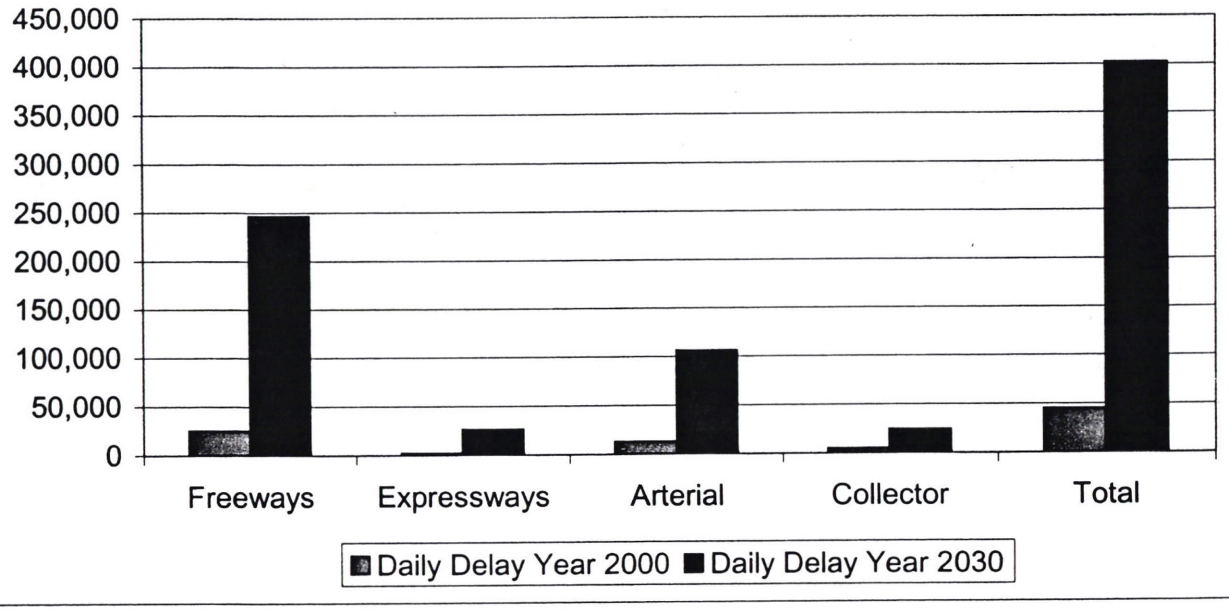
TABLE 15
CHANGE IN LANE MILES IN MORNING PEAK PERIOD

Facility Type	Lane Miles at Level of Servie			
	LOS E Difference	Percentage Difference	LOS F Difference	Percentage Difference
Freeways	-15	-60%	73	35%
Expressways	5	250%	9	14%
Arterials	21	117%	79	28%
Total	**11**	**24%**	**161**	**29%**

TABLE 16
CHANGES IN DELAY ON CLASSIFIED SYSTEM
(YEAR 2000 AND YEAR 2030 BASELINE)

Facility Type	Daily Delay			
	Year 2000	Year 2030	Difference	Percentage Difference
Freeways	25,000	246,000	221,000	884%
Expressways	2,000	26,000	24,000	1200%
Arterial	13,000	106,000	93,000	715%
Collector	5,000	24,000	19,000	380%
Total	**45,000**	**402,000**	**357,000**	**793%**

Figure 13: Hours of Delay



APPENDIX A

SCHOOL ENROLLMENT

APPENDIX A
SCHOOL ENROLLMENT FORECASTS FOR 2030 ORTP

This appendix explains the methodology used to develop and allocate K-12 and university/college enrollment for the baseline Year 2030 socioeconomic data set used for the 2030 Oahu Regional Transportation Plan (ORTP). The starting point for the enrollment was the information in the year 2000 socioeconomic data set provided by the City and County of Honolulu Department of Planning and Permitting (DPP) containing K-12 and university/college enrollment by traffic analysis zone (TAZ).

K-12 SCHOOL ENROLLMENT

Existing Data Sources: K-12 School Enrollment

The State of Hawaii Department of Education (DoE) provided K-12 projections from 2003 to 2009. This information was analyzed to assess the level of growth expected to occur in student enrollment over the next few years. Table 1 and Figure 1 show this data in greater detail. The only area where positive growth is projected (2.1%) is in the Leeward community. This equates to an average growth of less than 0.4% per annum. The other three communities listed (Honolulu, Central and Windward) all show a decline in enrollment with the largest in Windward (-11.2%). In summary, it can be seen from Table 1 and Figure 1 that the overall system growth in student enrollment is projected to be negative over the next six years.

K-12 Enrollment Methodology

The K-12 enrollment projections that were provided by DoE are not suitable for the longer-term projection needed for the 2030 ORTP. The six-year cycle as analyzed above shows the growth in enrollment declining over these years. Even though these projections are showing this trend, it not clear that that the trend will continue over the 25+ year timeframe of the 2030 ORTP. Therefore, the K-12 enrollment was projected using a different approach.

In addition, the alternative method was used because the way that the OMPO travel demand model is designed means that it will generate school trip productions regardless of change in household growth. Therefore, there is a need to grow K-12 enrollment so that the model can generate attractions to which the productions can be matched. If this is not undertaken, there is a possibility that the model may produce strange assignments/travel patterns, as it will balance home-school trips to the productions and thus effectively force enrollment up without input/guidance.

The socioeconomic data set provided by the Department of Planning and Permitting (DPP) for the Year 2000 and 2030 was used as the basis for the projections. This data contains the number of persons by household for year 2000 and a projection for year 2030. From this data, a growth rate by traffic analysis area (TAA) was calculated. Table 2 shows all the growth rates by the 23 TAAs. The growth rates were calculated as follows: first, the households containing three or more persons in each TAA were summed for Year 2000 and Year 2030. Households containing one or two people were not used, as they are expected to contain mostly adults without any children. The percentage change between the two years was calculated to form a

growth rate in each TAA. Table 2 shows that the range of growth rates produced results that range from a maximum of +424% in Kakaako to a minimum of –9% in Hickam/Pearl Harbor.

These percentages were then applied to the Year 2000 K-12 data by TAA as contained in the socioeconomic dataset provided by OMPO from the 2000 base year travel demand forecasting model (through aggregation of TAZs) to grow the student enrollment numbers for input into the travel demand forecasting model. It should be noted that the 2000 K-12 enrollment data shown in Table 2 is not directly comparable with the DoE data shown in Table 1 since the OMPO model 2000 base year dataset includes both public and private schools.

Table 2 shows the development of K-12 enrollment projections. The projections indicate an islandwide increase in enrollment to approximately 199,167 students in 2030, compared to about 167,112 students in 2000. This represents an increase of 32,056 students over the plan period. According to the 2000 socioeconomic dataset, 286 K-12 schools served a total of 167,112 public and private students; this translates into an average student population of approximately 584 students at each school.

Allocation of Projected K-12 Enrollment

The method used to allocate the K-12 growth projections within each TAA depended upon whether the TAA is located in a developing versus mature area of the island. This determination was made by examining the percentage increases in household size and the absolute increase in student enrollment from 2000 to 2030. TAAs projected to experience high enrollment increases were identified using the following criteria: a household growth rate greater than 15% and an absolute positive change greater than 1,000 students.

Some areas of the island are very much built out; for example, TAAs such as Ward-Chinatown, Kakaako, and Punchbowl-Sheridan-Date have limited capacity to build additional schools in which to house the projected enrollment. Therefore, the approach taken in such areas was to allocate the enrollment increases each traffic analysis zone within the TAA that contains student enrollment in the 2000 base year based on the ratio of the current school enrollment in each zone.

In developing areas of the island such as the Honoliuli-Ewa Beach and Kapolei-Ko Olina-Kalaeloa TAAs, it is reasonable to assume that new schools would be constructed to accommodate the additional growth over the next 25+ years. These new schools were assumed to be located in various TAZs within the TAA based on locations of land available for development in the portions of the TAA with projected residential development (as identified by a low amount of development in the 2000 base year socioeconomic dataset).

Combining all the evaluation factors, six of the 23 TAAs met the criteria for allocation of student enrollment to new schools. These TAAs include 11/Honoliuli-Ewa Beach, 12/Kapolei-Ko Olina-Kalaeloa, 13/Makakilo-Makaiwa, 14/Waipahu-Waikele-Kunia, 15/Waiawa-Koa Ridge, and 23/Waianae Coast. Estimating the number of new schools per TAA was achieved by comparing the ratio of the enrollment increase against the existing average student population (584 per school); this ratio effectively determined the approximate number of new schools required to maintain the existing average student population. Therefore, the Honouliuli-Ewa Beach TAA (highest enrollment increase) saw a proportionately higher number of newly sited schools compared to the Makakilo-Makaiwa TAA (lowest enrollment increase).

Enrollment projections for the 17 remaining TAAs did not meet the minimum requirements of household growth greater than 15%, an absolute enrollment increase greater than 1,000 students, and location in a developing part of the island. Student enrollment changes in these TAAs were proportionally distributed among the TAZs; the proportional allocations were determined by the number of enrolled students in each TAZ based on the 2000 dataset. Among this set, 10 TAAs are projected with an enrollment increase and an enrollment decrease is projected in seven TAAs. Enrollment increases and decreases were both allocated to individual TAZs within the TAAs in a similar fashion.

UNIVERSITY/COLLEGE ENROLLMENT

University of Hawaii Enrollment: Existing Data Sources

The University of Hawaii (UH) provided system wide projections from 2003 to 2009; projections for the Oahu-based campuses located were examined. Over the next six years, UH projects a total growth of 8.8% across all Oahu campuses amounting to an average growth of 1.5% per annum. Table 3 provides this data and Figure 2 shows the information graphically. It can be seen from Figure 2 that growth projection is almost linear in nature.

University/College Enrollment Methodology

In a situation exactly the converse of the K-12 DoE projections, it is believed that the UH projections, while aggressive for the next six years, will probably not be sustained over a 25+ year period. If they were taken linearly over the entire length of the ORTP timeframe, the total system growth would amount to approximately 45%. This value is deemed too large an increase for student enrollment islandwide so a different approach has been proposed.

Also, the OMPO travel demand model is designed in such a way that it will generate new college trip productions proportional to changes in household growth. Therefore, there is a need to grow college enrollment so that the model can generate an appropriate level of attractions to which the productions can be matched.

The approach used to project university/college enrollment growth was as follows. The growth in number of households was used to determine a growth rate islandwide. This approach used all households with one or more persons be used to determine the growth. Therefore, all the households were summed together to produce the total number of households for year 2000 and 2030. The percentage growth between them was subsequently calculated and this percentage was then applied to the year 2000 university/college enrollment data from the OMPO 2000 base year model to grow the student enrollment numbers to year 2030.

Table 4 shows the development of this data; the household growth projected from 2000 to 2030 indicates a growth rate of approximately 35.1%. Applying this growth percentage to the estimated 53,970 student enrollment in 2000 yields a projected increase to approximately 72,915 students in 2030. This represents an increase of about 18,945 students.

Allocation of Projected University/College Enrollment

As indicated above, university/college enrollment is projected to increase by approximately 18,945 students from 2000 to 2030. Of this projected increase, 7,600[1] students were allocated to the new University of Hawaii-West Oahu campus and the remaining 11,345 students were allocated to TAZs with existing college campuses. Therefore, the projected university/college enrollment was distributed among nine TAAs, of which one is the future home of the University of Hawaii-West Oahu campus and eight have existing enrollment.

The new University of Hawaii-West Oahu campus will be located in the Kapolei-Ko Olina-Kalelaeloa area (TAA 12). Based on descriptions of the new campus, UH-West Oahu was specifically assigned to TAZ 604, in the OMPO travel demand forecasting model, along with its student enrollment.

The remaining enrollment increase of 11,345 students was allocated proportionally to the TAZs containing existing campuses. Student enrollment changes in these TAAs were proportionally distributed among the TAZs; the proportional allocations were determined by the number of enrolled students in each TAZ based on the 2000 dataset. This allocation methodology is similar to the K-12 allocation methodology.

[1] The *2004 Long Range Development Plan for University of Hawaii – West Oahu* indicates that the student population will be 7,600 upon completion of the plan.

TABLE 1
DEPARTMENT OF EDUCATION K-12 STUDENT ENROLLMENT PROJECTIONS

	2003 Actual	2004 Projected	2005 Projected	2006 Projected	2007 Projected	2008 Projected	2009 Projected	Overall Growth	Avg Growth Per Year
Honolulu	32,812	32,664	32,545	32,343	32,084	31,940	31,715	-3.3%	-0.6%
Central	33,034	32,673	32,364	31,993	31,634	31,294	31,050	-6.0%	-1.0%
Leeward	38,827	39,067	39,379	39,704	39,887	39,756	39,655	2.1%	0.4%
Windward	17,697	17,422	17,132	16,756	16,398	16,047	15,723	-11.2%	-1.9%
Systemwide	**122,370**	**121,826**	**121,420**	**120,796**	**120,003**	**119,037**	**118,143**	**-3.5%**	**-0.6%**

Note: New Leeward school (K-6) in 2006.

Source: State of Hawaii Department of Education, K-12 Enrollment Projections.

Figure 1
Department of Education K-12 Projections - Oahu

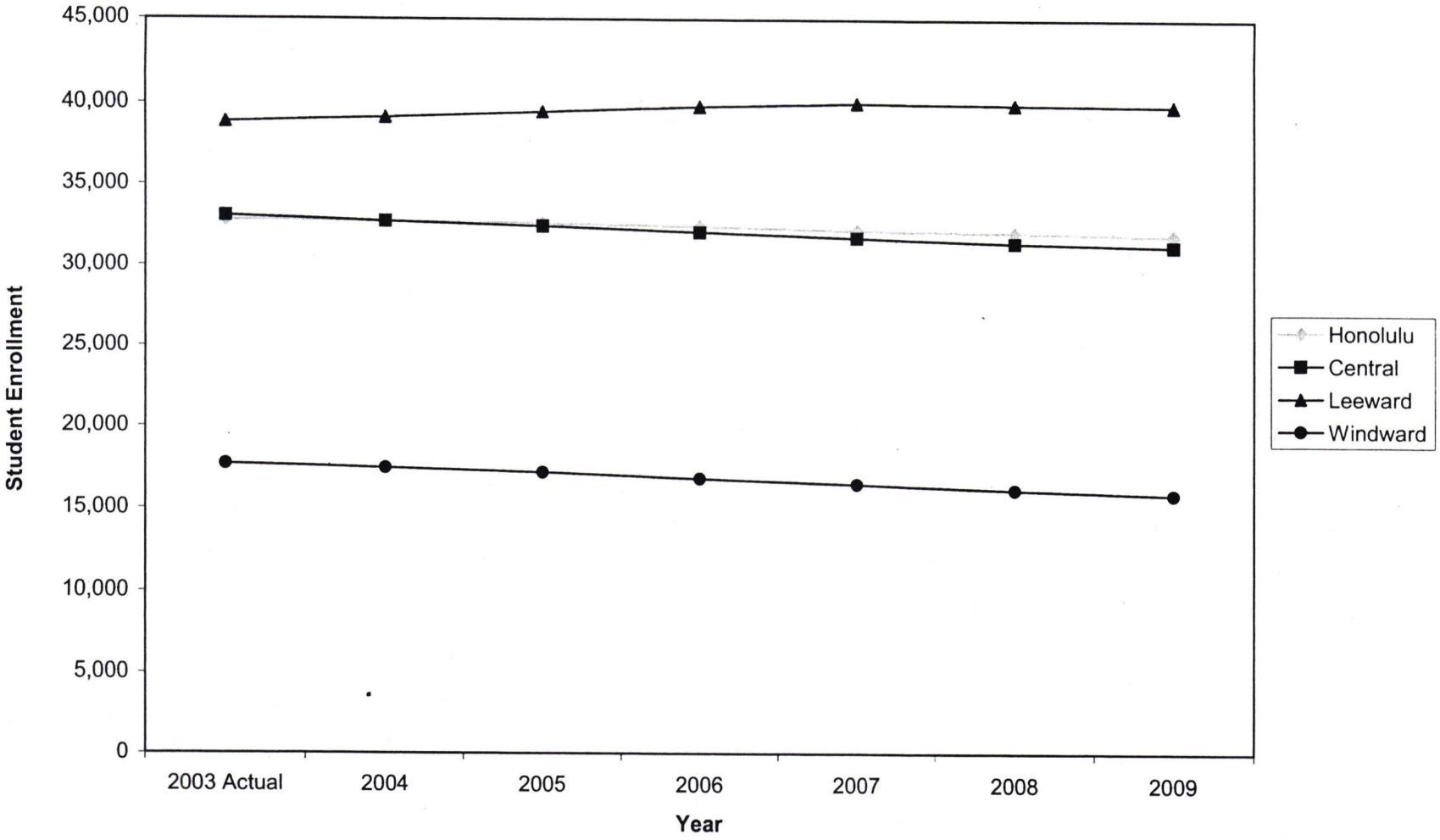


TABLE 2
K-12 GROWTH RATES AND PROJECTIONS BY TAA

TAA No.	TAA Name	2000 Households 3-5	2030 Households 3-5	Growth %	2000 K-12 Enrollment	2030 Projected K-12 Enrollment	K-12 Change: 2000 to 2030
1	WARD-CHINATOWN	1,086	1,855	70.8%	1,294	2,210	916
2	KAKAAKO	640	3,357	424.5%	2,287	11,996	9,709
3	PUNCHBOWL-SHERIDAN-DATE	8,555	10,107	18.1%	11,677	13,795	2,118
4	WAIKIKI	1,692	2,275	34.5%	556	748	192
5	KAHALA-TANTALUS	11,543	11,550	0.1%	17,868	17,879	11
6	PAUOA-KALIHI	12,061	13,645	13.1%	18,652	21,102	2,450
7	IWILEI-MAPUNAPUNA-AIRPORT	2,335	3,066	31.3%	4,033	5,296	1,263
8	HICKAM-PEARL HARBOR	3,647	3,320	-9.0%	7,155	6,513	-642
9	MOANALUA-HALAWA	9,275	8,981	-3.2%	9,793	9,483	-310
10	AIEA-PEARL CITY	11,493	10,806	-6.0%	13,058	12,277	-781
11	HONOULIULI-EWA BEACH	7,954	17,624	121.6%	7,477	16,567	9,090
12	KAPOLEI-KO OLINA-KALAELOA	2,340	11,212	379.2%	505	2,420	1,915
13	MAKAKILO-MAKAIWA	2,436	4,609	89.2%	1,221	2,310	1,089
14	WAIPAHU-WAIKELE-KUNIA	8,783	10,946	24.6%	7,459	9,296	1,837
15	WAIAWA-KOA RIDGE	2,066	6,747	226.6%	1,134	3,703	2,569
16	MILILANI-MELEMANU-KIPAPA	9,201	8,854	-3.8%	9,796	9,427	-369
17	WAHIAWA-WHITMORE-SCHOLIELD	5,864	5,433	-7.4%	8,004	7,416	-588
18	EAST HONOLULU	8,251	8,474	2.7%	7,129	7,322	193
19	KANEOHE-KAHALUU-KUALOA	9,624	9,118	-5.3%	8,723	8,264	-459
20	KAILUA-MOKAPU-WAIMANALO	10,453	9,640	-7.8%	10,858	10,014	-844
21	KOOLAULO A	2,239	2,537	13.3%	4,234	4,798	564
22	NORTH SHORE	3,154	3,274	3.8%	3,056	3,172	116
23	WAIANAE COAST	7,155	8,450	18.1%	11,143	13,160	2,017
Total		**141,847**	**175,880**	**24.0%**	**167,112**	**199,168**	**32,056**

TABLE 3
UNIVERSITY OF HAWAII ENROLLMENT PROJECTIONS 2003-2009

	2003	2004	2005	2006	2007	2008	2009	Overall Growth	Avg Growth per Year
University of Hawaii: Oahu Total	39,364	40,056	40,721	41,441	42,236	42,598	42,825	8.8%	1.5%

Source: University of Hawaii, Enrollment Projections Fall 2003 to Fall 2009 - Oahu campuses

Figure 2
University of Hawaii Enrollment Projections - Oahu

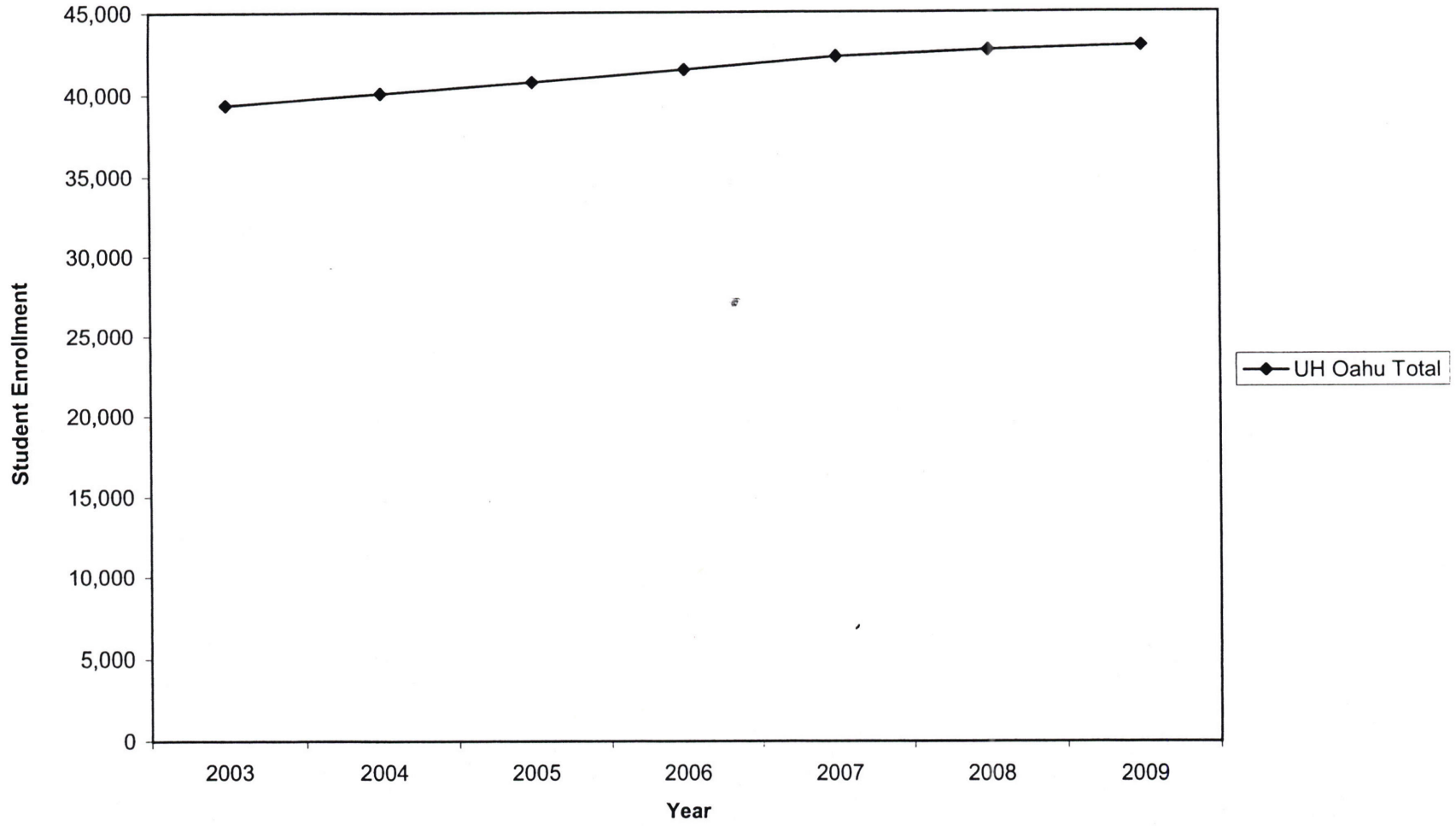
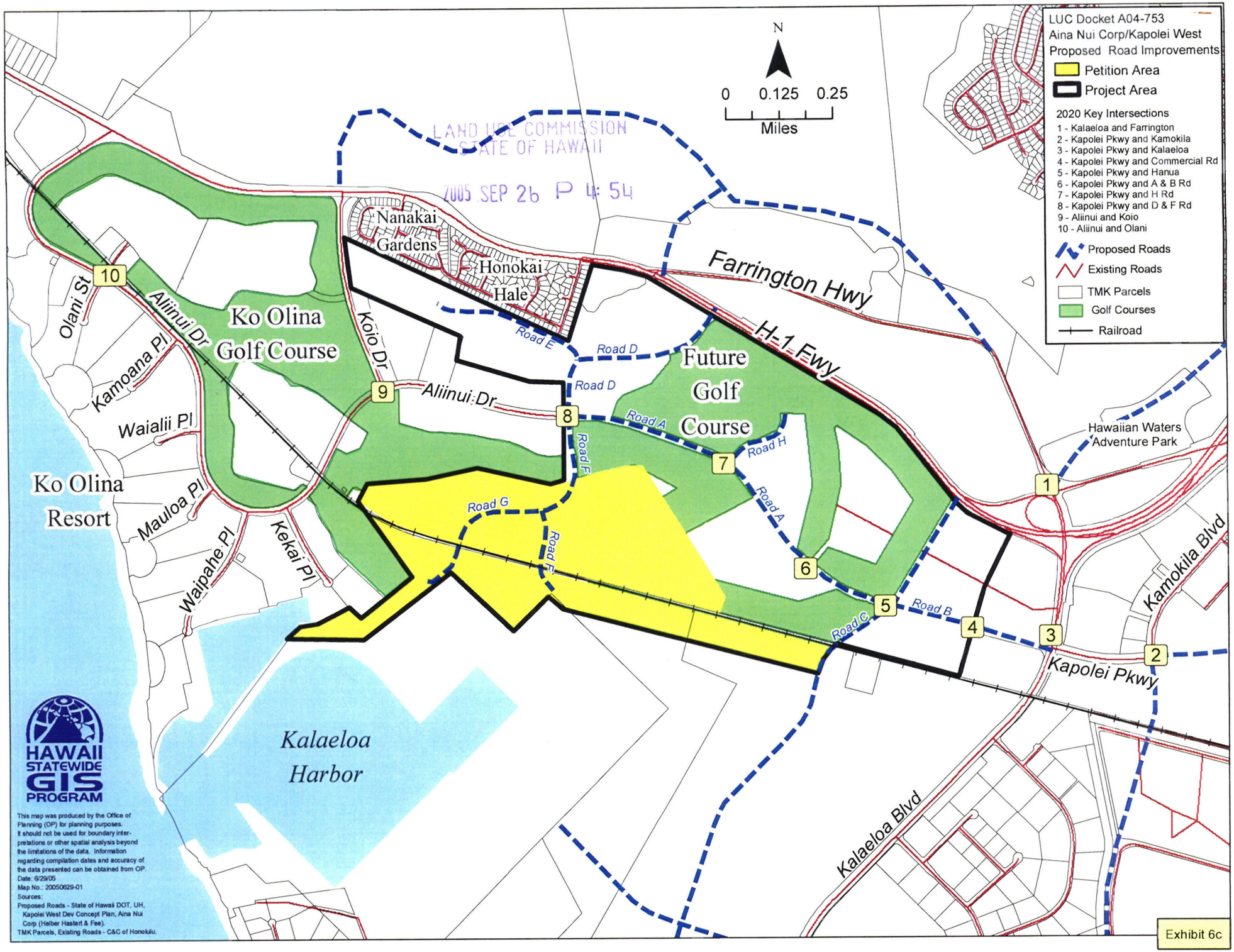


TABLE 4
UNIVERSITY/COLLEGE GROWTH RATES AND PROJECTIONS BY TAA

TAA No.	TAA Name	2000 Households 1-5	2030 Households 1-5	Islandwide Growth %	2000 University/ College Enrollment	2030 University/ College Enrollment	University/ College Change: 2000 to 2030
1	WARD-CHINATOWN	4,903	9,377		5,218	6,315	1,097
2	KAKAAKO	3,350	18,195		0	0	0
3	PUNCHBOWL-SHERIDAN-DATE	36,113	44,450		172	208	36
4	WAIKIKI	11,397	14,076		0	0	0
5	KAHALA-TANTALUS	25,955	27,926		31,285	37,861	6,576
6	PAUOA-KALIHI	23,167	25,306		0	0	0
7	IWILEI-MAPUNAPUNA-AIRPORT	4,000	5,614		5,260	6,366	1,106
8	HICKAM-PEARL HARBOR	5,147	5,879		0	0	0
9	MOANALUA-HALAWA	16,939	17,532		0	0	0
10	AIEA-PEARL CITY	22,018	22,391		0	0	0
11	HONOULIULI-EWA BEACH	11,703	28,381		0	0	0
12	KAPOLEI-KO OLINA-KALAELOA	3,276	18,540		0	7,600	7,600
13	MAKAKILO-MAKAIWA	3,946	8,097		0	0	0
14	WAIPAHU-WAIKELE-KUNIA	13,508	17,153		7,906	9,568	1,662
15	WAIAWA-KOA RIDGE	3,983	14,244		0	0	0
16	MILILANI-MELEMANU-KIPAPA	15,632	18,480		0	0	0
17	WAHIAWA-WHITMORE-SCHOLIELD	9,673	9,926		0	0	0
18	EAST HONOLULU	16,188	19,029		122	148	26
19	KANEOHE-KAHALUU-KUALOA	16,956	17,968		1,814	2,195	381
20	KAILUA-MOKAPU-WAIMANALO	18,486	19,241		0	0	0
21	KOOLAULO A	3,682	4,668		2,193	2,654	461
22	NORTH SHORE	5,893	6,853		0	0	0
23	WAIANAE COAST	10,535	13,672		0	0	0
Total		**286,450**	**386,998**	**35.1%**	**53,970**	**72,915**	**18,945**


LUC Docket A04-753
Aina Nui Corp/Kapolei West
Proposed Road Improvements
Petition Area
Project Area
2020 Key Intersections
1 - Kalaeloa and Farrington
2 - Kapolei Pkwy and Kamokila
3 - Kapolei Pkwy and Kalaeloa
4 - Kapolei Pkwy and Commercial Rd
5 - Kapolei Pkwy and Hanua
6 - Kapolei Pkwy and A & B Rd
7 - Kapolei Pkwy and H Rd
8 - Kapolei Pkwy and D & F Rd
9 - Aliinui and Koio
10 - Aliinui and Olani
Proposed Roads
Existing Roads
TMK Parcels
Golf Courses
Railroad
N
0 0.125 0.25
Miles
LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 26 P 4:54
Nanakai Gardens
Honokai Hale
Farrington Hwy
H-1 Fwy
Ko Olina Golf Course
Future Golf Course
Ko Olina Resort
Olani St
Aliinui Dr
Kamoana Pl
Waialii Pl
Mauloa Pl
Waipahe Pl
Kekai Pl
Koio Dr
Road A
Road B
Road C
Road D
Road E
Road F
Road G
Road H
Hawaiian Waters Adventure Park
Kamokila Blvd
Kapolei Pkwy
Kalaeloa Blvd
Kalaeloa Harbor
HAWAII STATEWIDE GIS PROGRAM
This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.
Date: 6/29/05
Map No.: 20050629-01
Sources:
Proposed Roads - State of Hawaii DOT, UH, Kapolei West Dev Concept Plan, Aina Nui Corp (Helber Hastert & Fee).
TMK Parcels, Existing Roads - C&C of Honolulu.
Exhibit 6c

LAND USE COMMISSION
STATE OF HAWAII
2005 SEP 26 P 4:55

Revised Ordinances of Honolulu

(Link to original Word Processing Version)

Chapter 33A

IMPACT FEES FOR TRAFFIC AND ROADWAY IMPROVEMENTS IN EWA

Articles:
1. General Provisions

Article 1. General Provisions

Sections:

33A-1.1 Purpose.
33A-1.2 Definitions.
33A-1.3 Impact fees.
33A-1.4 Conformity with the Ewa development plan and the Ewa highway master plan.
33A-1.5 Ewa highway impact fee program.
33A-1.6 Ewa highway master plan impact fees.
33A-1.7 Ewa highway improvement trust fund or account.
33A-1.8 Hearing and appeal procedures.
33A-1.9 Refund of fees.
33A-1.10 Exemptions and credits.

Sec. 33A-1.1 Purpose.
This chapter sets forth a regulatory scheme for the assessment and collection of impact fees to be borne on a pro-rata share basis by landowners, developers, home builders, and others who directly contribute to expanding the population and increasing economic activity in the Ewa region through new land development activities. This chapter is intended to recover only a portion of the governmental expenditures related to growth and implements the Ewa development plan and the Ewa highway master plan. (Added by Ord. 02-52)

Sec. 33A-1.2 Definitions.
For the purposes of this chapter, unless it is plainly evident from the context that a different meaning is intended:
"Applicant" means an individual, partnership, corporation, trust or agent having the requisite

OP EXHIBIT NO. 7

authority, who has applied to the City and County of Honolulu for a building permit.

"Building" or "structure" shall have the same meaning as defined in the uniform building code as adopted and amended in Chapter 16.
"Building permit" means an official document or certificate issued by the city authorizing the construction of any building or structure.
"Ewa region" means the geographical area defined in the Ewa development plan, plus the entire Royal Kunia and Village Park areas. The Village Park area is described by the following tax map key plats: 9-4-104, -106, -107, -113, -114, -120, -124, -131, -132, -133, -134, and -135; and by the following tax map key Nos: 9-4-002: 014 and 028. The Royal Kunia area is described by the following tax map key plats: 9-4-136, -137, -146, -148, -149, -152, -153, -154, -155, -156, -157, -163, -164, -165; and by the following tax map key Nos.: 9-4-002: 049, 050, 064, 066, 068, 001, 052, 070, and 071.
"Ewa highway impact fee program" refers collectively to (i) the July 3, 2002 report entitled "Ewa Highway Impact Fee Program," prepared by Kaku Associates, Inc., for the State of Hawaii department of transportation ("DOT"), which includes the Ewa highway master plan and which was submitted as miscellaneous communication No. 1965 (2002) to the city council, as supplemented by (ii) the letter from Kaku Associates, Inc., to the chair of the council's zoning committee, submitted as miscellaneous communication No. 2440 (2002) to the city council, and as further supplemented by (iii) the "Proportionate Share Study of the Ewa Highway Impact Fee Program" by SMS Research, dated October 2, 2002, and submitted as miscellaneous communication No. 2590 (2002) to the city council.
"Ewa highway master plan" refers collectively to the August 28, 2001 report from Kaku Associates, Inc., to the director of the DOT on the Ewa highway master plan/Year 2010 highway plan, as modified by the May 31, 2002 report from Kaku Associates, Inc., to the director of the DOT on the Ewa highway master plan, both of the aforesaid reports being included as part of miscellaneous communication No. 1965 (2002) to the city council. The Year 2010 highway improvement plan contained in the Ewa highway master plan sets forth the six regional roadway projects improvements that form the basis for this impact fee ordinance.
"Ewa highway master plan impact fees" are the charges imposed on new land development that are designed to fund a pro- rata share of the cost of traffic and roadway improvements set out and contained in the Ewa highway master plan.

"Hotel" or "transient vacation unit" are buildings or structures that are designed or intended for temporary human habitation. The types of hotel or transient vacation unit identified in this chapter shall have the same meaning as in Section 21-10.1.
"New land development" means the carrying out of any building activity or the making of any material change in the use or appearance of any structure or land that attracts or

produces vehicular trip(s) over and above that produced or attracted by the existing use of the land.
"Square feet" are computed by determining the total floor area of a nonresidential structure or building under roof, with all of the same exclusions as set forth in the definition of "floor area" contained in Section 21-10.1.
"Trip" or "vehicular trip" means a one-way movement of vehicular travel from an origin point (one trip end) to a destination point (the other trip end). For the purposes of this chapter, trip shall have the meaning that it has in commonly accepted traffic engineering practice and that is substantially the same as that definition in the previous sentence.
"Trip generation" means the attraction or production of trips caused by a given new land development.
(Added by Ord. 02-52)

Sec. 33A-1.3 Impact fees.
(a) Ewa highway master plan impact fees shall be charged and assessed for all new land development activities that require a building permit in the Ewa region, except as otherwise provided in Section 33A-1.10(a). Ewa highway master plan impact fees shall be assessed in accordance with Section 33A-1.6, and shall be paid to the City and County of Honolulu prior to the issuance of any building permit.
(b) No building permit shall be issued if an Ewa highway master plan impact fee is due and the Ewa highway master plan impact fee has not been paid.
(Added by Ord. 02-52)

Sec. 33A-1.4 Conformity with the Ewa development plan and the Ewa highway master plan.
Section 4.1 of the Ewa development plan, adopted by Ordinance No. 97-49, as amended, lists the highway improvements needed to be built in order to accommodate the planned growth in Ewa. The roadways identified in the Ewa highway master plan are consistent with and implement Section 4.1 of the Ewa development plan. The Ewa highway master plan is hereby approved and adopted by the City and County of Honolulu. This plan contains the Year 2010 highway improvement plan which lists a set of roadway improvements that are necessary in order to accommodate the anticipated development of the Ewa region with adequate roadway improvements while protecting the health, safety and general welfare of the public.
The Ewa highway master plan impact fees set forth in Section 33A-1.6 are in conformity with the Ewa highway master plan and are an essential component of implementing this plan.
(Added by Ord. 02-52)

Sec. 33A-1.5 Ewa highway impact fee program.
The Ewa highway impact fee program is hereby approved as the "needs assessment study" required for enactment of this chapter and for purposes of HRS Sections 46-141 through 46-148. The Ewa highway impact fee program is comprised of the following parts:
(a) Ewa Region Development Forecasts. The land use development forecasts for the Ewa region through 2010 are shown in Table 33A-1.1.

Table 33A-1.1
Ewa Region Development Forecasts through 2010

	Units (square feet for Non-residential)
Residential	
SF Residential Dwelling Unit	7,640
MF Residential Dwelling Unit	7,640
Nonresidential	
Retail	938,100
Office	852,200
Industrial/Other	3,475,200
Hotel	1,100
Timeshare	1,000

(b) Roadway Master Plan for Ewa. The estimated cost of Ewa highway master plan improvements for the Ewa region is shown in Table 33A-1.2.

Table 33A-1.2
Ewa Region Highway Improvement Program Estimated Cost of Improvements

FACILITY	SEGMENT	IMPROVEMENT	COST ESTIMATE

H-1	Kapolei Interchange	New ramps, bridges	$ 25,910,000
H-1	Makakilo Interchange	Extend ramp, new ramp	10,170,000
	Subtotal	$ 36,080,000	
Fort Barrette Road	Farrington to Franklin D. Roosevelt Ave.	Widen to 4 lanes	10,500,000
Fort Weaver Road	Farrington Hwy. to North Road	Widen to 6 lanes	33,500,000
Kapolei Parkway	Ko Olina to Kalaeloa Blvd.	New 4-lane roadway	14,400,000
	Kamokila Blvd. to Fort Barrette Rd.	New 4-lane roadway	10,400,000
	Kapolei Pkwy. Bridge to North-South Rd.	New 4-lane roadway	3,400,000
	North-South Road to Puamaeole	New 4-lane roadway	14,000,000
	Puuloa Road to Keoneula Blvd.	New 2-lane roadway	3,600,000
	Keonuela Blvd. to Kaileolea Dr.	New 2-lane roadway	2,424,000
	Kaimalie St. to Papipi Rd.	New 2-lane roadway	860,400
	Subtotal	$ 49,084,400	
North-South Road	H-1 to Kapolei Parkway	New 4-lane roadway New Interchange	64,800,000
	GRAND TOTAL	$193,964,400	

Based upon the Ewa highway master plan, the Ewa highway impact fee program, the Oahu regional transportation (Top 2025) plan, the Ewa development plan, and other policy considerations, the portion of the estimated cost of Ewa highway master plan improvements attributable to new development and to be collected by this impact fee ordinance is $38,792,880.

(c) Vehicular Trip Forecasts. The forecasted new vehicular trips, per hour, for the Ewa region are shown in Table 33A-1.3.

Table 33A-1.3
Ewa Region Trip Generation Estimate for New Development

Land Use (1,000 square feet for Nonresidential; units for Residential, Hotel and Timeshare)	Units (Increment 2002 to 2010)	Trip Generation Rate	Trip Generation		
		AM Peak	PM Peak	AM Peak	PM Peak
Residential					
SF Residential Dwelling Unit	7,640	0.78	0.52	5,959	3,973
MF Residential Dwelling Unit	7,640	0.52	0.362	3,973	2,766
Nonresidential					
Retail	938	0.62	2.25	582	2,111
Office	852	1.23	1.18	1,048	1,006
Industrial/Other	3,475	0.7	0.73	2,433	2,537

Hotel	1,100	0.34	0.37	374	407
Timeshare	1,000	0.17	0.185	170	185
Total	14,539	12,985			

(Added by Ord. 02-52)

Sec. 33A-1.6 Ewa highway master plan impact fees.

Ewa highway master plan impact fees shall be based on the following factors:

(a) Impact of New Development. The measure of impact is the number of predicted vehicular trips generated by the new land development activity. The authority for the trip generation rates to be used in the calculation of vehicle trips is Table 33A-1.3 of Section 33A-1.5.

(b) Assessment of Cost. A schedule for determining Ewa highway master plan impact fees is hereby established. The fee rates by land use type are shown in Table 33A-1.4.

Table 33A-1.4
Impact Fees by Land Use

CATEGORY	LAND USE	IMPACT FEE	
		AMOUNT	UNIT
Residential	Single Family Multi-Family	$1,836 1,245	Per Dwelling Unit Per Dwelling Unit
Nonresidential	Hotel Timeshare Retail Office Industrial/Other	$1,003 501 4,053 3,403 2,019	Per Unit Per Unit Per 1,000 square feet Per 1,000 square feet Per 1,000 square feet

The department of planning and permitting shall compute and collect Ewa highway master plan impact fees from applicants before issuance of building permits. The director of planning and permitting shall establish by rule such procedures as may be necessary to carry

out the department's responsibilities under this section.

(c) Interpretation of Fee Schedule. If the type of land use that is the subject of an application is in doubt, the applicant may request an interpretation from the department of planning and permitting as to the appropriate type of land development being undertaken and the applicable Ewa highway master plan impact fees that would be due. This interpretation may be appealed by following the procedures set out in Section 33A-1.8.

(d) Expansion of a Building or Structure. In the event of an expansion of a building or structure, Ewa highway master plan impact fees due would be the net positive difference between the Ewa highway master plan impact fees that would be due for the expanded building or structure and that which would have been due for the original building if constructed currently.

(e) Change of Use. In the event of a change of use of a building or structure, Ewa highway master plan impact fees due would be the net positive difference between the Ewa highway master plan impact fees that would be due for the new use of the building or structure and that which would have been due for the original use if constructed currently.

(f) Mixed Use. When a single building or structure will contain more than one type of land use, the Ewa highway master plan impact fees due will be based on the amount of space devoted to each type.

(g) Retail, Office, and Industrial/Other Impact Fees. Impact fees for land uses that are listed in units of 1,000 square feet in Table 33A-1.4 shall be computed by dividing the per-1,000-square-foot amount of the land use impact fee by 1,000 and then multiplying this amount by the actual square footage of the land use.

(h) Revisions to the Ewa Highway Master Plan. The director of transportation services, in consultation with the director of planning and permitting and the state director of transportation, shall review the Ewa highway master plan once every five years in terms of land uses, densities, highway improvements, and changes in costs and make appropriate changes thereto. This review and revision shall include consultation and input from the Ewa region developers. The cost of this review may be funded out of the impact fees collected under this ordinance. Based upon this review of the Ewa highway master plan, the directors may recommend to the city council that the impact fee program contained in this chapter be modified by amending this ordinance. As a matter of policy, the share of the costs attributable to new development for highway projects in the Ewa region and payable by impact fees shall remain in roughly the same proportion as the proportion set forth in this chapter.

(i) Compliance with Unilateral Agreement Conditions. The enactment of this ordinance constitutes compliance with the various unilateral agreement conditional zoning conditions attached to project zoning conditions requiring participation in the implementation, funding, and construction of the six regional transportation projects contained in the Ewa highway master plan, or similar requirements to address regional transportation impacts in the Ewa area. Upon issuance of a building permit, the requirements for participation in the implementation, funding, and construction of the six regional transportation projects contained the Ewa highway master plan, or similar requirements to address regional transportation impacts in the Ewa area, shall be satisfied

with respect to the development covered by that building permit. Any on-site or project-specific improvements, apart from those set forth in the Ewa highway master plan, remain subject to the requirements of the specific unilateral agreement conditions.
(Added by Ord. 02-52)

Sec. 33A-1.7 Ewa highway improvement trust fund or account.
(a) The department of budget and fiscal services shall create a special trust fund, or interest-bearing account in the general trust fund or other appropriate fund, which shall serve as the exclusive depository of all funds collected as Ewa highway master plan impact fees pursuant to this chapter.
(b) All funds collected as Ewa highway master plan impact fees shall promptly be deposited into and held in the special trust fund or account until expended or encumbered pursuant to this chapter. All interest earnings on the balances in the special trust fund or account shall be retained and used for the same purposes as Ewa highway master plan impact fees.
(c) All funds deposited into the special trust fund or account are to be used exclusively for traffic and roadway improvements set out and contained in the Year 2010 highway improvement plan contained in the Ewa highway master plan, as that plan may be amended, and not for any other purpose, except that the city shall receive two percent of all funds deposited, deducted upon deposit, as reimbursement for the cost of administering this chapter.
(d) Funds collected as Ewa highway master plan impact fees shall be made available to either the State of Hawaii for state highway or traffic improvements, or the city for city highway or traffic improvements, provided that the improvements are contained in the Year 2010 highway improvement plan contained in the Ewa highway master plan.
(Added by Ord. 02-52)

Sec. 33A-1.8 Hearing and appeal procedures.
The applicant may contest the amount of the impact fee assessed by petitioning the director of the department of planning and permitting for a declaratory ruling pursuant to the practices and procedures of the department. The petition must be submitted by the developer within 15 days of notification of the fee amount. Payment of the fee amount will not be a waiver of the applicant's right to request a declaratory ruling from the director. The declaratory ruling shall be considered a final decision and order by the department. (Added by Ord. 02-52)

Sec. 33A-1.9 Refund of fees.
(a) The fees collected pursuant to this chapter, less the administrative costs set forth in Section 33A-1.7(c), shall be refunded to the applicants in the following situations, provided that the procedures set forth in subsection (b) shall be complied with:
(1) If they have not been spent or encumbered within six years from the date collected; or
(2) If the building permit is revoked or withdrawn and no

work was initiated thereunder.

(b) (1) The applicant shall petition the department of planning and permitting for the refund within the following time periods:

(A) For situations described in subsection (a)(1), within one year following the end of the sixth year from the date on which the fee was collected; or

(B) For situations described in subsection (a)(2), within 30 days of the revocation or withdrawal of the building permit.

(2) The form of the petition shall be prescribed by the department of planning and permitting. The petition shall contain such information as the department deems necessary to establish that the petitioner is eligible for a refund.

(3) Within one month from the date of receipt of a petition for refund, the department of planning and permitting shall advise the petitioner of the status of the request for refund. For the purposes of this section, fees collected shall be deemed to be spent or encumbered on the basis of the first fee in shall be the first fee out. In other words, the first money placed in the special account shall be the first money taken out of that account when withdrawals have been made.

(Added by Ord. 02-52)

Sec. 33A-1.10 Exemptions and credits.

(a) The following shall be exempted from payment of the Ewa highway master plan impact fee:

(1) Alterations or expansion of an existing residential dwelling unit where no additional dwelling or living units are created and the use is not changed;

(2) The construction of accessory buildings or structures, as defined in Section 21-10.1, that will not increase the number of external vehicular trips beyond those produced or attracted by the primary buildings or structures;

(3) The replacement of an existing building or structure with a new building or structure of the same size and use that will not increase the number of external vehicular trips beyond those produced or attracted by the original buildings or structures;

(4) Facilities that are part of water, sewer, electrical, telecommunication, or roadway system infrastructure and that do not attract or produce vehicular trips. This includes but is not limited to utility installations, as defined in Section 21-10.1, that do not have regular on-site employees; and

(5) Mass transit centers or stops that promote a reduction in commuting by private vehicles.

(b) The following credits shall be applied to payment of the Ewa highway master plan impact fee:

(1) In lieu of paying the Ewa highway master plan impact fee, a landowner or developer may elect to construct all or a portion of one of the Ewa highway master plan Year 2010 highway improvements set forth in Section 33A-1.5(b). If a landowner or developer does elect to construct all or a portion of one of the Ewa highway master plan Year 2010 highway improvements, then the landowner or developer shall receive a credit against Ewa highway master plan impact fees equal to the estimated cost set forth in Section 33A-1.5(b) or a pro-rata share thereof depending upon the portion of the improvement constructed. If a

developer elects to oversize all or a portion of one of the Ewa highway master plan Year 2010 highway improvements, the developer shall receive a credit against Ewa highway master plan impact fees equal to the developer's actual cost of constructing the improvement if the oversized improvement subsequently is identified as a needed improvement in an Ewa highway master plan revision undertaken pursuant to Section 33A-1.6(h). The credits received by a landowner or developer pursuant to this section may be transferred by the holder to other landowners or developers.

(2) Credit for construction costs given to the landowner or developers may be repaid by the city from future new land development activities.

(Added by Ord. 02-52)

Revised Ordinances

© Copyright 2002-2005 City and County of Honolulu, Hawaii
Privacy Statement | Technical Support | Customer Service | Policy | Accessibility | Diversity Statement

ORIGINAL

Hanua Street Improvements and Extension

Petitioner shall set aside land necessary for the future construction of Hanua Street to ~~Molokole~~ Malakole Street as a four (4) lane highway. In the event the Hanua Street extension is built, Petitioner agrees it shall be built as a four-lane divided highway in accordance with State highway standards, or to an alternative design as identified by the State Department of Transportation, so that the extension of Hanua Street may be dedicated to the State at the option of the State Department of Transportation, up to five years after completion of the Hanua Street extension.

RECEIVED
OCT 2 0 2005
State of Hawaii
LAND USE COMMISSION

OP Exh 9

ORIGINAL

Notification of Potential Nuisances – Kalaeloa Harbor

Disclosures. Petitioner shall inform all prospective purchasers of properties in the Petition Area of the potential impacts, including, but not limited to, noise, dust, lighting, fumes, soot, smoke, light, heat, vapors, odors, chemicals, vibrations, and other substances and phenomena of every description to be discharged, emitted, or transmitted over and upon the properties or other industrial events associated with commercial marine activities that may be generated by Kalaeloa Harbor which may affect the properties and may be considered a nuisance.

The disclosure shall be made through a Disclosure Document which shall be signed by the prospective purchaser as an affirmative acknowledgement of the potential impacts. A copy of the form of the Disclosure Document shall be provided to the Office of Planning for its review and approval prior to any sales. In addition, the disclosure shall be included as a covenant in the deed to purchaser releasing the State of Hawaii from all liability for nuisance claims and shall be recorded so as to run with the land.

This condition in no way prohibits, prevents, or restricts Petitioner from modifying the disclosure to include other uses and additional disclosures to prospective purchasers.

RECEIVED
OCT 20 2005
State of Hawaii
LAND USE COMMISSION

OP Exhibit 10