

Helber Hastert and Fee, Planners, Inc.

City and County of Honolulu General Plan Update

Commercial Real Estate Market Trends Report

Colliers Monroe Friedlander Consulting
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LIST OF ACRONYMS

C&D	Construction and Demolition
CCP	Coal Combustion Products
CCRC	Continuing Care Retirement Community
CLASS	Community Living Assistance Services and Supports Act
CMFC	Colliers Monroe Friedlander Consulting
EPA	Environmental Protection Agency
EV	Electric Vehicle
HCDA	Hawai'i Community Development Agency
HHF	Helber, Hastert and Fee, Planners, Inc.
LEED	Leadership in Energy and Environmental Design
TBL	Triple Bottom Line Reporting
TOD	Transit-Oriented Development
USGBC	United States Green Building Council

PROJECT OBJECTIVES

Helber, Hastert and Fee, Planners, Inc. (“HHF”) engaged Colliers Monroe Friedlander Consulting (“CMFC”) as a subcontractor for the City and County of Honolulu General Plan Update. This trend report is part of Stage 1 – Reconnaissance of the Basic Scope of Services and examines trends which impact commercial real estate and how they will potentially influence future land use patterns on O’ahu over the next twenty-five years.

PROJECT METHODOLOGY

Over the next two and a half decades, sustainability and technological advances will reshape land use and how and where companies conduct their business. This trends overview includes local and regional changes that will affect future land use as well as examine macro-level trends. For the local market overview and trends, CMFC utilized its market knowledge and proprietary database for the office, retail, and industrial property sectors. CMFC utilized on-line searches of real estate industry organizations and other business industry sources to determine the macro-level trends which could potentially impact commercial real estate on O’ahu .

EXECUTIVE SUMMARY

LOCAL MARKET TRENDS

Office and Retail

Over the next few decades, the following trends will affect office and retail land uses and development.

- *Redevelopment of Commercial and Industrial Lands in the Urban Core* – Kamehameha Schools, General Growth Properties, CommonWealth Real Estate Investment Trust (“CommonWealth”), Queen Emma Land Trust, and the State of Hawai‘i have plans to redevelop a significant portion of their land holdings in urban Honolulu into more vibrant mixed-use neighborhoods to increase property values and maximize returns. Many of the ground leases in these areas are set to expire or come up for renegotiation over the next twenty-five years. The revitalization of these areas will provide growth opportunities for office and retail users.
- *Transit-Oriented Development* – Transit-oriented development (“TOD”) is a planning, design and development trend that seeks to create compact, mixed-use, pedestrian-oriented communities located around public transit stations. This type of development is new to the Hawai‘i real estate market. Certain transit zones of the planned rail transit system will create opportunities for retail, office and residential market growth.
- *Continued Commercial Development in West O‘ahu* - The City of Kapolei holds the majority of the remaining developable commercial and residential land on the island. With over 20,000 new homes planned over the next twenty-five years and an underserved retail market, an influx of new retail centers are on the horizon. In addition, more than 30 acres of land in the city center have been designated for retail and office use. The development of retail and office buildings in Kapolei as compared to urban Honolulu, are more financially viable due to lower land prices and generally higher rental rates.
- *Lack of Viable Office Development Sites in Urban Honolulu*- In the urban core, there are a limited amount of available land parcels for office development. High-rise residential condominiums, which are allowed under the same zoning as office buildings, were built on several potential office sites as they produced a higher net return to developers. As a result, any future office developments will most likely occur through redevelopment.
- *Medical Office Development* - As Hawai‘i’s population ages, the increased need for healthcare services may result in an increase in medical office development over the next twenty-five years. However, only a fraction of the planned medical office developments has been successfully leased over the past few years. Thus, there remain questions regarding the true depth of medical office demand.

Industrial Market

Industrial real estate will be impacted by several issues over the next two and a half decades as significant land use changes will transform current industrial markets into more commercial uses.

- *Gentrification of Existing Urban Industrial Properties* - Much of the Kākā'āko, Kalihi/Kapālama, and the Airport/Māpunapuna districts are planned to transition away from primarily industrial use to retail, residential and high-tech uses. As these efforts continue to progress, industrial tenants will likely pay more for lease rents or relocate outside of Honolulu's urban core.
- *Ground Rent Term Expirations to Peak in the Next Decade* - Honolulu County's industrial market is unique in that a large portion of the land is controlled by a few major landlords. A significant portion of the ground leases in urban Honolulu are expiring or coming due for rent renegotiations in the next twenty-five years. This will serve as the impetus for the redevelopment of today's industrial markets.
- *Rising Land Prices* - High construction costs and land prices have kept new warehouse development to a minimum. The shortage of available vacant land in urban Honolulu has resulted in significant price increases for industrial properties and industrial-zoned land. Industrial businesses that rely upon thin margins are unable to pay the large increases in rents from this price growth.
- *Relocation of Industrial Tenants* - The planned redevelopment of the Kākā'āko Waterfront and the pending closure of the Kapālama Military Reserve will force the relocation of approximately 4.8 million square feet of industrial users.
- *Availability of Industrial Land in West O'ahu* - The West O'ahu industrial market appears to act as a buffer for the ebb and flow of the real estate market. As market conditions tighten within the urban core, demand surges in West O'ahu. At this point, there are several hundred acres of West O'ahu land that are already zoned for industrial use and another several hundred acres that are undergoing the entitlement process.

MACRO LEVEL TRENDS

CMFC feels that the most relevant issues that need to be addressed which will impact land use over the next twenty-five years are:

The Green Revolution

Global concerns over the environment and the desire to reduce our dependency on fossil fuels are projected to impact and change the current use of commercial and industrial properties. The green revolution that capitalizes on energy management, recyclable construction materials and efficient space utilization will be the drivers of future commercial development.

Transit Oriented Development

Rapid transit will serve as a major contributor to the change in how employees travel to and from work. Developers will focus on transit-oriented development to target commuters buying power along the transit corridor. Mixed-use developments will allow commercial spaces to benefit from a captured audience of residents. Parking space requirements are likely to be reduced in an effort to entice developers to build with transit in mind.

Developable Land Shortage

With the existing limits to urban commercial development likely to be breached before 2035, developers will have to concentrate on creative reuse of existing properties. Higher density with vertical growth will likely be required in order to make any development financially feasible. Alternative formats of commercial space can serve to reduce space usage requirements.

New Commercial and Industrial Concepts

The continued use of the internet and smart card technology will continue to spur new retail concepts that will impact physical space requirements. Retailers will service their customers through multiple channels such as on-line, in-store, or on the phone. The reduction of overall land use from large stores to smaller concepts will be the norm which coincides with the concerns over the lack of available developable commercial land.

Changing Demographics

Hawai'i's population is aging rapidly. The population 65 years old and above increased at a 1.7% annual rate from July 1, 2000 to July 1, 2009 while the State's total population increased 0.7% a year during the same period. This demographic trend will influence what developers build. Nursing homes, assisted living, hospitals and outpatient clinics will be in high demand.

1.0 LOCAL MARKET TRENDS

1.1 Office Market Overview

With just over 15.7 million square feet of inventory on O'ahu, more than 72% of this inventory is located in the Central Business District and Kapi'olani Corridor. Over the past twenty-five years, more than 5.3 million square feet of office space has been built on O'ahu. The bulk of this construction occurred between the late 1980's and early 1990's. From 1985 to 1996, average annual office building construction was 435,000 square feet. Since then, less than 200,000 square feet of office space has been built. Office building development has been inhibited by a lack of available developable land and rental rates that are insufficient to cover construction costs. Current monthly base asking office rents for O'ahu are \$1.59 per square foot. Rates would need to be over the \$3.00 per square foot range to support new office construction.

Over the past twenty-years, the office market on O'ahu has averaged a 10.1% vacancy rate with the strongest conditions experienced in 1991 and 2006. At mid-year 2010, the office market had a vacancy rate of 11.1%. CMFC projects an increase in vacancy rates through 2011 with the market stabilizing thereafter.

Office Market Indicators

For the purposes of this report, companies categorized under the Professional & Business Services, Financial Activities, and Information technology sectors are considered the primary office market users. Job growth among these employment sectors drives the demand for future office development. Over the past decade, the office sector has averaged approximately 89,000 jobs with a minimal average growth rate of 0.5% annually. During the last economic boom, office job counts averaged 90,000 to 95,000 positions. In April 2010, office jobs had dipped to 83,650 as a result of poor economic conditions.¹ CMFC estimates that each office position represents approximately 150 square feet of office space.

1.2 Retail Market Overview

O'ahu's retail market consists of over 26 million square feet of retail space. Over the past ten years, there has been more than 2.2 million square of new retail construction, indicating an average annual growth rate of about 220,000 square feet. Nearly 60% of this development occurred over the last four years. Much of this growth took place in the West O'ahu and Leeward O'ahu submarkets where the majority of large tracts of vacant land were available and the residential population has grown the fastest.

Historically, O'ahu's retail market has been strong, averaging 5.2% vacancy rate since 1995. In the most recent boom period, retail vacancy dropped to their lowest level at 2.18% in 2006. The highest vacancy rate was experienced in 1998 at 10.0%. At mid-year 2010, the retail market had a vacancy rate of 2.87% which is still strong considering recessionary conditions. CMFC projects an increase in vacancy rates through 2011 with the market stabilizing thereafter.

¹ Department of Business, Economic Development and Tourism

Retail Market Indicators

The retail tax base, visitor arrivals, home sales and construction activity are general economic factors that help determine the relative health of the retail market.

The retail sales tax base serves as the benchmark for retail sales and gauging the strength of the retail market. The Honolulu County retail tax base peaked in 2007 at \$22.2 billion dollars and has since dropped to \$20.2 billion in 2009. Since 1989, retail sales have increased an average of 3.4% each year. This number is dependent on economic factors such as personal income growth, the number of visitor arrivals, and inflation which all affect consumer spending.

A significant portion of consumer spending in Hawai'i is from tourism and thus visitor arrivals are key to a strong retail market. O'ahu receives approximately four million visitors each year from the mainland U.S. and internationally. At the peak of the market from 2005 to 2007, more than 4.5 million tourists visited the island. However, recessionary pressures were reflected in the decrease in tourists to 3.8 million in 2009.

Residential home sales and median home prices also impact consumer spending. When residential home sales are strong, home furnishings and household goods purchases increase proportionally. In addition, in times of rapid price appreciation such as in the mid-2000s, homeowners used the rising equity in their homes to remodel or purchase high ticket items. Since 1985, median home prices have increased about 5.5% annually from \$158,000 to \$575,000 in 2009². In the boom periods of the late 1980's and mid-2000s, prices increased more than 25% each year. An increase in consumer spending is reflected for these periods.

General economic indicators such as the CPI-index, unemployment, and personal income growth also impact the retail market. Strong economic conditions reflect low unemployment rates, moderate personal income growth and low inflation rates, which in turn fuels consumer spending a strong retail market.

Office and Retail Market Trends

Over the next few decades, there are several trends that will affect office and retail land uses and development. The following issues will be discussed:

- Redevelopment of Commercial and Industrial Lands in the Urban Core
- Transit-Oriented Development
- Continued Commercial Development in West O'ahu
- Lack of Viable Office Development Sites in Urban Honolulu
- Medical Office Development

² Honolulu Board of Realtors.

Redevelopment of Commercial and Industrial Lands in the Urban Core

Land uses in the urban core are projected to change significantly as major land owners look to redevelop and revitalize their real estate assets. These areas include:

Areas for Redevelopment

- Kākā‘āko (The Howard Hughes Corp. and Kamehameha Schools)
- Airport (Commonwealth)
- Māpunapuna (Commonwealth)
- Kalihi/Kapālama (Kamehameha Schools)
- Waikīkī (Queen Emma)
- Areas Mauka of Pearl Harbor
- Mō‘ili‘ili (Kamehameha Schools)
- Kāhala (Kamehameha Schools)

Many of the existing properties in these areas were built over forty years ago when urban Honolulu was growing at a rapid pace. Since then, many properties have become tired and inefficient. A significant portion of land in these areas is subject to long-term ground leases which are expiring or coming due for rent renegotiations over the next twenty-five years. These upcoming land reversions present redevelopment opportunities for land owners.

The major land owners mentioned above are already in the planning stages for redeveloping these areas into more vibrant mixed-use neighborhoods which will increase the values and maximize the returns on their land holdings. For example, under the preliminary development plans of General Growth Properties, the State’s Hawai‘i Community Development Authority (“HCDA”), and Kamehameha Schools, more than 600,000 square feet of new commercial space is proposed for the Kākā‘āko area over the next ten years.

Transit-Oriented Development

Transit-oriented development (“TOD”) is a planning, design and development trend that seeks to create compact, mixed-use, pedestrian-oriented communities located around public transit stations. This type of development does not yet exist in the Hawai‘i real estate market. The impending rail transit system will bring opportunities for commercial development around the planned stations. Land owners around these stations are keen to the potential increase in value that TOD can bring. The following neighborhoods are potential candidates for TOD:

Areas for Transit Oriented Development

- Kapolei
- Waipahu
- ‘Aiea/Pearl City
- Airport area /Kalihi/Kapālama
- Kākā‘āko
- Ala Moana

The proposed redevelopments of the Airport, Kapālama, and Kākā'āko neighborhoods will likely incorporate TOD in their planning efforts. Development guidelines for these districts differ from general commercial developments because of their focus around public transit. Increased density and a reduction in parking ratios would be required conditions needed for TOD development. Additional background on Transit-Oriented Development is provided in the Macro Level Trends section of this report.

Continued Commercial Land Development in West O'ahu

The City of Kapolei has the largest concentration of developable commercial and residential land on the island. More than 20,000 new homes are projected to be built over the next twenty-five years. As a result, retail developers have been focused on the West O'ahu region. More than five million square feet of new retail centers had been planned before the recession and financial market crisis hit in 2007. Many of these centers have been postponed or have incorporated phasing for an incremental development plan. As market conditions improve, the significant portion of retail center growth over the next twenty years will continue to be in this area.

The master plan for Kapolei, O'ahu's "second city", also includes about 30 acres of land in the city center for office building development. CMFC estimates about 1.5 million square feet of office can be built in the area. If this new inventory were developed, it would more than triple the amount of office space in the Leeward O'ahu office market (inclusive of 'Aiea, Pearl City, Waipahu, 'Ewa Beach, and Kapolei).

Land prices that are less than half the price of urban Honolulu, limited existing office inventory, and higher than average rental rates have made this area attractive for office development. However, office demand in this area has been limited to back office uses or smaller users who service the community, rather than the larger corporate users who are needed to fill up a high-rise office building. As a result, most of the planned office projects have been cancelled or postponed until better market conditions arise. As Kapolei continues to grow as a city over the next twenty-five years, the area's desirability as an office location should increase.

Lack of Viable Office Development Sites in Urban Honolulu

In the urban core, there are a limited amount of available land parcels for office development. Office buildings are currently permitted principally on BMX-3, and BMX-4 zoned parcels with secondary use on land zoned B-1 and B-2. In addition, they may also be built on certain IMX-1 and HCDA zoned parcels subject to restrictions under the Land Use Ordinance. Residential development, which is also allowed under BMX-3, BMX-4, and HCDA zoning, produced a higher net return to developers resulting in little interest in office development. Average land prices for urban centrally located land parcels with appropriate zoning currently range from \$150 to over \$200 per square foot. As mentioned earlier in the office market overview, rents would need to be more than double what they currently are to justify construction at these prices. Even if office rents were to reach rates high enough to support new office development, many of the prime office development sites have already been developed into high-rise residential condominium buildings.

Considering the lack of vacant land sites in the urban core, any future office developments will most likely be concentrated in West O‘ahu or will be a part of the redevelopment plans discussed earlier.

Medical Office Development

The medical office market is considered a subsection of the overall office market, but with somewhat different market drivers. This sector is typically situated near hospitals in urban Honolulu with a small percentage of doctors having offices in suburban markets. In addition, many hospitals do not have available space to lease to doctors whose practices are expanding. As a result, many doctors have office space outside of hospitals in medical office or general office properties. However, the close proximity to the area hospitals is important as a substantial share of many doctors’ “book of business” stems from their hospital affiliations.

With Hawai‘i’s aging population, there is an increased need for healthcare services resulting in a likely increase in medical office development over the next twenty-five years. Typical medical office rents are 30% higher than general office rents and are able to support future development costs. Despite having adequate rents to support construction, there remain questions regarding the depth of the medical office demand.

Based on an analysis of physician lease turnover, there is potential demand for 50,000 square feet of medical office space each year for O‘ahu through 2015. This estimated annual demand should remain the same as the number of physicians is not projected to increase. However, only a limited amount of medical office development (outside of hospital physician office buildings) has occurred over the past twenty years. With the continued shortage of doctors and more efficient medical facility designs, we project that the annual demand for medical space will remain limited.

Market Demand Estimates for Commercial- Zoned Land

The primary urban redevelopment areas are Kākā‘āko, Airport/Māpunapuna, Kalihi, Waikīkī, and Kapolei and Ala Moana. Transit-oriented development will also bring additional growth to Leeward O‘ahu areas for markets mauka of Waipahu and the existing urban area north of Pearl Harbor.

CMFC estimates that more than six million square feet of new retail space will be developed over the next twenty to twenty five years on O‘ahu. Retail development has been healthy as rents are currently sufficient to make construction financially feasible. New retail centers in the West O‘ahu region will benefit from the significant residential development planned in the area over the next twenty years.

Office developments will most likely occur in Kapolei where land prices are lower-priced than urban Honolulu, with some medical office development and general office space in the mixed-use components of redevelopments in the urban Honolulu.

1.3 Industrial Market Overview

The real estate cycle of O'ahu's industrial marketplace corresponds to the ebb and flow of the economy. During growth periods, such as those experienced during the early 1990's and the mid 2000s, the boom in residential homes sales and its corresponding impact on the construction industry, coupled with the jump in air passenger arrivals and its boost to retail sales, positively influenced the growth in the industrial market with healthy net absorption and occupancy growth. Conversely, with the stagnant economy during the 1992-1997 and the recent recession of 2008-2010, the industrial market posted lost occupancy and sagging rental rates.

For this report, we analyzed twenty years of historical data and determined the average annual growth rate for the industrial market to be roughly 72,000 square feet and that the average vacancy rate for this time period was 4.53%. At the end of the first quarter of 2010, Honolulu's vacancy rate was 4.37% and posted its first quarter of positive absorption over the past three years.³ During the past twenty years, O'ahu has experienced two full real estate cycles where there were two established peaks and troughs. The historical context of these two cycles will help to identify the likely growth patterns for the next twenty-five years.

Industrial Market Indicators

An effective way to determine the condition of the industrial sector is to review State tax receipts on industrial sales. For this study, we combined tax receipts from the contracting, wholesaling, producing and manufacturing industries to conduct an analysis on the health of the industrial real estate sector. The boom times in industrial real estate closely corresponds to growth periods in industrial sales activity. Industrial sales peaked at \$19.65 billion for 2007, only to have reversed course to \$16.24 billion in 2009 for a drop of \$3.4 billion. This sales activity mirrored the industrial vacancy rates and net absorption which posted downward trends over the past three years.

The drop in industrial sales matches the downturn in the economy and corresponds to a loss in industrial sector jobs as well. The most significant decline was experienced among the construction industry, where a total of 10,000 construction and warehouse/distribution positions were cut between 2007 and 2010. Additionally, building permit volume, which is a good determinate of future construction activity, fell by nearly 50% when comparing year-to-date April 2007 of \$613 million and year-to-date April 2010 figure of \$313 million. Over the past twenty years, the average year-to-date April annual permit volume was \$352 million.⁴

The wholesale/distribution and the construction industries constitute the lion's share of the industrial sales activity and are also viewed as the primary users of Honolulu's industrial real estate marketplace. These two sectors will likely continue to dictate the demand levels for Honolulu's industrial properties.

³ Colliers Monroe Friedlander Consulting.

⁴ Department of Business, Economic Development and Tourism.

Industrial Market Trends

Industrial land absorption will be impacted by several major changes that are anticipated to emerge over the next few decades.

1. Continued gentrification of existing urban industrial properties
 - a. Kākā'āko redevelopment plans (Kamehameha Schools and The Howard Hughes Corp)
 - b. Kalihi-Kapālama redevelopment plans (Kamehameha Schools)
 - c. Airport-Māpunapuna redevelopment plans (CommonWealth)
2. Near-term and mid-term ground lease term expirations
 - a. Kalihi-Kapālama (Kamehameha Schools)
 - b. Sand Island-Kalihi Kai (CommonWealth)
 - c. Airport-Māpunapuna (CommonWealth)
 - d. Hālawa-Bougainville (Queen Emma Land Company)
3. Rising Industrial Land and Rental Rate Pricing
 - a. Increased construction costs
 - b. Impact on warehouse feasibility
4. Closure of Kapālama Military Reserve and Honolulu Harbor Expansion
 - a. Relocation of one million square feet of tenants into private sector space
 - b. Shortage of expansion space for Matson/Horizon for containers
 - c. Further development of Kalaeloa Harbor
5. West O'ahu industrial park developments
 - a. Hawai'i Raceway Park
 - b. Kapolei Business Park Phase II
 - c. West Kalaeloa Industrial Park
 - d. Harborside Industrial
 - e. Honouliuli Industrial Park

Gentrification of Existing Urban Industrial Properties

Future industrial land use and development will need to focus on dealing with the continued gentrification and conversion of existing industrial zoned properties into alternative uses. Much of Kākā'āko is planned for redevelopment and will likely change the industrial landscape to higher density retail and residential uses. Similarly, the Kalihi-Kapālama and the Airport-Māpunapuna regions of Honolulu, which are primarily industrial areas, have plans to transition away from industrial use to one incorporating more retail, residential and high-tech uses. As these efforts continue to progress, industrial tenants will likely pay more for lease rents or relocate to outlying areas of the island, further away from the urban core. Shortages of available space continue to be a problem as much of the industrial markets of Airport, Māpunapuna, Hālawa, Bougainville, 'Aiea, Pearl City and Waipahu have already been developed and are nearly fully occupied.

Ground Rent Term Expirations to Peak in the next decade

Honolulu County's industrial market is unique in that a large portion of the land is controlled by a few major landlords that are either land trusts or real estate investment trusts ("REITs") that plan on keeping the land as leasehold in tenure. This ownership structure results in many leasehold properties becoming functionally obsolete as there is little incentive for lessees facing

term expirations and property reversions to invest in maintaining or improving their properties. A significant portion of the ground leases in urban Honolulu are expiring or coming due for rent renegotiations in the next twenty-five years. The fair market value of the industrial zoned land will typically dictate the ground rent values. Areas such as Kalihi Kai, Kapālama (Kamehameha Schools), Airport, Māpunapuna (CommonWealth), Bougainville and Hālawā (Queen Emma Land Company) are owned principally by one or two large landowners under a leasehold tenure.

Rising Land Prices

The inability to locate developable industrial zoned land near the urban business centers of Waikīkī, Honolulu Harbor and the Honolulu International Airport have driven industrial land prices upward as businesses contemplate alternative strategies to deal with their warehousing and distribution requirements. Honolulu's warehouse vacancy rate remains among the lowest in the country fluctuating between 1% and 5% during most of the past twenty-five years. Multi-tenant speculative warehouse development remains financially unfeasible as the combination of rising land prices and construction costs have driven development costs higher than the return generated from current market rents. Of those industrial projects that have proceeded, warehouse development has been primarily focused on urban infill projects for an owner-user or industrial condominium development in West O'ahu.

High construction costs and land prices have combined to keep development of new warehouse space to a minimum. Shortage of available vacant urban land results in sizeable increases in prices for industrial properties and industrial zoned land. Industrial businesses that rely upon thin margins are unable to pay sizeable increases in rents. This poses a dilemma for developers that are faced with high construction and land prices and tenants that are unable to pay higher rents. For new warehouse development to become viable, rents would have to escalate to \$18 to \$20 per square foot annually or \$1.50 to \$1.60 per square foot per month.

Closure of Kapālama Military Reserve Tenants

State Department of Transportation, Harbors Division is looking to implement a plan to redevelop the former Kapālama Military Reserve for harbor expansion. It is anticipated that construction will begin once the site has been remediated of environmental hazards and is likely to displace more than 1.0 million square feet of tenants onto the market.

Honolulu Harbor will continue to remain the primary port for the State of Hawai'i. It is estimated that 80% of all goods consumed are imported through this harbor. Cargo tonnage through Honolulu Harbor is projected to continue to grow at a healthy pace resulting in increased demand for storage space near the harbor. Despite the redevelopment of the former Kapālama Military Reserve for port use, there will likely still be a shortfall of storage facilities for cargo handling.

Relocation of Kākā'āko Industrial Tenants

The HCDA has restarted its efforts to create a long term master plan for the Kākā'āko area. Currently there is an estimated 3.8 million square feet of industrial users in this submarket and a vacancy rate of 3.6%. Previous efforts by Kamehameha Schools, The Howard Hughes Corp./General Growth Properties and the State to redevelop Kākā'āko were met with mixed

results. The likelihood is that existing industrial uses will be phased out as landowners seek higher rents for this highly valued land.

Availability of Industrial Land in West O'ahu

The cyclical nature of Honolulu's real estate market was demonstrated by the rapid development and leasing of Kapolei Business Park and Kenai Industrial Park on the west side of the island during the latest boom period of the early 2000s. During this era, a number of industrial condominiums were built to meet a market that had desired smaller bay sizes and the rights of fee simple ownership. This boom cycle was subsequently followed by the current down cycle which began in 2009 when land prices and industrial rents fell and subsequently industrial condominiums showed high vacancy.

West O'ahu industrial parks were adversely affected by this downturn and vacancy rates rose dramatically. The West O'ahu industrial market appears to act as a buffer for the surge in demand when market conditions tighten within urban industrial properties. There are over 560 acres of vacant West O'ahu land that are already zoned for industrial use and over 330 acres that are undergoing the entitlement process.

Utilization of Kalaeloa Harbor

The space constraints presented at Honolulu Harbor and the efforts by the Department of Transportation Harbors Division to redevelop Kapālama Military Reserve serves to encourage the full development of Oahu's second port to handle the projected growth in demand over the next few decades. Efforts should be concentrated on turning Kalaeloa Harbor into the state's second main port. Deep water dredging coupled with infrastructure to handle container shipments should be encouraged at Kalaeloa Harbor. If this should occur, the available zoned industrial land adjacent to the Harbor would be ideally suited for storage and distribution facilities.

Market Demand Estimates for Industrial-Zoned Land

The average annual absorption of industrial space for the past twenty years has been 51,000 square feet.⁵ Using this as the benchmark for the next twenty-five years, much of the existing industrial inventory will have been occupied in urban Honolulu and there will be an increasing level of demand for newly built warehouse/distribution space. The West O'ahu markets of Campbell, Kenai, and Kapolei Industrial Parks provide the next viable option for expanding or relocating displaced industrial tenants.

Currently, there are an estimated 1,144 acres of industrial-zoned, and planned-to-be-entitled industrial land for West O'ahu. For the near term, it appears that land pricing will likely decline after the sizeable increases that were experienced between the 2004 and 2008 time period. Hawai'i Raceway Park, which has been foreclosed upon, and Kapolei Business Park Phase II and West Kalaeloa Industrial Park, which are encountering financial difficulties, will likely place downward pressure on industrial land prices in the area. For fully-entitled and infrastructure-improved industrial-zoned land, sales prices reached a high water mark of \$42 per square foot in 2008.

⁵ Colliers Monroe Friedlander Consulting.

Table 1.1 - West O’ahu and Central O’ahu Industrial Parks

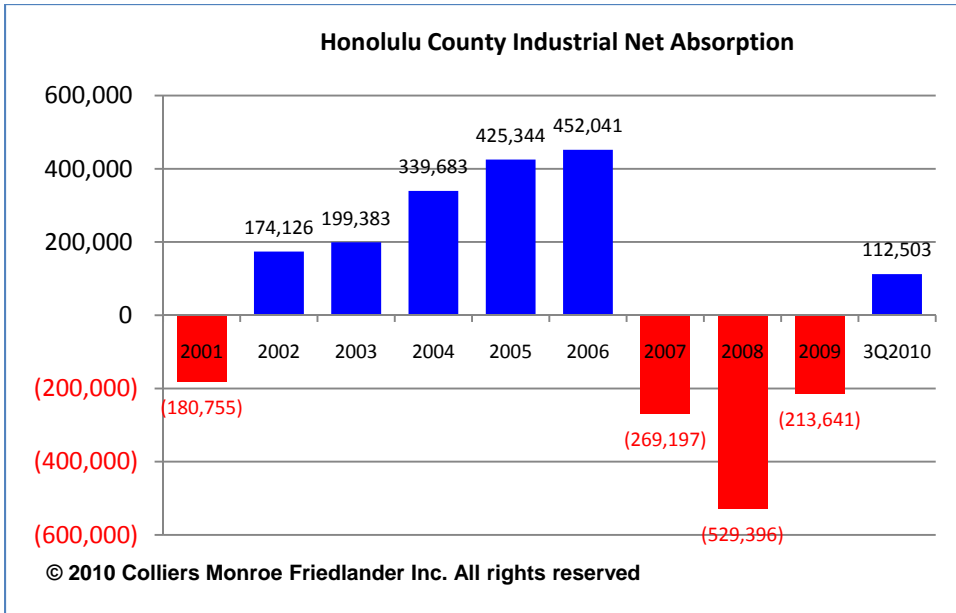
New Inventory and Competing Properties	Total Acres	Zoning	Start Date of Land Sales or Development	Status
Mililani Tech Park	145	I-2	2010	28 acres undergoing subdivision approvals. 117 acre Phase II unchanged.
Malakole Industrial Park	54	I-2	2010	Larger parcels are being sold with the intent to subdivide at a later date.
KBP Phase II	53	I-2	2010	Property being remarketed for larger parcel sales.
Hawaiian Cement	29	I-2	2012	Site sold with plans for subdivision at a later date.
DLNR Olai St	110	I-2	2012	Previously DLNR planned to place land up for long term ground lease. Recent developments have the land going to OHA.
West Kalaeloa	100	I-2	2012	Subdivision being sought 1/08. Infrastructure to needs to be built.
Harborside	250	I-2, I-3 and IMX-1	2015+	Kapolei Property Development waiting for improvement to market conditions before marketing parcels for sale. Undergoing post entitlements efforts to prepare.
Waiawa/Koa Ridge	120	Light Industrial and Commercial	2015+	Received LUC approvals. Master plan mentions light industrial uses.
Royal Kunia	123	Industrial	2015+	Industrial Park purchased by HRT. Nothing planned at this time
HCDA Kalaeloa	160	Light Industrial and Eco-Industrial	2015+	Based on 2006 HCDA plan for Kalaeloa.
Total	1,144	acres		

The combination of the demand elements of annual industrial net absorption of 51,000 square feet over the past ten years (see graph 1.2 on page 18), the relocation of tenants off leasehold land, gentrification of existing urban industrial properties, the redevelopment of functionally obsolete properties and the relocation of tenants from the former Kapālama Military Reserve will all have an effect on the demand for industrial land.

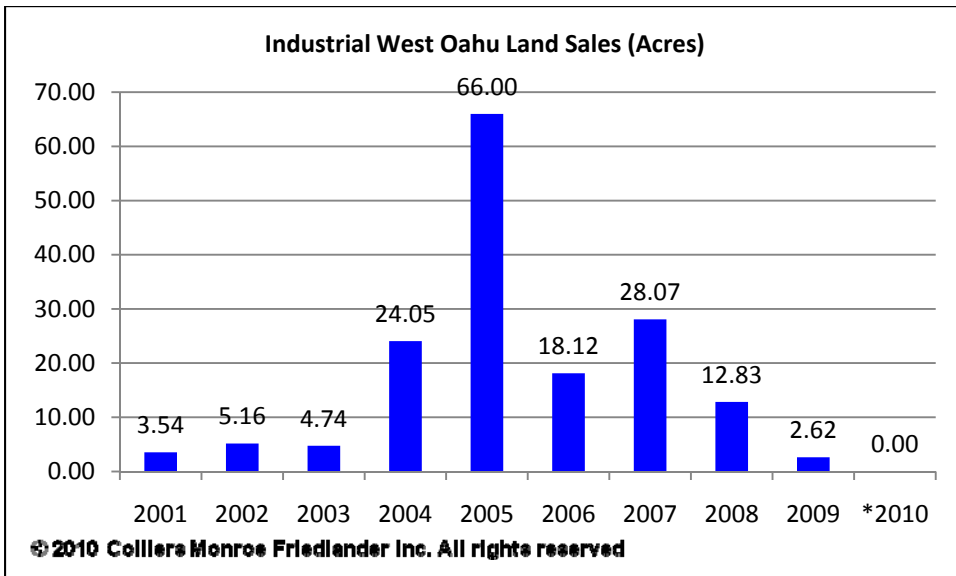
Based on Table 1.1, CMFC estimates that there are 1,144 acres of planned industrial inventory. Over the past ten years, a total of 247 acres of land was sold (see graph 1.3 on page 18) in the ‘Ewa marketplace (inclusive of Kapolei, Kenai and Campbell Industrial Parks). While this amount was significantly impacted by the purchase of Kapolei Business Park and Kapolei Business Park Phase II, exclusive of these two sales, the average acreage sold was sixteen acres with the median amount equivalent to nine acres per year. The current amount of zoned land and land

going through the entitlement process is estimated to be more than adequate to support the island's total projected industrial demand for the next twenty-five years.

Graph: 1.2 – Honolulu County Industrial Net Absorption



Graph 1.3 – Industrial West Oahu Land Sales (Acres)



* Incomplete year and that there were no industrial land sales as of July 2010.

2.0 MACRO-LEVEL TRENDS

While local market trends are more critical to changes in land use, macro-level issues should also be examined to prepare best practices for new trends to Hawai'i. The following is a compilation of various trends using research of written media and case studies in Hawai'i as applicable. We will also discuss the potential impact on the local commercial real estate markets from these trends. CMFC feels that the most relevant issues that need to be addressed which will impact land use over the next twenty-five years are as follows:

1. The Green Revolution
2. Transit Oriented Development
3. Shortage of Developable Land
4. New Commercial and Industrial Concepts
5. Changing Demographics

2.1 The Green Revolution

Global concerns over the environment and the desire to reduce our dependency on fossil fuels are projected to impact and change the current use of commercial and industrial properties. The green revolution that capitalizes on alternative energy sources, recyclable construction materials and efficient space utilization will be the drivers of future commercial development.

Capitalizing on solar, wind, biofuel, geothermal, ocean, fuel cell and other alternative energy sources will likely be the approach to achieving a higher level of energy independence by 2030. The State of Hawai'i's mandate to be 70% energy independent will be a prime motivating factor to adopt new energy technology. This technology will influence how a property's energy systems are developed, as well as determining the preferred locations for new developments.

In addition, sustainability reporting methods will become more commonplace over the next ten years. Triple bottom line reporting ("TBL") makes companies accountable for economic, social and environmental effects of doing business. This is a popular form of accounting for nonprofit companies and government organizations to show a commitment to corporate social responsibilities.

The Green movement is growing rapidly with each property sector ardent on participating. Owners and users of commercial real estate see the value of lowering their carbon footprint both environmentally and for operational cost savings. The following are a few of the relevant trends which impact the commercial real estate market.

Green Building

Green building is the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle. This includes design, construction, operation and maintenance, renovation, and deconstruction. The common objective is that green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation⁶

Energy Management⁷

Buildings are the major source of demand for energy and materials that produce by-product greenhouse gases. Various energy management practices and measurements have been established by government agencies to address the global warming issue which is tied directly to cumulative exploitation of fossil fuels as an energy source. These practices apply to the construction of new commercial developments as well as existing buildings and tenant spaces.

LEED Certification

One of the leading organizations that promote green building is the United States Green Building Council, or USGBC. USGBC develops and maintains a wide range of initiatives to expand green building initiatives. Their best known initiative is a program named Leadership in Energy and Environmental Design, or LEED. According to USGBC, LEED is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO² emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

The LEED program has four distinct certification levels based on a 69-point rating system. The system evaluates sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and LEED innovation credits. The certification levels for LEED construction include LEED Certified (26-32 points), LEED Certified Silver (33-38 points), LEED Certified Gold (39-51 points), and LEED Certified Platinum (52-69 points).

- *Office Buildings* – The LEED program applies well to office properties because of its emphasis on mechanical systems such as heating, ventilating, and air conditioning, which is typically characterized by large indoor environments with a higher density of employees.
- *Industrial Buildings* - While industrial developers initially dismissed the option of earning certification points, attaining a LEED-Certified or LEED-Certified Silver designation for a spec industrial building is possible through the introduction of other sustainable building features and construction methods.

⁶ U.S. Environmental Protection Agency. (October 28, 2009). Green Building Basic Information. Retrieved December 10, 2009, from <http://www.epa.gov/greenbuilding/pubs/about.html>

⁷ http://www.architecture2030.org/2030_challenge/index.html

- *Retail Buildings* - The LEED for Retail rating systems will launch in late 2010. Until then, retail projects will continue to register under LEED 2009 for New Construction or LEED 2009 for Commercial Interiors.⁸

Local Trends

As of 2009, there were 146 projects in Hawai'i registered for LEED certification. Of this amount, 9.6% or 14 projects had obtained their certification. In comparison, there were 19,524 LEED registered projects, and 12.7% or 2,476 LEED certified projects worldwide.⁹

The Department of Hawaiian Home Lands' Kaupuni residential subdivision development in West O'ahu is one of these projects. This 18-home community will be the nation's first LEED Platinum subdivision. The net zero community will be energy efficient and contribute to food sustainability, much like the eco-district concept.

One of the key issues for property owners and developers is understanding how and to what extent the additional costs (approximately 25% higher than non-LEED projects) associated with a LEED certified project will be repaid over time from energy savings.

ENERGY STAR Rating

An ENERGY STAR qualified facility meets strict energy performance standards set by the EPA and uses less energy, is less expensive to operate, and causes fewer greenhouse gas emissions than its peers. In order to qualify for this rating, a building must score in the top 25% based on EPA's National Energy Performance Rating System.

Local Trends

There are 36 ENERGY STAR labeled commercial buildings in Hawai'i representing over 9.2 million square feet of inventory. The first ENERGY STAR building in Honolulu was the Pacific Guardian Center, which received the rating in 2003.¹¹

Net Zero Buildings

A net zero building is a building that generates more energy than it uses over the course of a year as a result of relatively small size, extreme efficiencies and onsite renewable energy sources such as wind, solar or geo-exchange systems. The Architecture 2030 Challenge tasks the global architecture and building community with developing net zero buildings by 2030. Building extreme efficiency into a structure is highly cost effective, and achieves the bulk of the net zero effort.

⁸ www.usgbc.org

⁹ <http://www.hawaii绿色建筑law.com/wordpress/2010/07/10/hawaii-sports-24-leed-certified-projects-as-of-july-2010/>

¹¹ "ENERGY STAR Labeled Buildings & Plants" search at www.energystar.gov

Local Trends

In Hawai'i, while the net zero concept is growing in the residential market with photovoltaic systems, there are only a few non-residential net zero buildings. The Hawai'i Energy Gateway Energy Center on the Big Island which serves the Natural Energy Laboratory of Hawai'i ("NELHA") achieves its net zero status through a photovoltaic system. The Energy Lab at the Hawai'i Preparatory Academy campus is a LEED platinum candidate as well as Living Building Challenge participant. The Living Building Challenge addresses six performance areas: site, energy, materials, water, indoor quality, and beauty and inspiration, with a goal of achieving a "net zero" impact on the energy grid, water systems and natural environment.

Hawai'i Clean Energy Initiative

Hawai'i is doing its part in the energy management movement. In January 2008, the State of Hawai'i entered into a partnership with the U.S. Department of Energy called the Hawai'i Clean Energy Initiative which aims to supply 70% or more of Hawai'i's energy needs by 2030 through efficiency and developing indigenous renewable energy sources. The practices discussed above are part of this initiative. On October 20, 2008, an Energy Agreement was signed by the State of Hawai'i, the Hawaiian Electric Companies, and the State Consumer Advocate to accelerate the accomplishment of the State's energy objectives in the regulated electric utility sector. There are over 30 renewable energy and energy efficiency projects that are currently in operation or under development Statewide.

Electric Vehicles ("EVs") – Part of the Hawai'i Clean Initiative is to promote the use of electric vehicles. Hawai'i's goal is to have 50,000 electric cars on the road by 2015 and to establish a network of electric charging stations. The State has established a public-private partnership with Better Place to bring electric vehicles and the infrastructure needed to support them to Hawai'i. In January 2010, the first public electric car charging station in Hawai'i went into service in Kākā'āko and others are planned for various commercial properties throughout Honolulu.

Additionally, the State legislature just passed Act 156, Session Laws of Hawai'i 2010, which will be effective in 2011. This law will require commercial properties with more than 100 parking spaces to allocate parking stalls and electric charging stations for electric vehicle use.

Reuse and Recycle of Construction and Demolition materials^{12,13}

According to the Environmental Protection Agency ("EPA"), each year in the United States, industries produce over half a billion tons of residuals that are potentially usable materials, such as coal combustion products ("CCPs"), construction and demolition ("C&D") materials, spent foundry sand, used tires, and slags. Many of these materials have chemical and physical properties that make them valuable resources when recycled or beneficially reused, but they are often disposed of as waste.

¹²EPA Recover Your Resources *Reduce, Reuse, and Recycle Construction and Demolition Materials at Land Revitalization Projects*

¹³ www.epa.gov/industrialmaterials

The reuse and recycling of construction and demolition materials is becoming more commonplace as new material prices continue to increase and the Green movement grows. Many materials can be salvaged from demolition and renovation sites and sold, donated, stored for later use, or reused on the current project. Typical materials suitable for reuse include plumbing fixtures, doors, cabinets, windows, carpet, brick, light fixtures, ceiling and floor tiles, wood, HVAC equipment, and decorative items (including fireplaces and stonework).

In addition, materials can either be recycled onsite into new construction or offsite at a C&D processor. Typical materials recycled from building sites include metal, lumber, asphalt, pavement (from parking lots), concrete, roofing materials, corrugated cardboard and wallboard.

Local Trends

Several construction projects in Hawai'i already use this practice of reuse and recycling. One example is the 40 South School Street project which was one of the first LEED-certified construction projects in Hawai'i. The project site was a neglected and vacant three-story concrete shell building sitting on a busy street several blocks from the downtown financial district of Honolulu. Originally built in 1963, the new owners chose to renovate and reuse the existing building shell instead of sending it to the landfill. They reused the existing building shell and all construction waste generated from the renovation was sent to a construction debris recycling station. All of the custom-designed wood fixtures and furniture were constructed of either reclaimed wood, or locally grown Eucalyptus wood.

While Hawai'i has been slow to adopt many of the existing sustainable construction practices, recycling and reuse efforts of this type will become common practice in the future. Typically, if there is a positive cost benefit, the adoption process would be faster.

Eco-Districts¹⁴

This concept extends green building into an integrated and resilient district or neighborhood that is resource efficient; captures, manages, and reuses a majority of energy, water, and waste on site; is home to a range of transportation options; provides a rich diversity of habitat and open space; and enhances community engagement and well-being.

“Fundamentally, it’s the next generation of green building strategy,” says Rob Bennett, executive director of the P+OSI, a nonprofit entity created this year to engage government officials, academics, developers, and builders in the formation of a series of eco-district pilots. “We are taking what we’ve learned from green building and applying it at a neighborhood scale.”

“It’s like green building was maybe 10 years ago,” says Mark Gregory, Portland State University’s associate vice president for planning and facilities. “Now we’re saying you can do this with a neighborhood.” College campuses and hospital facilities have for decades shared heating and air conditioning among buildings, but the departure point in this latest brand of hyper-sustainability comes when developers start talking about co-generation plants, which distribute electricity as well as heat, and use alternative fuels to run them.

¹⁴http://www.sustainablebusinessoregon.com/articles/2010/05/ecodistrict_plans_gain_traction_in_portland.html

Portland isn't the only place planning the greening of neighborhoods. Seattle calls their areas in consideration "climate benefit districts" where they plan to integrate energy and transportation solutions to reduce greenhouse-gas emissions. China's "eco-block" is being used in the city of Qingdao as a prototype for future energy and emission-reducing opportunities.

Local Trends

The concept of eco-districts is still in its infancy. However, with the planned redevelopments of Kākā'āko and other areas over the next twenty-five years, this type of neighborhood development is plausible. Kamehameha Schools has already supported a plan for sustainable development with its Kākā'āko lands.

Use of Industrial-Zoned Land for Alternative Energy Generation, Storage and Distribution

Industrial zoning on O'ahu allows for petroleum processing and explosive and toxic chemical manufacturing and storage. Should the alternative energy industry expand at a rapid pace, the use of industrial zoned properties will likely face an increase in demand from the bio-fuels industry.

A recent trend that is being adopted for many buildings in the Sun Belt of the United States and being considered for use in Hawai'i is the installation of photovoltaic panels to capture solar energy. The large rooflines associated with warehouse building presents landlords with a potential money-saving or money generating opportunity. Energy created by these panels can be sent back to Hawaiian Electric Company for an electric bill credit.

Green Retail

The "greening" of the retail industry is expected to stay strong as retailers want to stay ahead of regulatory developments and because sustainability is becoming a growing priority for consumers. Some large retailers such as Home Depot, Starbucks, and Wal-Mart, are leading the charge to more environmentally aware practices.

Sustainability efforts by retailers include reducing plastic shopping bag waste, eliminating unnecessary packaging, increasing solar and wind power projects that will supply electricity to stores, obtaining ENERGY STAR certification for stores, and improving recycling efforts. From an individual store perspective, retailers are discovering that there are measurable economic benefits from going green. Besides energy cost savings, some cities are offering retailers a fast-track on building permits and licenses, and waiving certain fees, if they follow the city's green guidelines.¹⁵ These types of incentives could also be offered in Hawai'i to encourage green practices at a tenant level.

¹⁵ "The Age of Transformation: A retail outlook for 2009 and beyond." Deloitte Touche Tohmatsu.

Conclusions

Future commercial and industrial developments will be built with sustainability and the environment in mind. While these Green trends are fairly new, they will become the norm as consumers become more environmentally conscious in their consumption of goods. Land use policies should encourage this type of development. Legislative issues should also incentivize and streamline the permitting processes for those who are proactive in following these trends.

2.2 Transit Oriented Development

The desire to reduce commute times and increase the amount of quality family time will spur the continued need for satellite offices, hoteling concepts, telecommuting and alternative transportation. Rapid transit will serve as a major contributor to the change in how employees travel to and from work. Developers will focus on transit-oriented development to target commuters buying power along the transit corridor. Mixed-use developments will allow commercial spaces to benefit from a captured audience of residents. Parking space requirements are likely to be reduced in an effort to entice developers to build with transit in mind.

Neighborhood Villages, a concept of blending “live”, “work” and “play” will constitute a role in how developers envision their master planned communities. In addition to housing, these developments will encourage the formation of employment hubs that allow residents to live near their workplaces.

A transit-oriented development (TOD) is a mixed-use residential or commercial area designed to maximize access to public transport. A TOD neighborhood typically has a center with a transit station surrounded by relatively high-density development with progressively lower-density development spreading outwards from the center. TODs generally are located within a radius of one-quarter to one-half mile from a transit stop, as this is considered to be an appropriate scale for pedestrians.

Over the past decade or so, there has been tremendous growth in demand for compact housing near transit: between 2000 and 2030, upwards of nine million additional households across the United States will live within a half-mile of transit stations.¹⁶ A variety of different groups—transit and smart growth advocates, community-based developers, business leaders, planners, and more—have embraced TOD as a powerful strategy for smart growth, urban revitalization, and creating access and opportunity for low-income residents.

¹⁶ Parker, T. and Arrington, G., *Statewide Transit Oriented Development Study: Factors for Success in California*. Sacramento, CA: Department of Transportation, 2002.

When implemented as an equitable development strategy, TOD can bring multiple benefits to the local community and to the metropolitan area as a whole. Some of these benefits include:

- Revitalization around and beyond the station area.
- Accessible jobs, housing, services, and recreational opportunities for residents.
- Reduced transportation costs for residents.
- Affordable housing and mixed-income communities.
- Increased transportation mobility and access to jobs and other opportunities.
- Local economic development.
- Asset-building and ownership opportunities.

Local Trends

In 2008, Mayor Hanneman signed Bill 10 which creates a framework for future neighborhood TOD plans to be adopted in the future by City Council resolution. The plans will focus on creating economically vibrant communities that are healthier and more pedestrian-friendly. These plans will become the foundation for specific zoning regulations and financial incentives. Zoning regulations will address parking standards, new density provisions, open space and affordable housing. Financial incentives could include public-private partnerships, real property tax credits and infrastructure financing.

As discussed in the local market trends section, TOD will create additional opportunities for retail and office development. Older neighborhoods such as Kalihi and Waipahu will benefit from the redevelopment and revitalization of the areas around the proposed transit stops. The first neighborhood TOD draft plan was for the two stations in Waipahu. TOD plans are also being drafted for areas near the Pearlridge, Kapolei and Ala Moana stations.

Lower Parking Requirements

The most important effect of density on parking is its potential to reduce required parking space, as compared to similar developments at conventional densities. As density increases, people find other means to reach the shops or offices. More people take transit or walk. Different neighboring uses may also share the same parking spaces at different times of the day.

As practiced in mainland cities with a rapid transit system, the creation of new shopping and residential districts around transit stations on O'ahu should be subject to different density and parking requirements which promote this alternative transportation method.

Conclusions

While rapid rail transit will be a new experience for Hawai'i, there are numerous mainland and global systems that can serve as examples of best practices for development around transit stations. Land use policies should encourage these benchmark processes and reward developers who adhere to socially and environmentally conscious developments.

2.3 Shortage of Development Land

Being on an island, land is a valued resource. Land prices are expected to continue to escalate driving development costs upward. With the existing limits to urban commercial development likely to be breached before 2035, developers will have to concentrate on creative reuse of existing properties. Higher density with vertical growth will likely be required in order to make any development financially feasible.

Additionally, gentrification of older neighborhoods and industrial parks will become commonplace as Kākā'āko, Kalihi, Kapālama, Airport/Māpunapuna areas and the Honolulu Harbor transform into higher and better uses.

Various alternative formats of commercial space such as the following can serve to reduce space usage requirements.

Alternative Workplace Strategies¹⁷

Alternative workplace strategies encompass a variety of methods of redesigning office space to reduce costs and commuting, improve productivity, adapt to new technology, and accommodate the increased mobility of employees.

A study of people working from home at least one day a week, by the U.S. Consumer Electronics Association, suggested that telecommuting saves 840 million gallons of gasoline a year and 14 million tons a year of greenhouse gas emissions. The report calculated that the total saving in electricity amounted to 9-14 billion kilowatt hours a year - approximately equivalent to the energy used by one million U.S. households.

Remote Office or Telework Centers

- Remote Office or Telework Centers are distributed centers for leasing offices to individuals from multiple companies. A Remote Office Center provides professional grade network access, phone system, security system, mail stop and optional services for additional costs. ROCs are generally located in areas near where people live throughout population centers, so that workers do not have to commute more than a couple of miles. The telecommuter works in a real office but accesses the company network across the internet using a Virtual Private Network ("VPN") just as in traditional telecommuting.

Hoteling

This concept was instituted to save work space during the previous economic downturn as a way of trying to save square footage and cut business occupancy costs. Traveling consultants reserve space in the home office on an as-needed basis. Individual lockers provide permanent storage space for their belongings.

¹⁷http://www.ciscosystems.com/en/US/solutions/collateral/ns340/ns394/ns165/ns152/white_paper_c11-459857.html

Video conferencing

- Video conferencing or “live meetings” enable employees and clients in different locations to conduct meetings. Companies aren't disrupting an employee's day by asking him or her to fly to a meeting, thus avoiding the need to travel. The idea of an employee being able to hook up his or her laptop anywhere and do desktop presentations on the screen in the front of the room has become attractive to many companies.

Local Trends

Alternative workplace strategies are not as widely utilized in Hawai'i as they are in larger mainland metropolitan areas where commute times may be longer and such practices are more commonly accepted. However, the local workforce has become more mobile to a certain extent through the use of virtual networks and smart phone technology. Over the next twenty-five years as Honolulu's business hub expands out of the urban core and virtual communication and connectivity is more widely used, these practices may become more relevant.

Shrinking Spaces

Office Consolidation

One of the biggest trends is consolidation. This trend brings people together in less space that is used more efficiently. Some companies are consolidating by taking employees from leased space in other parts of the country and bringing them together in one location so that communication and idea generation can happen easily.

Companies are determining what type of office space will increase efficiencies. Smaller and more efficiently designed cubicle workspaces are now the trend. In addition to reduced size, workstation panels are also coming down in height, creating less privacy and more open space, at an exponential rate.

By reducing private offices and lowering cubicle heights, this allows for interior openness and more natural light to permeate through the space. Increased energy-efficiency with a decreased need for harsh overhead lighting is a result.¹⁸

Local Trends

As a result of cost-cutting measures, consolidation has become common in Hawai'i. Space planners have adapted to these trends and prepare their client space plans accordingly.

¹⁸ <http://www.bobbrooke.com/trendsinofticedesign.htm>

Shrinking Retail Store Formats¹⁹

As retailers try to manage the dual challenges of rising costs and limited capital, many are investigating more profitable store formats. Some retailers are shrinking square footage and experimenting with small-format stores as a way to encourage quicker and more frequent neighborhood shopping trips. Small format stores are those that are a fraction of the size of the original concept stores. For example, small-format grocery stores are about half the size of their original concepts at 10,000 to 25,000 square feet. Wal-Mart has its Marketside stores which average 15,000 square feet in size, significantly smaller than a typical 130,000 square foot Big Box format. These smaller stores also offer retailers better inventory control and consumers a more personalized and time-saving shopping experience. In addition, smaller formats may present a better way of serving shoppers given the likely prospect of rising energy prices in the long term and an aging U.S. population.

Concurrent with the trend toward smaller stores is a focus on selling to smaller, more targeted audiences, a phenomenon known as “long tail” retailing. As mass markets have become both saturated and more fragmented in terms of incomes and shopping behavior, mass-market retailers and their suppliers have become highly focused on price competition. This strategy can drive down margins and fail to provide consumers with clearly differentiated offerings. In contrast, retailers that target niche markets (or long-tail opportunities) rather than mass markets can find them to be quite lucrative. Some of the biggest online success stories today are companies that sell a deep selection of just one product type. Diapers.com, for example, was the second-fastest-growing retailer in the 2007 list of the top 500 companies selling on the Web, according to Internet Retailer.

Local Trends

The smaller store format will work well in land restricted retail markets such as Waikīkī, as well urban in-fill mixed-use redevelopments and transit-oriented developments.

Main Street Development²¹

One of the current development trends for retail centers is the main street development which creates a downtown-like environment in a community. The days of the strip-mall retail center appear to be numbered as more retail developers and owners favor the Main Street aesthetic. Storefronts now have the appearance of freestanding buildings, each with its own unique style and attractive facade. The structures are meant to stand apart and promote a sense of destination, like a typical town center.

Another trend that goes along with the Main Street aesthetic is to place parking behind the buildings and away from pedestrian walkways serving Main Street. This creates a focus on the structures, the pedestrian spaces, and the shopping experience instead of the parking.

¹⁹ DELOITTE The Age of Transformation: A retail outlook for 2009 and beyond

²¹ <http://www.buildings.com/tabid/3413/ArticleID/9956/Default.aspx>

All in all, the Main Street approach caters to the idea of a neighborhood. When completed, Main Street shopping centers are designed to look like they've always been in place, serving and complementing the community in which they're located.

Main Street at Exton, located in Exton, PA, is a pioneering development that embraces this type of design. The 300,000-square-foot retail center is made up of 13 retail buildings, each boasting its own look. It houses a number of major tenants (including Barnes & Noble, Bed Bath & Beyond, Old Navy, and Pier 1 Imports) and provides some parking along its Main Street, with the bulk of the parking located behind the retail buildings. Thanks to this set-up, the center fosters pedestrian and vehicular traffic all throughout the complex.

With the creation of Main Street at Exton, a downtown area was formed where none previously existed. The retail center has been adopted by local residents as the community's new downtown area. The success of Main Street at Exton and similarly designed retail centers has inspired many developers and owners to recreate this approach in other communities.

Local Trends

The Main Street concept is seen as a good fit for various development scenarios on O'ahu. Planned retail centers such as Ka Makana Ali'i in Kapolei, the planned Maka'iwa Hills project, and the mixed-use redevelopment plans for Kākā'āko all have elements of a main street design.

Conclusions

As the most populated island in Hawai'i, O'ahu is also the most developed island. As planned developments come to fruition, there is an increased concern over the loss of developable land. Alternative workplace strategies, shrinking spaces, and mixed-use vertical developments coupled with virtual connectivity will help lessen physical workspace requirements.

In addition, the redevelopment of older business districts such as the Kaimukī, Mō'ili'ili, and McCully areas will also create venues for new development growth. Land use policies and legislation should accommodate the lack of new growth areas. Policies should also encourage and streamline the processes for future development.

2.4 New Commercial and Industrial Concepts

Impact of Technology

The continued use of the internet and the adoption of smart cards for consumer use and retailer use will continue to spur new retail concepts that will impact the physical space requirements for retail stores. The ability to "touch and feel" the product will not change, but the entire product distribution channel will be affected by the transition. Retail stores will likely be smaller and require less sales manpower as touch screen monitors will advise the availability of inventory. Shelf space will be reduced as customers continue to shop on-line in lieu of in-store shopping. The reduction of overall land use from large stores to smaller concepts will be the norm which coincides with the concerns over the lack of available developable commercial land.

Smart Card Technology

First introduced in Europe over a decade ago, smart cards debuted as a stored value tool for pay phones to reduce theft. As smart cards and other chip-based cards advanced, people found new ways to use them, including charge cards for credit purchases and for record keeping in place of paper.

In the U.S., consumers have been using chip cards for everything from visiting libraries to buying groceries to attending movies, firmly integrating them into our everyday lives. Multifunction, microprocessor-based smart cards incorporate identity with access privileges and also store value for use in various locations.

A primary use of smart cards is stored value, particularly loyalty programs that track and incentivize repeat customers. For multi-chain retailers that administer loyalty programs across many different businesses and Point of sale systems, smart cards can centrally locate and track all data. The applications are numerous, from parking and laundry to gaming, as well as all retail and entertainment uses.

Local Trends

Several national and local retailers already use smart cards for loyalty programs, as well as gift cards. With the large number of national and global retailers in Hawai'i, smart card trends of these companies will also be followed locally.

Multi-channel integration

Consumers are increasingly using two or more points of contact with retailers to research, evaluate, purchase, service, and, when needed, return a product. The movement toward an integrated multi-channel retailing environment is already underway. Forrester Research recently estimated that cross-channel shopping by 2012 will represent 38% of retail sales, compared with only 20% of sales in 2007.²²

Forward-thinking retailers will focus on enriching the brand experience for distinct customer segments across multiple channels. They will use Web sites not just to sell, but to build brand identity, engage consumers in dialog, and obtain feedback from consumers. This will require that retailers move from a traditional Web 1.0 model (selling on the Web) to a Web 2.0 model (creating social networks on the Internet and creating a multi-dimensional perspective for customers via blogging, virtual worlds, etc.). These new technologies will enable consumers and retailers to access and communicate varied, rich information in real time to transform key interactions and relationships.

In multi-channel retailing, the goal is to create relevant interactions with customers and a seamless and differentiated brand experience, whether a consumer is shopping in the store, buying online or over the phone, or purchasing through a call center or kiosk.

²² DELOITTE The Age of Transformation: A retail outlook for 2009 and beyond.

While part of the multi-channel practice includes physical store contact, the various mediums of purchasing goods could result in a reduction in retail store sizes. In this regard, new retail developments may be more compact in size than their mega mall predecessors.

Local Trends

National, global and local retailers have already tapped multi-channeling to both service and introduce a brand to Hawai'i consumers.

Mobile movement²³

The greatest influence on modern corporate design is continuing technological improvements such as the growing prevalence of Smartphones, virtual conferencing, and virtual private networks ("VPNs") which has allowed employees to push the limits of the office further into virtual realms. Now staying connected, even while away from the workplace, is easier than ever. But with the lines between the home and office blurred, companies are recognizing that there is less need to designate large amounts of office space for employees.

"There's a new realization (and research shows) that we're only in our workstations about 35 to 40 percent of the day...and it's not just the Intels and the IBMs of the world doing this kind of work," says Steve Delfino vice president of corporate marketing and product management for Teknion, an international designer, manufacturer, and marketer of office furniture.

Local Trends

As mentioned earlier, Hawai'i's workforce has become more mobile to a certain extent through the use of virtual networks and smart phone technology. Over the next twenty-five years as Honolulu's business hub expands out of the urban core and virtual communication and connectivity is more widely used, these practices will become more relevant.

Supply Chain Trends and Industrial Space

Shipping costs will also be a point of competitive advantage as the delivery of goods to the final customer will change and improve. Transportation companies, wholesalers and retailers will be fully integrated reducing the need for costly warehouse/storage space, and "just-in-time" ordering systems will be adopted. Additionally, warehouse vertical heights will increase as merchandise racking systems improve in an effort to maximize limited warehouse land.

Warehouse spaces in Hawai'i are generally in the smaller size range (less than 25,000 square feet) with lower ceiling heights. There are only a handful of warehouses over 50,000 square feet in size. In addition, much of this inventory is aging and obsolete. As noted earlier, there is a limited amount of industrial land available for new development in West O'ahu. In this regard, the construction of any new industrial warehouse building would be built to maximize land use.

²³ <http://www.contractdesign.com/contract/design/Office-Design-Trends-1869.shtml>

Conclusions

Many businesses and consumers in Hawai'i are no strangers to this mobile movement. Technology has already affected the way people work and live their everyday lives by allowing for constant communication and connectivity. Future trends will focus on greater exposure to consumers via multi-channels. This will impact the types of commercial spaces and infrastructure needed to accommodate new technologies. Land use policies should be mindful of these changing space needs and should accommodate any infrastructure requirements to support these technologies such as fiber optic cabling.

2.5 Changing Demographics

Hawai'i's population is aging rapidly. According to the U.S. Census Bureau, on July 1, 2009, the population 65 years and above accounted for 14.5% (ranked 8th in the nation), while persons 85 years of age and older shared 2.5% of the total population (6th place in the nation). These percentages of aged population are significantly higher than in April 1, 2000, when the population 65 years and above accounted for 13.3% of the total, and population 85 and older accounted for 1.4% of the total. Hawai'i's population 65 years and older increased at 1.7% annual rate from July 1, 2000 to July 1, 2009 while our overall population increased 0.7% a year during the same period.

This demographic trend will influence what developers build. Nursing homes, assisted living, hospitals and outpatient clinics will be in high demand. Extra security and handicap parking stalls will be needed.

Medical Office Trends

Demand for medical office space continues to be driven by several factors, including performing more procedures at an outpatient setting, the expansion of existing practices, and the increasing obsolescence of aging assets. Additionally, the growing trend of hospitals expanding to offer medical services at off-campus satellite facilities is expected to accelerate in the future as medical practitioners and hospitals continue to seek out methods to reduce costs. The principal force remains the shift of baby boomers into later stages in life, as the number of those ages 55 and older in the United States is forecast to expand by nearly 11 million individuals through 2012. More importantly, as the population in general is physically active longer, the number of physicians' office visits among this key age bracket is rising, necessitating the demand for more doctors, and consequently more office space.²⁴

It is projected that by 2015, acute care facilities will no longer try to be all things to all patients. They will specialize and build their competencies around targeted conditions and treatments. Non-urgent acute conditions will be treated from home, via the use of telemedicine or at retail settings that provide low cost, good quality, and convenience.²⁵ These trends could reduce medical facility size and layout in the future.

²⁴ Marcus & Millichap Medical Office Research Report - Midyear 2008 MEDICAL OFFICE ASSETS RESISTANT TO AILING ECONOMY

²⁵ <http://www.slideshare.net/lulupetrina/redefining-medical-office-building>

Local Trends

While CMFC estimates that there is potential demand for 50,000 square feet of medical office space each year for O‘ahu, only a limited amount of new medical office development (outside of hospital physician office buildings) has occurred over the past twenty years. Although rents for medical office space appear high enough to justify construction, only two of planned medical office buildings have come to fruition over the past few years as developers have had difficulty securing anchor tenants. With the continued shortage of doctors, more efficient medical facility designs, and a lack of new development, we project that the annual demand for medical space will not experience much growth and will remain the same.

Senior Housing²⁶

The Community Living Assistance Services and Supports (“CLASS”) Act, part of the federal government’s sweeping healthcare reform legislation, will likely have a significant impact on the senior housing sector. This portion of the bill will provide government-sponsored, long-term care insurance. Users of government-sponsored healthcare will automatically be enrolled in the program. Depending on how many individuals use this insurance to seek long-term care, the value of skilled nursing communities across the country could be impacted over the next several years.

Proponents of the CLASS Act see it as a financial lifeline that would allow individuals to remain functional and independent longer and mitigate the financial burden on informal and family caregivers. CLASS Act funds could be used to make housing modifications, hire personal assistant services, pay for transportation, and other services and supports.

Those who oppose the CLASS Act caution that premiums may be set too high to attract enrollees. After the five-year vesting period, premiums may fall short of benefits paid out, leading to further stress on Medicaid and reduced payouts under the current system.

Skilled Nursing Facilities

Since most of the value in skilled nursing facilities relates to the profitability of the business and not its physical site, any decrease in Medicaid payouts will lower the value of the business. This trend will wedge a divide between new, state-of-the-art facilities that cater to Medicare and private-pay users and older communities that depend on Medicaid supplements.

Assisted Living Facilities

While the CLASS Act will likely impair operations at some skilled nursing properties, assisted living units may benefit from the legislation. Projected reimbursements will be at least \$50 per day, helping pay for the less expensive living arrangement. Anyone enrolled, vested, and needing support for at least two activities of daily living can opt for home healthcare or assisted living properties, rather than skilled nursing beds. With approximately half of the cost of assisted living covered, more seniors will stay in these facilities longer. The resulting evolution in the population at skilled nursing facilities will cut further into margins as residents with more challenges move into beds later and the cost of care escalates.

²⁶ Senior Housing Research Report, Marcus & Milichap, 1st half 2010.

Over the next 10 years, these changes will encourage developers to build Continuing Care Retirement Communities (“CCRCs”) with larger assisted living components to stay solvent. A severe shortage of skilled nursing facilities will emerge as margins fall, requiring additional government intervention to spur development and supplement the high cost of care.

Local Trends

According to a January 2010 survey by Pacific Business News, there are 13 senior living facilities on O’ahu, with a total of 2,406 living units. Just as with the rest of the U.S., the impact of the CLASS Act will create additional demand for these types of facilities in Hawai’i.

Conclusions

The increased government involvement in providing healthcare and the large aging population could be beneficial for the senior housing market as demand could increase for these facilities. Technology will also impact the medical industry as more mobile services will be available leading the medical real estate market to smaller and more convenient facilities. While the demand for medical services is likely to increase further, the shortage of medical professionals could also hamper any need for medical office development. As discussed previously, while there would appear to be demand for medical office development in the future, the depth of this market has been challenged.

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