Transect Zones

2.2.60 T4 Neighborhog



Duplex

Mansion Apartmen

Courtyard Building

Public Draft: July 2014 2.2-21

Cottage Court

Townhouse

ousing, an

walking and bicyclin

uilding forms but allow r a more diverse mix

South Kaua'i Form-Based Code

The open sub-zone provides the same

Apartment House

13		14		
T3 VE	T3 VN-1	TAN	TAINO	
T3 Village Edge	T3 Village Neighborhood 1	T4 Neighborhood	T4 Neighborhood - Open	т
Intent	Intent	Intent	Intent	h
To reinforce established neighbor- hoods, to maintain neighborhood rathility and provide a transition between higher intensity walks able neighborhoods and rural and agricultural areas.	To provide a walkable neighbor- hood that integrates compatible multificanily housing types mch as dupleness and bungslow covers within walking distance to tramit and village center areas.	To integrate appropriate, no dium- dentity retidential building types such as duplene, bungalewe courts, mall coveryard howing, and nam- nico apartnean with limited retail and service uses in an errorison- ment conductive to walking and bicyeling.	To integrate appropriate, medium, dennity renidential building types with livelwock, retail and service uses in an environment conducion to walking and bicycling.	Ti ci di in a pi
Desired Form	Desired Form	Desired Form	Desired Form	C
Detached, low rise form, setback from the street. Primarily single- family form with carriage houses and ancillar y structures.	Closely spaced, detached, low rise form, setback from the street. Single-family form that accom- modates a range of ningle and multi-family building types.	Predominantly detached, closely apaced low rise form, closely set back from the street. Multi-family building types and form.	Predominantly detached, closely spaced low rise form, closely set back from the street. Multi-family and live's ork/shopfront building types and form.	A lo Li bi
Building Height	Building Height	Building Height	Building Height	8
2 stories max.	2 stories max.	2 % stories mar.	2 % stories max.	3
General Use	General Use	General Use	General Use	0
Residential with some Gric/Open Space and Service Uses;	Residential, with some Civic/Open Space, and Service Uses	Residential, with limited Retail, and some Givic/Open Space and Service Uses	Residential, with Retail, and some Crvic/Open Space and Service Uses	R
Parking	Parking	Parking	Parking	P
Moderate Parking Requirements Individual Parking Lots. Limited On-Street Parking	Low to moderate Parking Require- ments to promote walkability and minimize visual impact. Individual Parking Lots, Some On Street Parking	Low to moderne Parking Require- ments to premote walkability and minimize visual impact. Shared or Individual Parking Lots. On-Street Parking	Low to moderate Parking Require- ments to promote walkability and minimize visual impact. Shawd or Individual Parking Lots, On-Street Parking	L ps Pi re SI



Chapter 5 provides the background on the development of the Form-Based Code (FBC) for South Kaua'i. The code itself is located in Appendix C. However, this chapter provides the purpose and intent, a discussion on place types and how they relate to specific places in South Kaua'i, and the application of the rural-to-urban transect in South Kaua'i. All of these elements lay the groundwork for developing the FBC and the FBC was then calibrated based on measurements of the existing towns and their built form. Preserving these design elements and carrying them forward in the FBC for new or future development will help maintain each town's unique character and focus future growth and infill into compact and connected walkable places that are supportive of pedestrians, bicycles and transit.









Section 3.1.020 Additional Height Regulation Footprint Miscellaneous Miscellaneous Where existing adjacent buildings are in front of the entries may not be located on street-facing facades

be set to align with the facade of the front most immediately adjacent property. Minimum lot width and depth may be reduced up to 20% if access via alley is provided.

horoughfare Standard -0 T3VN T4V T4V0 6' continuous planter ighting Type 2 @ 10' 2 @ 4' 2 @ 3' 2 @ 7', marked Bicycle Lar

Parking Lanes

Key

2.2-22 Public Draft: July 2014

South Kaua'i Form-Based Code

2 stories max

2 stories ma:

T# By Right T# By Director T# Not Allowed 5.3-24 Public Draft: July 2014 South Kaua'i Form-Based Code

Trees at 40' o.c. avg.

Pipe, Post or (

5 FORM-BASED CODE FRAMEWORK

PURPOSE AND INTENT 5.1

Past zoning and subdivision regulations have promoted drivable suburban habitats and development patterns that over time have compromised Kaua'i's unique character. The Form-Based Code (FBC) instead provides a regulatory framework that preserves, enhances, and creates "walkable urbanism"-the concept that places of human habitat on Kaua'i should be of a scale that is primarily pedestrian-oriented in nature—while continuing to preserve Kaua'i's natural resources and rural character, improve the quality of life of its residents and visitors, protect sensitive environmental habitats, and encourage economic growth. The code will:

- Promote, preserve, and enhance community design that reflects the distinct character of Kaua'i and supports a range of vibrant human habitats;
- Promote development patterns that support safe, walkable, pedestrian-oriented mixed-use places;
- Promote development patterns that support safe, effective, and multimodal transportation options, including auto, pedestrian, and bicycle, minimizing vehicle traffic by providing a mix of land uses, walkability, and compact community form;
- Promote the health benefits of pedestrian-oriented places, including safe routes for walking, bicycling, and other exercise;
- Preserve, protect, and enhance the character of established communities;
- Support existing walkable neighborhoods through networks of well-designed streets that are safe and secure for pedestrians and bicycles;
- Encourage appropriately-scaled infill and development that places services within safe, comfortable walking distance of homes;
- Encourage and incubate local business activity through community design;
- Promote neighborhoods with quality housing that encourage a diversity of housing choices;
- Ensure that each building plays a role in creating a better whole, not just a good building;
- Ensure buildings and environments that can adapt to changing economics and demographics;
- Encourage architecture that grows from local climate, history, and building practice; and
- Preserve and protect historic and cultural resources.

5.2 **PLACE TYPES**

Unfortunately, not much of the prehistoric settlement patterns of native Hawaiians survived the plantation era. Certain roads such as Hapa Trail and pockets of sites such as Kāneiolouma survived where sugarcane was not planted or towns did not develop. Instead, South Kaua'i's current settlement patterns relate more to the plantation towns which were centered around sugar cane mills and plantation camps. These places were built to a pedestrian-oriented scale that made it possible to get around on foot. The sugar cane fields that surrounded these places provided a de-facto greenbelt that differentiated places of more intense human habitation from agricultural and natural areas (Kaua'i Smart Growth, 2012). This relationship between built areas and natural or agricultural lands helped to reinforce Kaua'i's primarily-rural identity.

As development has become more auto-oriented and less walkable over the past several decades the distinction between these places has been eroded. Much of the growth that has taken place on Kaua'i is spread out and requires a car to get from place to place. This auto-oriented style of growth consumes rural and agricultural land without contributing to any meaningful sense of place on the island.

In order to distinguish between places built as auto-oriented, drivable places and those built as walkable places eight distinct place types have been identified on Kaua'i. These place types help to determine where certain types and intensities of development are appropriate. Four are considered *drivable place types* and the other four are *walkable place types*.

5.2.1 Drivable Place Types

Drivable place types are those in which a person is mostly dependent on the automobile to travel to work, or other destinations, and to accomplish most shopping and recreation needs. These environments may have areas where it is sometimes possible to walk or ride a bike for recreational purposes, but due to the lack of nearby amenities and street connectivity, are not favorable for walking or biking as a primary mode of transportation on a day-to-day basis.

The design and layout of development in these areas is driven by the need to accommodate the automobile. Land uses are segregated and often buffered, leaving large distances between which further require the automobile for day-to-day functions.

Drivable place types on Kaua'i include Residential Community, Regional Commercial Center, Port/Airport/Light Industrial, and Resort.

- ending in cul-de-sacs. Buildings in a residential community are generally set far back from the street.
- most common to arrive by car.
- such as runways, storage lots or staging areas that are not open to the public.
- parking facilities and minimal pedestrian connections to surrounding places.

5.2.2 Walkable Place Types

Walkable place types are those in which a person can walk, bike or ride transit to work and to fulfill most shopping and recreation needs. These environments allow for the use of automobiles but do not require the use of a vehicle to accommodate most daily needs.

Walkable areas are built with a pattern where a person could live with limited reliance on the automobile, conducive to destination walking and cycling, and with access to transit. Walkable areas are largely supported through a network of interconnected, tree-lined streets, a diversity of housing choices and a mix of appropriate commercial and residential uses in a compact form. These areas also support public transit due to their compact nature.

• Residential Community: Areas that are primarily single-family and are not within walking distance of retail or civic services. Street networks may lack pedestrian facilities and are generally not well connected, sometimes dead-

Regional Commercial Center: Areas that are primarily single-use retail or commercial, such as shopping malls or office parks. Buildings in a regional commercial center are generally separated from the street and sidewalk, if one exists, by large expanses of surface parking. While it is possible to move around within this place type on foot, it is

Port/Airport/Light Industrial: Areas that are primarily single-use and have special requirements, such as a large amount of truck traffic or movement of goods. These places often include large-footprint buildings or large areas

Resort: Areas that are set up as visitor accommodations and which are generally self-contained and oriented inwards towards a private central space or outwards towards the ocean. Resorts accommodate car use with large Four distinct walkable place types, based on traditional settlement patterns and existing places on Kaua'i, provide a framework to establish a more intentional relationship between open spaces and developed areas on the island. These places correspond to traditional settlement patterns on Kaua'i, as well as existing places on the island. Walkable place types include Rural Crossroads, Small Village, Large Village and Town.

Rural Crossroads: Located at the intersection of two or

more roads, a crossroad provides a small amount of locally-serving retail and other services in a rural or less urban context; crossroads transition quickly into rural or less-urban intensities and activities, and/or into the natural environment. Historic examples of rural crossroads include Kapaia.

Small Village: Located in less urbanized areas. small villages exist at the edge of the rural and urban condition. A village has a main street with surrounding



residential areas; this transitions quickly into agricultural uses and/or into the natural environment. Historic examples of small villages include 'Ōma'o and Lāwa'i.

- Large Village: Located in urbanized areas, large villages are made up of clusters of neighborhoods that can support a larger mixed-use environment. The mixed-use environment can be located at the intersection of multiple neighborhoods or along a corridor between multiple neighborhoods. Historic examples of large villages include Koloa and Kalaheo.
- *Town:* Located in urbanized areas, towns are made up of clusters of neighborhoods or villages that support a larger, more complex mixed-use environment. Buildings within towns are often attached and may be up to four stories tall. Large towns are important centers. Līhu'e is an example of a town place type and is the only one on the island.

The fundamental building block of places on Kaua'i is the pedestrian shed, where spaces for living, working, shopping, learning, and recreation are typically located within a five-minute walk of one another. While small places on Kaua'i such as rural crossroads may exist within a single pedestrian shed, larger, more complex places such as towns may incorporate multiple pedestrian sheds.

5.2.2.1 Components of Walkable Place Types

Walkable places on Kaua'i can be differentiated from one another according not only to size, but also according to other qualities such as rural or urban character, limited or diverse land uses, and detached or attached building forms. Generally, crossroads and small villages tend to be smaller and more rural in character, with a limited range of land uses and



transect zones as part of a Form-Based Code.

SOUTH KAUA'I COMMUNITY PLAN

- Civic/Institution/Park
- Civic/Institution/Park

buildings that are primarily detached from one another. At the other end of the spectrum, large villages and towns are larger and more urban, with a greater diversity of land uses and buildings that are more commonly attached.

While crossroads and small villages are comprised of only one small neighborhood, large villages and towns are made up of several different neighborhoods. Neighborhoods can be further broken down into three component parts: "neighborhood center" or the main street of town, "neighborhood general," and "neighborhood edge." Differentiating the parts of a neighborhood helps to identify where it is appropriate for certain types of development to take place within a neighborhood.

Neighborhood centers-also called main streets-are appropriate for higher-density buildings and a mix of Blocks designated uses. as neighborhood general are meant to be less dense, with some mix of uses integrated into primarily-residential buildings that may be single- or multifamily. The neighborhood edge is intended for the least amount of density and is primarily single-family residential. All parts of the neighborhood are walkable and provide access to civic spaces.

The distillation of place types, from place type components and designations to more specific neighborhood components, helps to inform the assignment of

5.3 PLACES IN SOUTH KAUA'I

Each of the existing places in South Kaua'i was analyzed by the project team and the CAC and categorized into place types. Figure 5-1 illustrates the initial analysis which was later refined into the following place type descriptions based on the vision statements developed for each community. This analysis was also coordinated with their designation on the Land Use Map (Figure 4-1) and the transect zones for the SPAs. The place type descriptions also recognize the relationships of the different places to one another within the region.

Figure 5-1: South Kaua'i Place Types Analysis



5.3.1 Kalāheo

Kalāheo is the largest mauka village in the Planning District, bisected by Kaumuali'i Highway with neighborhoods weaving around hilly terrain to both the north and south. Kalāheo can be categorized as a Small Village due to its size and intensity of retail and civic uses. Over the long-term Kalāheo has the potential to grow into a Large Village since the topography lends itself to multiple-story buildings. However, wastewater service and transportation issues would need to be resolved to support such growth.

5.3.2 Koloa

The site of the State's first sugar plantation, Kōloa is a compact, thriving village resting in the mid-land plains between the mauka villages along Kaumuali'i Highway, and the makai tourism-focused villages and resorts. Its compact commercial main street strikes a balance between serving local residents and tourists. Kōloa can be categorized as a Large Village due to the intensity, size of the commercial core, and the prominence of the area within the region.

5.3.3 Kukui'ula

Though Kukui'ula is not a place with much historic development, it is a growing area with many important assets: Spouting Horn, Kukui'ula Small Boat Harbor, and the National Tropical Botanical Garden, in addition to a beautiful coastline. This site is the focus of much new development, with a new high-end shopping center and club, and entitlements for large subdivisions set around golf courses.

5.3.4 Lāwa'i

Lāwa'i is a small mauka neighborhood straddling a winding section of Kaumuali'i Highway, with two distinct "crossroad"size commercial nodes—along Kōloa Road at Lauoho Road, near the old cannery and on the highway at Aulima Road where the post office and market are located. Though physically encompassing a large area, Lāwa'i's neighborhood pattern is highly defined and limited by its reservoirs and hilly topography. Lāwa'i can be categorized as a rural crossroad due to the limited retail and civic uses found at the core and the surrounding residential areas and hills.

5.3.5 'Ōma'o

'Ōma'o is a small series of mauka neighborhoods that reach southward from Kaumuali'i Highway. It has no defined commercial node but is rather a largely residential neighborhood, limited in connectivity, size, and future growth by topography and reservoirs. 'Ōma'o is a small residential community with a small central park.

5.3.6 Poʻipū

Poʻipū is a collection of makai developments and historic epicenter for resorts and tourist activity on the southern shore of Kauaʻi. It has large expanses of sandy beaches, including the popular Poʻipū Beach Park, and is highly developed with a nearly unbroken maze of resorts and tourist lodgings between Poʻipū Road and the shore. Poʻipū can be classified as a Resort area. While there are portions that have walkways and bike paths, in the longer term, there is potential for Poʻipū to transition to a more walkable environment.

5.4 TRANSECTS AND ZONING

5.4.1 Using Zoning to Reinforce Place

FBCs provide an alternative approach to Euclidean zoning that emphasizes physical form, rather than separation of uses. They have been utilized to reinforce walkable, sustainable, mixed-use environments that build upon the existing character of places. The nonprofit Form-Based Codes Institute defines FBCs as follows:

"Form-Based Codes foster predictable built results and a high-quality public realm by using physical form (rather than separation of use) as the organizing principle for the code. These codes are adopted into city or county law as regulations, not mere guidelines. Form-Based Codes are an alternative to conventional zoning."

The transect is the organizing principle of FBCs, which regulates the built environment based on its location within the natural to urban spectrum. For the purposes of the SKCP, the transect zones are limited to the rural-to-urban spectrum as there is little need to dictate built form in the natural and agricultural zones (see next page, The Rural-to-Urban Transect sidebar).

The Rural-to-Urban Transect

The Framework for the Form-Based Code:

The Rural-to-Urban Transect is an organizing principle used in Form-Based Coding (FBC) that establishes a hierarchy of places/contexts from the most rural to the most urban. The designation of each zone along this hierarchy is determined first by the character and form, intensity of development, and type of place and secondly by the mix of uses within the area. This hierarchy of places becomes the framework/organizing principle for the entire FBC, replacing use as the organizing principle as is used in conventional or Euclidean zoning. Transect zones are used to reinforce existing or to create new walkable mixed-use urban environments.

The Rural-to-Urban Transect is a means for considering and organizing the human habitat in a continuum of intensity that ranges from the most rural condition to the most urban. It provides a standardized method for differentiating between the intentions for urban form in various areas using gradual transitions rather than harsh distinctions. The zones are primarily classified by the physical intensity of the built form, the relationship between nature and the built environment, and the complexity of uses within the zone.

~ Form-Based Codes Institute



DUANY PLATER-ZYBERK & COMPANY

The model transect is divided into six transect zones or T-zones: Natural (T1), Rural (T2), Sub-Urban (T3), General Urban (T4), Urban Center (T5), and Urban Core (T6), together with a District (D), often referred to as a Special District, designation for areas with specialized purposes (e.g., heavy industrial, transportation, entertainment, or university districts, among other possibilities). Each T-zone is given a number: higher numbers designate progressively more urban zones, and lower numbers designate more rural zones.

The traditional Hawaiian ahupua'a has some parallels with the Rural-to-Urban Transect, as land use intensity was historically related to the location of the land within the watershed (i.e., mauka areas were typically forested and sparsely populated, while lowland makai areas were used for cultivation, habitation, and cultural activities). Transect-based zoning can be utilized so that modern communities will also retain a strong relationship to the land, encouraging them to be complete, compact, and connected.

Modern Form-Based Codes were initially utilized in the 1980s and 1990s as a means to implement innovative development patterns that would otherwise not have been feasible under conventional zoning. Since then interest and knowledge of form-based coding has increased rapidly, with the advent of the SmartCode, an open-source coding template that was made available by Duany, Plater Zyberk & Company in 2003, growth and development of professional FBC practitioners, the founding of the Form-Based Codes Institute in 2004, and several major publications supporting their development. As of November 2012, there were more than 250 adopted FBCs of different variety and scope across the country (Borys and Talen), including applications in Hawai'i. These include FBCs to implement infill and redevelopment (e.g., Mauka Area Rules for Kaka'ako in Honolulu, Oahu, 2011) as well as FBCs regulating greenfield development (e.g., Honokōhau Village in Kona, Hawai'i, 2008).

It is also important to note that while FBCs primarily regulate an intended physical form, they also regulate use secondarily. FBCs often allow a range of uses that are carefully chosen to maximize compatibility between uses and the intended physical form of the zone. The use tables are simplified and categorized by use type, and clearly defined, to allow a greater degree of administrative decision-making related to particular uses.

5.4.2 Implementation

Place type components and the land use designations have a direct relationship to transect zones and the implementation of Form-Based Codes as shown in Figure 5-2. These relationships were determined through the community planning process.

Figure 5-2: Place Types, Land Uses, and Transects



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Form-Based Code Framework: Transects and Zoning | 5-5

SOUTH KAUA'I COMMUNITY PLAN

Transect zones can be applied to areas with place type components in order to accommodate growth and change. The exact delineation of transect zones can be "right sized" to the appropriate level of anticipated growth following the guidance that the place types provide.

- *Neighborhood Center* designations can generally be implemented with T5 and T4 Transect-zone districts to achieve moderate to high densities and a mix of uses appropriate for walkable centers.
- *Neighborhood General* designations can typically be implemented with T4 and T3 zone districts to achieve moderate densities and supporting land uses appropriate for areas in close proximity to walkable centers.
- *Neighborhood Edge* designations can typically be implemented in the Form-Based Code as T3 zone districts to achieve low to moderate densities and supporting land uses appropriate for areas further from, but within walking distance of, walkable centers.

Existing places in South Kaua'i help to inform the Form-Based Code content. The range of intensities found in historic centers, for example, can provide direction for how greenfield areas may be required to compose transect zones when forming new places. An analysis of the scale and size of the existing development in South Kaua'i provides a basis for the form standards of respective transect zones, which regulate building types, building heights, setbacks, frontage types, and frontage depths, etc.

The South Kaua'i transects fall within the T3 and T4 zones and include:

- *T3 Village Edge.* This zone reinforces established neighborhoods to maintain neighborhood stability and provide a transition between higher intensity walkable neighborhoods and rural and agricultural areas.
- *T3 Village Neighborhood 1.* This zone provides a walkable neighborhood that integrates compatible multi-family housing types such as duplexes and cottage courts within walking distance to transit and village center areas.
- *T4 Village Neighborhood.* This zone integrates appropriate, medium-density residential building types such as duplexes, cottage courts, small courtyard housing, and mansion apartments with limited retail and service uses in an environment conducive to walking and bicycling.
- *T4 Village Center.* This zone integrates main-street commercial and retail environments into neighborhoods, providing access to day-to-day amenities within walking distance, creating potential for a transit stop, and serving as a focal point for the neighborhood.

Since the South Kaua'i transects are meant for application primarily in those areas where mixed-use, walkable environments are desired, both T1 Natural and T2 Rural Transect Zones have not been included. The T5 Town Center is reserved for more intense mixed-use environments than are found in South Kaua'i. Additionally, because very high densities are not currently compatible with the character of Kaua'i, the T6 Urban transect zone has also been omitted.

The transect zones are established in the Regulating Plans for Kōloa, Kalāheo, and the Poʻipū Roundabout Special Planning Areas. (See Appendix C). Future master planning processes will need to be completed to determine the appropriate transects for the remaining three proposed SPAs at Poʻipū Gateway, Lāwaʻi Cannery, and Numila. However, they have been categorized as a Large Village (Poʻipū Gateway) and two Small Village (Lāwaʻi Cannery and Numila) place types to guide this effort. For all the SPAs within South Kauaʻi, the FBC in Appendix C will supersede the regulations from the County's CZO tied to the underlying zoning districts.

The FBC also provides standards for developing larger projects that are otherwise regulated by the County's Subdivision Ordinance such as block size, street standards, and park dedication. These elements are regulated in the Street and Thoroughfares and Civic Space sections of the FBC.