Villages of Kapolei
By Dan Burden

Summary Report

The Wednesday, October 9, 2002 traffic calming charrette was sponsored by the Village of Kapolei home owners association. The issues and needs of this neighborhood are more complex, dynamic and involving than any conducted on city/county land. There are many agencies and organizations that are active stakeholders in this neighborhood. With the potential that the roadways of the villages will be dedicated over to the city and county in the near future, there are many details that residents wish to have worked out before the dedication is made. My work on this project was to do more than facilitate the charrette. I was asked to also provide an audit of existing conditions, and then make recommendations based on combining the audit and my professional experiences to address walkability, traffic calming and livable communities principles.

On the one hand the Villages of Kapolei provide ideal housing with a combination of market and Hawaiian Homelands settlement. The project was based upon popular new communities being developed in southern California in the mid to late 70's. While designed for a lifestyle that was focused on automobiles, the walled communities, wide, fast roadways and lack of walking connections, create isolation and a lack of community that should not be repeated in experiments elsewhere in the Aloha state. New designs are needed to create a more classic way to achieve neighborliness and a sense of identity for the Villages. To overcome these design omissions a number of recommendations include provision of critical missing design features. These include new connections, a community center, some appropriate scale commercial, mixed use, and public space to internalize trip capture, and the creation of a central gathering place that many people walk to. Fortunately, the town is exceptionally well laid out to permit this to happen.

My work and findings include:

1. The all-day work included a morning and early afternoon photo tour of all seven villages, all main roadways, and a sampling of neighborhood streets, trails and linkages.

2. About 18 residents took part in the workshop. Although participation was not great in numbers, those taking part were interested and highly involved in finding short and long term means to alter existing roads into sizes and operations making it possible to walk, bicycle and assure quality of life.

3. Residents are highly concerned with the numbers of lanes, wide roadways, speeds on interior arterial and collector roads. There are also concerns for speed within local street networks and dangers crossing all major roadways.

4. In my presentation I illustrated that if eventual build-out is 5,000 homes conventional transportation models predict 50,000 daily auto trips generated within the village complex. The current number of homes is between 2,500 and 3,000.

5. The Villages layout is based on highly segregated land uses. Some walking and bicycling linkages exist between the villages, but many connectors for walking and bicycling are missing. Meanwhile, all schools and the recreation center are within a pleasant walk and bicycle ride of all homes. Connections across wide roadways are a serious issue and need, as well as the need for added connections where walls and fences block passage making walking journeys impractical.

6. With many land use and transportation decisions being made in the area with Kalaeloa (formerly called the Barber's Point Naval Air Station), the University of Hawaii West Oahu Campus (7500 students estimated), a growing Second City, other residential development, several additional on-off ramps and eventual resolutions to some highly troubled intersections, traffic volumes and patterns here are complex and changing.

7. Residents pointed out that many original planned and built elements, such as roadway and lane widths, placement of signalized intersections and even some street classifications in the Villages planning documents are no longer appropriate.

8. New traffic counts and speed analysis is underway. It appears that the 4 and 6 lane roadways are over-built

for existing volumes, and perhaps for predicted volumes. Mid to late 1990's traffic data show that interior system roads are carrying 6-10,000 vehicles daily. Based on land use decisions and other connections planned for the H-1 freeway, significant changes in the management of traffic inside the villages should be considered.

9. There are many exemplary pedestrian treatments, such as good sidewalks on most collector and arterial streets. A few of these walkways are too narrow, but many are built to comfortable and appropriate levels. Medians on major roadways are very helpful in street crossings. Median noses, a rare excellent measure to provide a semi-protected standing location midway across the street are especially good. Bike lanes are helpful on most major roadways. Street trees and clustered trees add essential shade to the dry desert environment. However, many more trees are needed (and planned) for some sections.

10. There are many easy to fix pedestrian facilities oversights. These include major intersections where crosswalks are not marked, or are poorly marked. Additional amenities (benches) are needed along all corridors, and especially at all bus stops.

11. Residents are not interested in some of the planned intersection changes. Many oppose stop controls, and many do not favor the planned signals. Residents are concerned with the potential of any new intersection controls that might tend to draw in by-pass traffic, especially onto the smaller residential streets.

12. Residents are most concerned with traffic chaos around schools, and the difficulty children have walking and bicycling to school.

Recommendations

1. The city/county, state and university should consider updating the interim transportation master plan for the immediate and general area. This plan needs to include the many new changes in development schedules and in land use. The ultimate development of the area is still envisioned by the city and state as reflected in the latest draft of the Ewa Regional Transportation Plan. This plan projects traffic for the full growth of the region. Development schedules have changed due to changes in the housing market and the State's economy. The interim condition could last for ten to twenty years, affect the lifestyle of the residents of Kapolei when temporary measures could improve their lives. If the proposed developments are not constructed or the projected traffic volumes are not realized, the interim measures may become permanent. For that reason, these measures should be designed as permanent measures with future road widening considered.
2. The Villages should sponsor additional planning and charrette activities addressing specific needs within the villages to reduce motorized trip demands, create added walking and bicycling connectivity.
3. Some of this village scale planning may be achieved with University of Hawaii DURP graduate students, guided by a multi-disciplinary professional team, making use of highly engaging public process.
4. In my presentation I pointed out that from 20-40% of future trips can be converted to walking, bicycling and other non-auto trips. Residents should reach consensus on internalizing trip capture of common needs (including appropriate scale commercial and office services and activities, increase the safety of walking, bicycling and transit use.
5. Although there is early small group consensus on major findings (below) it is necessary to have a firm, such as R.M. Towill, conduct additional analysis, and have at least one additional workshop.
6. The city/county approved the construction of the roadways within the Villages of Kapolei and certified their construction. While the city/county cannot reject dedication once the State completes all the conditions of dedication, the city/county should work with HCDCH to resolve all major issues, designs and efforts to traffic calm and handle foot, bicycle and motorized traffic management in the area. The solutions should be finalized and built, or at least funded. The city/county should not have to face changes and issues needed by citizens following dedication.

Specific Roadways and Intersections

1. **Kama'aha Loop**. Kama'aha Loop is a four lane road servicing the Kapolei Elementary School and recreation complex. This road is also an essential access to the large undeveloped commercial or church parcel in the center of this loop.
    a. Convert this 40-50 foot wide roadway to a single lane, one way access road, with major diagonal parking installation on one or both sides.

Provision of on-street parking, and reduction of off-street parking maximizes the potential of the undeveloped site, reduces chaos in front of the school, and maximizes safety of the many pedestrians using this area.

b. This new street pattern assures that traffic in front of the school and recreation center will move at more appropriate speeds of 15-20 mph, and eliminate much of the existing school pick-up and drop off chaos.
c. A pedestrian trail and link across the Kealanai Avenue tee-intersection with Kama'aha Avenue needs to be built and emphasized. This town center intersection is key to community bicycle and pedestrian access. This connector is the most central and vital connector of the long spine serving most of the villages. Either a single lane roundabout or a raised intersection is appropriate for this area. Speeds at this critical junction should be no more than 20-25 mph.

2. **Develop the Piazza (the neighborhood square). Without a piazza you cannot live!**
    a. Develop the trail across the oval shaped neighborhood center parcel into a vibrant paseo and in the center form the piazza or public gathering place. The general area should accentuate public space and make use of a piazza gathering place. The best buildings should form here, watching over day long and evening activities. This paseo and piazza will be the neighborhood's most significant walking destination. Decorative lighting, colorful, wide sidewalks with landscaping, benches, public art and other features make this the 100% location for the community. There should be a central axis point in the absolute center, with walks leading to prominent buildings at the visual terminus of these two walk. Buildings should enclose this central walk, whether the land features a church campus, appropriate scale commercial and mixed use development, or a combination of each. If there is to be a branch library for the Villages of Kapolei, it should also be located in this good central area.

1. Ten years ago, on a visit to a city on America's Great Plains, an Italian architect and city planner observed the city layout from the spacious windows of a skyscraper, offering his opinions to city planners and reporters gathered around.

After awhile, he asked "Where is the city square? Where do the people go to be together?

"Where is the piazza?"

Well, the listeners explained, there wasn't really anything like that. There were some really nice parks, and there was a pedestrian mall (though people had to watch out not to be struck by shuttle buses) and for

certain occasions public streets would be shut down for specific celebrations. But there was no set place used the way Italians use the public squares that date to ancient times.

"That is very sad," he said. "Without a piazza, you cannot live!"

That architect was right about something Americans are beginning to realize, in communities across the nation: people need public places to be together in order to maintain some sense of belonging to a community.

3. **Multi-Use Trail Connection.** The villages' central most trail connects bike lanes feeding directly to this undeveloped parcel of land, the school, recreation complex and village center, then continues south across Kaiau Avenue and eventually reaches Kapolei Parkway. Currently this trail is broken by a median island on Kaiau that lacks a median opening.
    a. Correction of this oversight should be immediate.
    b. Low traffic volumes on Kaiau Avenue both today, and projected, suggest there should be no more than two lanes total, and crossing width of no more than 11.0 feet per lane, with 10.0 feet preferred.
    c. The median cut should be angled 45 degrees so that pedestrians and bicyclists maximize their storage and are forced to face oncoming motorists. The crossing should be well marked and lit, and should include a raised speed table.

4. **Signals, Roundabouts and major intersections.** Existing plans call for six to eight signalized intersections. Although it is not entirely clear from any single document what all of the priority intersection improvements are, they are likely to include:
    a. (1-2) Kama'aha Avenue and the two junctions to Kama'aha Loop, as well as (3) Kama'aha Avenue and Kealanani Avenue, (4) Kama'aha and Kapolei Parkway, (5) Kapolei Parkway and Ft Barrette Road, (6) Kama'aha Avenue and Ft Barrette Road, (7) Kealanani and Ft Barrette Road, and (8) Kealanani Avenue and Farrington Highway.
    b. Each of these intersections should be modeled for single lane roundabouts. It is likely that all of the internal intersections (Ft Barrette and Farrington Highway connections are exterior intersections) can work quite well with single lane roundabouts.
    c. No funding should be spent for signals until these intersections are modeled for lower-speed, higher performance, reduced delay, pedestrian-friendly roundabout designs.

d. It is up to the community to make the final selection and gain needed resident and other stakeholder support. The state should not be expected to face public controversy for putting forth alternative designs.

5. **Reduce Unnecessary Lanes.** Once traffic counts and reasonable traffic projections are completed it is unlikely that interior arterial and collector roadways (Kapolei Parkway, Kama'aha Avenue, Kama'aha Loop, Kealanani Avenue and Kaiau Avenue have any need for more than 2 lanes. Once these counts are known all roadways not needing extra lanes should be compressed.
    a. Kapolei Parkway is a highly overbuilt 6-lane section. Excess width should be converted to on-street parking.
    b. Kama'aha Avenue buffers into the central neighborhood oval and can convert to two lanes with on-street parking and curb extensions added. With modern roundabouts up to 20-25,000 vehicles can be handled efficiently and at appropriate speeds along this central corridor.

5. Retain on-street parking on local neighborhood streets. Neighborhoods with not overly wide streets are creating a yield form of travel. This reduced street width with significant on-street parking helps curtail speeding. Removal of parking on one or both sides would make it possible to travel at high speeds through the neighborhood.