

# **Redefining the Street: A Shared Space Design Concept for Pauahi Street, Honolulu, Hawai'i**

## **Doctorate Project**

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# Abstract

Through government policy and contextual circumstances, traffic engineers are given the sole responsibility in street design. Their priority on safe and efficient automotive transportation has, however, ignored the equally important pedestrian priority. Recognizing the disconnect transportation planners are working towards experimental methods to reduce traffic fatalities and be sensitive to community concerns and needs. Studies show, though, that over many years traffic fatalities are leveling off, signaling a realization that fatalities will not continue to decrease without completely separating the pedestrian from the street. Streets, as the primary public space to the built form, also serve our collective memories as social, political, psychological, and environmental anchors that support and sustain our culture and society. Hence, a fully segregated vehicular and pedestrian system will be unable to serve these equally important functions.

Shared Space serves as a viable solution to this dilemma. By creating pedestrian-priority streets, Shared Space will improve the ills that broad stroke transportation engineering and planning has created and fulfill the psychological and physical needs of the community. Also known as Naked Streets, Home Zones, Living Streets, and Woonerf Streets Shared Space is successfully used in Europe, Israel, and Japan, just to name a few. Shared Space is a public space where people, bicycles, and automobiles share a common right-of-way. Elements of pedestrian-vehicular separation are removed and features such as landscape and paving are introduced to psychologically calm the speed of vehicular traffic. The result

is a significant reduction of pedestrian injuries and fatalities therefore encouraging a sustained civic, social, and economic presence on the public street.

Shared Space functions by employing a psychological theory called “risk compensation” or “risk homeostasis”. Risk compensation occurs when humans – or animals – change their behavior when there is a perceived change in risk. Designing Shared Spaces in important public right-of-ways will give Honolulu a new vision for urban street life.

The project is conducted in three parts. The first part is background and precedent analysis research. Looking at six precedents of Shared Space streets in North America and Europe, the case studies, which varied in location, time, and size, reveals seven commonalities, or principles, that establish the makings of a successful Shared Space. These principles became the comparative framework of evaluating land use and transportation infrastructure for ten neighborhood centers in Honolulu’s central and eastern primary urban core, the best candidate of which would be used to create a Shared Space urban design concept. As a source of numerous cultural and physical opportunities, Pauahi Street in Chinatown Honolulu was chosen.

The second part of the research creates a visual design framework to form an ideal Shared Space environment based on the premise that all pedestrian activities take place only when the conditions for looking, walking, crossing, standing, and talking are good. The framework, therefore, establishes a rationale, priority, and suggestion for preferred street design

solutions to make Pauahi Street a successful Shared Space and neighborhood center.

The third part is a conceptual Shared Space design proposal for Pauahi Street. To support the design the research analysis was undertaken which analyzed existing street life, transportation, and conducted interviews with stakeholders. The design proposes an urban design framework that creates seven shared space street and intersection typologies that support the strengths and address the challenges of Pauahi Street’s unique context. The concept and ideas are supported by shared street activity pattern diagrams, street sections, and vignettes to give the reader an idea of what a Shared Space life would be like on Pauahi Street. The result is an urban design framework for designing a Shared Space and an urban design concept for Pauahi Street.

The intended audiences for this research reach a large number of people from a variety of backgrounds. Anyone who has an interest in supporting, designing, or planning future and existing communities and their centers in Chinatown, Honolulu, or the United States can gain from this work. Although the research and framework focuses on Honolulu, its concepts and design framework can be applied to many communities, streets, and urban centers looking to redefine street design and its beneficial properties to their community.



## Background of Shared Space

Long before the personal automobile dominated the urban landscape, pedestrians roamed the street and mingled with streetcars, trains, horses, and carts. The built urban environment reflected the fixed nature of rail transit technology and the slow speeds of horses and pedestrians, the other users of streets in the city. Streets always existed, but their design and function were much different during this time. Since personal automobiles were not available to the common man and current modes of transportation were fixed and ran at a moderate speed, people felt comfortable crossing the street, spilling into the street, and partaking in a number of social and physical activities in the street. Here, people were able to walk within a reasonable distance to support the daily needs for a functional society – food, goods, work, bartering, etc. The act of such activities occurring on or near the street produced a social connection to the street. The street stood as a shared living room for society. As a result, many cultures developed spaces around this occurrence like Bazaars, Plazas, Paseos and Squares.

Older cities and villages in Europe, Asia, and historic districts in the U.S. still maintain the physical form of older streets – the building shell, scale, and paving, but they all have adjusted to the needs of the personal automobile in one degree or another. Cities in Europe were wary of the automobiles effect on pedestrian space and safety and found ways to reduce such negative impacts. Netherlands, for instance, supported bicycle use over the personal automobile resulting today in one of the lowest automobile usage rates in a developed country and an

urban center that maintains the same significance in social interactions and societal needs as it did a century ago. Another example is Copenhagen where Stroget Street was transformed into a pedestrian mall while slowly implemented strategies to reduce parking over many years and converting it to open space and housing. Although the existing dense urban form played in Copenhagen's favor for success these examples exhibit how Europe countries reacted to the contradictory nature the personal automobile had on their existing urban fabric.

Unlike European cities, the United States has plenty of land and resources. Demolition of the existing urban fabric occurred to accommodate the efficient of the personal automobile and where demolition couldn't occur, sidewalks were removed or narrowed. Spaces where people once walked, bartered, and socialized, were now covered by black pavement, traffic signs, and parking spaces. Street fronts that once had loiterers, cafes, and quaint interactions were replaced by parked cars and people on a mission to get what they need done and leave.

### **Traffic In Towns**

In 1963 Colin Buchanan, a traffic engineer and architect, led a study group within Great Britain's Ministry of Transport to "study the long term development of roads and traffic in urban areas and their influence on the urban environment."

<sup>1</sup> *Traffic in Towns*, also known as the "Buchanan Report",

became a landmark document being the first comprehensive and quantitative study of the automobile's effect on the urban environment. After witnessing continued deterioration of public safety on city streets the British government commissioned a study in order to find a solution. Plazas and places where the public once gathered were consumed by parked automobiles, people were being injured and killed by fast moving vehicles, and the air and noise pollution was making life in the city unpleasant. Despite the clear deterioration that automobiles had on their surroundings, there was also a need for the city to expand transportation infrastructure.

As the study's leader, Colin Buchanan's goal was "to contrive the efficient distribution, or accessibility, or large numbers of vehicles to large numbers of buildings, and to do it in such a way that a satisfactory standard of environment is achieved."<sup>2</sup> In other words, the goal of the Buchanan report was to improve automotive mobility in relationship to the quality of street life and neighborhoods, or environment. "This criterion of environmental capacity would then be used in setting standards and limitations. Thus, certain environmental areas would segregate traffic and pedestrians completely, while others would allow pedestrians and vehicles to mix safely in the street."<sup>3</sup> The relationship between traffic and quality of urban environment was a unique perspective in 1963. American traffic planning never seriously recognized the relationship between the two until the 1990's when the U.S. Department of Transportation Federal Highway Administration initiated the Context Sensitive Solutions (CSS) program.



Figure 1.1 Separation of Traffic Modes  
(Ministry of Transport, UK, 1963)

The Buchanan report described the relationship between transport and environment to a circulation diagram of a Hospital. Hospitals tend to have a great deal of movement from people of wide backgrounds and relationships. This is handled through a corridor system that handles primary distribution of traffic keeping the rooms, or environment areas free of extraneous movement. The one thing that cannot happen in a hospital is for an environmental area, or room, to be opened to through traffic. Likewise, the city must have “urban rooms – where people can live, work, shop, look about, and move around on foot in reasonable freedom from the hazards of motor traffic” and ensure that automotive movement matches the character of the environmental area. Colin Buchanan’s

background in transportation planning and architecture gave him a balanced and unique understanding of the dilemma. His research has thus given him the nickname “Father of Traffic Calming”.

Although his groundbreaking work wasn’t immediately recognized in Great Britain, it immediately influenced the thinking of other planners, and government officials in other European countries such as the Netherlands.

### Important Figures

Niek de Boer, a professor of Urban Planning at the Delft University of Technology found potential in Colin Buchanan’s research of balancing transport and environment. At the time Niek was trying to solve the contradiction of a street as a place for cars and a place for children to play. Colin’s theory of “urban rooms” and “environmental areas” gave Niek an idea. “He designed streets so that motorists would feel as if they were driving in a “garden” setting, forcing drivers to consider other road users.”<sup>4</sup> In 1969, the Municipality of Delft implemented De Boer’s idea, now named the “Woonerf” or “residential yard” to lower-income neighborhoods where the number of safe play sites were low and sorely needed.

Although the concept expanded to other countries soon after, no one became an innovator or champion of Shared Space design until 40 years later when Hans Monderman became the Dutch Head of Road Safety in 2000 for the northern cities of the Netherlands. Known as the modern pioneer of Shared Space,

Monderman implemented and refined the concept of Shared Space to go beyond the residential street. Monderman's research connected Shared Space with the reduction of traffic fatalities and improvement of life quality in important public spaces in cities under his jurisdiction. Shared Space is an evolution of the Woonerf. Capitalizing on the psychological concept that makes Woonerven successful, Hans has expanded the idea from small residential lanes to neighborhood commercial streets and major intersections. Hans work and advocacy of Shared Space's benefit to neighborhoods has spurred international notoriety in bringing the concept to Europe and the United States. Despite his passing in January of 2008 his work and the movement he created continues to perpetuate the ideas and benefits associated with Shared Space.

Ben Hamilton-Baille is a British Urban Designer who has become an expert in Shared Space for England. Learning from prior Woonerven and Shared Spaces designed by Hans Monderman, he has helped England develop 'Home Zones' a British equivalent to Woonerf Streets and smaller projects in the heart of smaller communities. Ben Hamilton-Baille is assisting in developing a Shared Space for London's famous Kensington High Road.

Ian Lockwood is an American Transportation Engineer that is a pioneer in context-sensitive solution design, a new program created by the FTWA to implement community input in the planning and execution of transportation projects. Ian's largest accomplishment was his term as the head of the City of West Palm Beach's Transportation Planning Division. Here, he

revitalized degraded and underdeveloped areas in downtown to become centers for pedestrian activity. While abandoned blocks were in-filled with residential mixed use projects, sidewalks were widened and streets were designed to bring people closer to automobiles. By removing curbs and adding bollards at key crossings and using brick pavers, vehicular traffic has slowed down considerably therefore encouraging people to return to the street.

### **The Birth of the Woonerven**

The Municipality of Delft, Netherlands was at crossroads in the 1960's. In a city of 100,000 people, high vehicle speeds and unsuspecting pedestrians became a collision with deadly results. "According to a Swedish report, *Helping Pedestrians in Urban Areas* (Swedish Statens Vaginstitut, 1967) the average risk for children of being mortally injured in a traffic accident is ten times the risk run by an adult."<sup>5</sup> Children play areas were in high need, especially in lower-income neighborhoods in the inner-city but with a city where 85 to 95 percent of streets were intended for limited local traffic speeds of 10-15 mph, speeds instead reached an average of 30 mph.

At the same time, Niek De Boer, professor of urban planning at Delft University of Technology, was trying to solve the dilemma between streets as children's play area and vehicle thoroughfare. After reading the Buchanan report, De Boer created the first Woonerf streets, or "Residential Yards". In its purest form a Woonerf transformed a dangerous residential

street into a “creative resident-oriented environment” that focused on pedestrian priorities as an equal to vehicular priorities.

The Municipality of Delft saw the potential of De Boer’s Woonerf and decided to expand the project to the whole city. Across the city residential streets that served limited local traffic were eliminated of curbs and designed with planters, benches, and paving that responded to the pedestrian. The driver, relegated to the fact that streets were no longer suited for 30 mph, now had to respect the pedestrian.

### **Woonerven beyond Netherlands**

The success of Woonerf streets in Delft became an important step towards the expansion of Woonerf streets within Netherlands and beyond. The Dutch government adopted the concept and expanded the program throughout the country in the form of design standards in 1976. The regulations, which focused on the pedestrians rights of the street over the rights of the vehicle, became the basis of adoption for many other countries. Germany was the first to adopt the Woonerf guide in 1976, while England, Sweden, and Denmark came shortly thereafter in 1977. By 1982, France, Japan, Israel and Switzerland joined.<sup>6</sup>

These countries welcomed the Woonerf as an alternative to existing city planning and street design to balance pedestrians and vehicles in the older neighborhoods and narrow streets of Western Europe. Eager to experiment with

new ideas to reverse the negative impacts of the automobile on the urban environment, the Woonerf gave countries reconciling the pedestrian and pedestrian a solution.

“By 1990 over 3,500 shared streets had been constructed in The Netherlands and Germany, more than 300 in Japan, and 600 in Israel.”<sup>7</sup> The amazing quantity gave rise to an equally impressive number of design solutions reflecting each country’s unique street culture. During the expansion, the Woonerf took on new terms and meanings such as Living Street in Germany, Shared Street in England, Community Street in Japan and Integrated Street in Israel. As the named and design solution evolved however, the concept did not. The “underlying concept of the shared street system is one of integration, with an emphasis on the community and the residential user.”<sup>8</sup> Everyone shared the street and parking was kept at a minimum to ensure a balance was kept for each user type.

Expansion didn’t take a hold in the United States though. The United States still dealt with high traffic fatality rates and deteriorating downtowns like their European counterparts but seemed to not be as eager to adopt Woonerf ideals. The United States enforced a policy to design streets to accommodate the needs of the personal automobile first. People though were not oblivious to the negative impacts of the personal automobile and tense protests against the expansion of freeway transportation networks through the destruction of existing neighborhoods became commonplace.



The concept of pedestrian malls in downtowns across the United States became the solution as downtown commercial centers competed with suburbs for residential and commercial opportunities which had more pedestrian space and was cleaner. At its height pedestrian malls numbered up to 300 in the United States<sup>9</sup> in the early to mid 1970's at the same time of the Woonerf Street movement in Europe. Today, there are around 30 pedestrian malls left in the United States<sup>10</sup>, and in the public mindset served as a solution with benefits that proved to be difficult for hundreds of cities to sustain. The pedestrian malls' struggle was attributed to its prohibition of vehicles and lack of residential mixed-use. The lack of cars and people after hours created a "policing effect" of the street in downtown areas opened opportunities for homeless and undesirable activities to move in.

Because a Woonerf is in a mixed-use residential neighborhood policing becomes a natural tool to prevent the problems associated with pedestrian malls and many Woonerf Streets exist to this day. Europe recognized the importance of pedestrian street safety and quality and was quick to implement alternative solutions. The priority placed on public space was higher in Europe than in the United States. As a developing country, the United States had the space and resources to maximize the potential personal automobile had in giving people freedom of access and identity. This was done despite protests against demolition of community for transportation efficiency. Allan Jacobs, author of the book, *Great Streets*, states that,



Figure 1.2 Woonerfs in the Netherlands and Israel  
(Michael Southworth, 2003)

*“The people of cities understand the symbolic, ceremonial, social, and political roles of streets, not just those of movement and access. Regularly, if they are aware of what is being planned, they protest widenings as well as new streets, particularly if those improvements will mean dislocation of people or more traffic in their neighborhoods. They object to high volumes of fast traffic on their streets. On the other hand, proposals to improve existing streets, to make them special, “great” places, are common and are regularly approved by voters who tax themselves to achieve this end.”<sup>11</sup>*

We see now that there is a new push by new architect, transportation engineer, and planning leaders expanding the use and definition of Woonerf Streets. Also known as Shared Space this movement is finally becoming a reality in the United States.

## SECTION ENDNOTES

- 1 Great Britain. Ministry of Transport. Traffic in towns : a study of the long term problems of traffic in urban areas / reports of the steering group and working group appointed by the Minister of Transport. Publisher: London : H.M. Stationery Off., 1963
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- 3 Southworth, Michael. Streets and the shaping of towns and cities. Washington, DC Island Press, 2003. pg 119
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- 5 Appleyard, Donald. Livable Streets. Berkeley, University of California Press, 1981.
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- 7 Ibid 3 pg 122.
- 8 Ibid 3 pg 117.
- 9 Wikipedia Contributors. “Car-Free Zone”. Wikipedia, The Free Encyclopedia. [http://en.wikipedia.org/wiki/Pedestrian\\_mall](http://en.wikipedia.org/wiki/Pedestrian_mall) (accessed April 24, 2008).
- 10 Ibid 9.
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# Doctor of Architecture Project Statement

Through government policy and contextual circumstances, traffic engineers are given the sole responsibility in street design. Their priority on safe and efficient automotive transportation has, however, ignored the equally important pedestrian priority. Recognizing the disconnect transportation planners are working towards experimental methods to reduce traffic fatalities and be sensitive to community concerns and needs. Studies show, though, that over many years traffic fatalities are leveling off, signaling a realization that fatalities will not continue to decrease without completely separating the pedestrian from the street. Streets, as the primary public space to the built form, also serve our collective memories as social, political, psychological, and environmental anchors that support and sustain our culture and society. Hence, a fully segregated vehicular and pedestrian system will be unable to serve these equally important functions.

Shared Space serves as a viable solution to this dilemma. By creating pedestrian-priority streets, Shared Space will improve the ills that broad stroke transportation engineering and planning has created and fulfill the psychological and physical needs of the community. Also known as Naked Streets, Home Zones, Living Streets, and Woonerf Streets Shared Space is successfully used in Europe, Israel, and Japan, just to name a few. Shared Space is a public space where people, bicycles, and automobiles share a common right-of-way. Elements of pedestrian-vehicular separation are removed and features such as landscape and paving are introduced to psychologically calm the speed of vehicular traffic. The result



is a significant reduction of pedestrian injuries and fatalities therefore encouraging a sustained civic, social, and economic presence on the public street.

Shared Space functions by employing a psychological theory called “risk compensation” or “risk homeostasis”. Risk compensation occurs when humans – or animals – change their behavior when there is a perceived change in risk. Designing Shared Spaces in important public right-of-ways will give Honolulu a new vision for urban street life. The project is conducted in three parts. The first part is background and precedent analysis research. The following case studies looked at the project’s Length, Project Goals, Street Width, Pedestrian Activities, Land Use, Transportation Infrastructure, Physical Organization, and Social Impacts.

- Rijkstraatweg, Haren, Holland
- Terry Avenue, Seattle, Washington
- Festival Street @ Davis, Portland, Oregon
- Wall Street, Asheville, North Carolina
- Addison Circle, Addison, Texas
- Kalamazoo Mall, Michigan

This investigation was able to provide evidence of a Shared Space’s ability to improve the quality of street life. This formed found seven characteristics, or principles, that lead to a successful Shared Street and provided a base of knowledge that was used towards proposing streets for a Shared Space intervention.

These principles became the comparative framework of evaluating land use and transportation infrastructure for ten neighborhood centers in Honolulu’s central and eastern primary urban core, the best candidate of which would be used to create a Shared Space urban design concept for ten neighborhood centers in Honolulu’s central and eastern primary urban core. The best candidate of which would be used to create a Shared Space urban design concept. The following sites are:

- Waikīkī
- Downtown Honolulu
- Chinatown
- Kaimukī
- Kapahulu
- Makiki
- Ward/Kaka’ako
- Diamond Head
- Wai’alae
- University

The exercise resulted in a table evaluating each community and their strength in supporting a Shared Space by using the principles created in the Precedent Study. The table revealed Chinatown and Waikīkī to be the best neighborhoods. A site visit and visual inventory of a number of potential streets within a ¼ mile walking radius of these neighborhood centers resulted in choosing Pauahi Street in Chinatown to be the sole candidate for a Shared Space intervention.

The second part of the research creates a visual design framework to form an ideal Shared Space environment based on the premise that all pedestrian activities take place only when the conditions for looking, walking, crossing, standing, and talking are good. The framework, therefore, establishes a rationale, priority, and suggestion for preferred street design solutions to make Pauahi Street a successful Shared Space and neighborhood center.

- Places for Vehicles
- Places for Looking
- Places for Walking
- Places for Crossing
- Places for Sitting
- Places for Hearing, Talking, Dancing, Singing

The third part is a conceptual Shared Space design proposal for Pauahi Street. To support the design the research analysis was undertaken which analyzed existing street life, transportation, and conducted interviews with stakeholders. The design proposes an urban design framework that creates seven shared space street and intersection typologies that support the strengths and address the challenges of Pauahi Street's unique context. The typologies are:

- Standard Shared Street
- Standard Shared Space with Primary Outdoor Seating
- Standard Shared Space with Secondary Seating

- Pauahi Art Alley
- Pauahi Plaza
- Roundabout Intersection
- Shared Space Raised Intersection

The pattern diagrams, which are applied to each typology, use a novel graphic language that defines in simple terms the basic actions of a pedestrian. Supported by street sections and vignettes, the work gives the reader an idea of what a Shared Space life would be like on Pauahi Street. The result is an urban design framework for designing a Shared Space and an urban design concept for Pauahi Street.

The intended audiences for this research reach a large number of people from a variety of backgrounds. Anyone who has an interest in supporting, designing, or planning future and existing communities and their centers in Chinatown, Honolulu, or the United States can gain from this work. Although the research and framework focuses on Honolulu, its concepts and design framework can be applied to many communities, streets, and urban centers looking to redefine street design and its beneficial properties to their community. The concept may also include private developments and large pedestrian-oriented campuses such as the University of Hawai'i at Mānoa. Audiences include but are not limited to:

- Architects
- Planners
- Urban Designers
- Traffic Engineers
- Neighborhood Boards in Honolulu's Central and Eastern Primary Urban Core
- Residents in Honolulu's Central and Eastern Primary Urban Core
- Business Owners and Community Groups in Chinatown and Downtown
- Private Developers and Investors
- Neighborhood Boards
- Politicians
- University of Hawai'i and Hawai'i Pacific University

# PROCESS

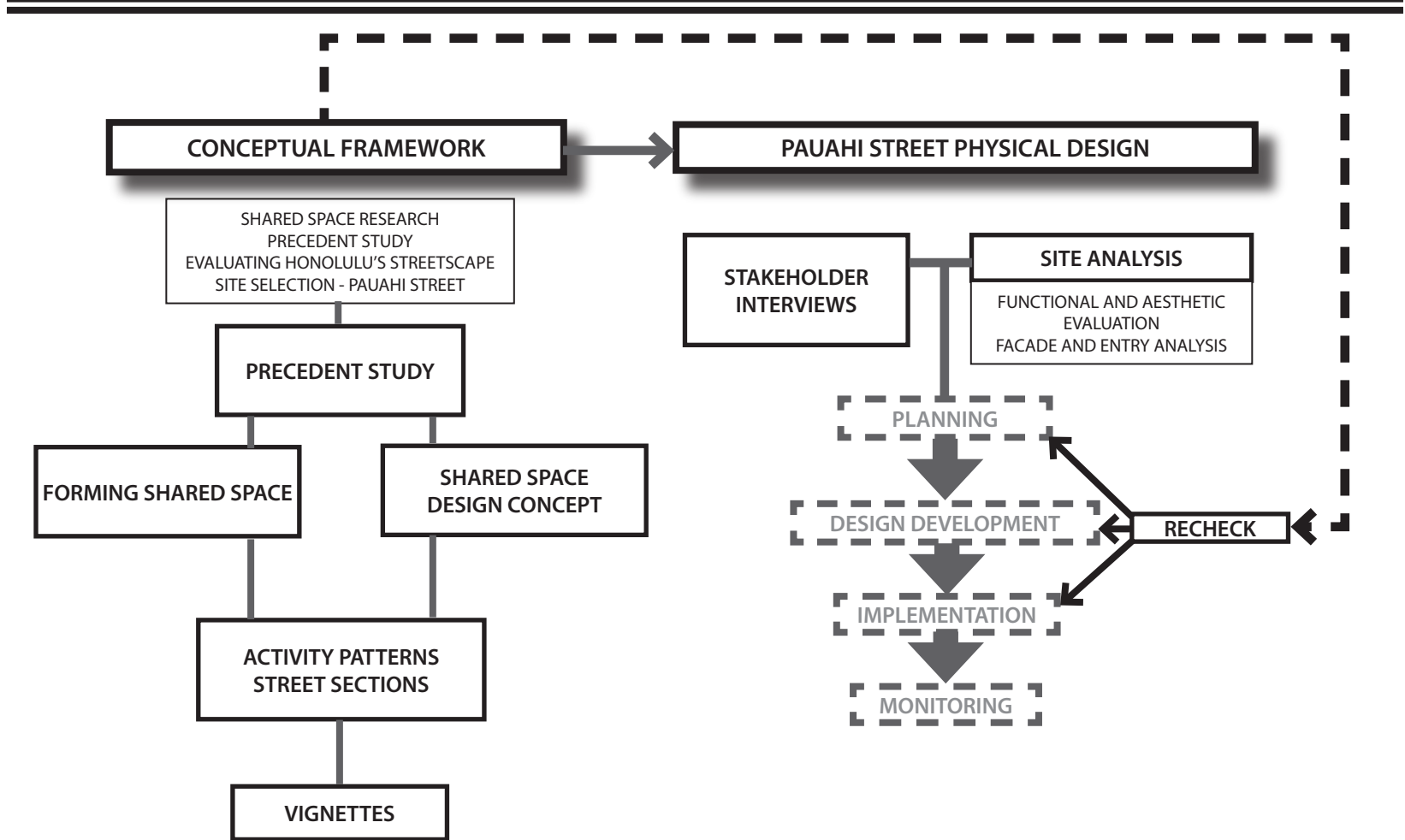


Figure 1.3 Project Process

# **PART I: SHARED SPACE RESEARCH**

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# Shared Space Precedent Study

The intent of the precedent study research is to analyze the design of existing Shared Space streets in the United States and compare it to an ideal Shared Space street example in the Netherlands. The analysis will develop parameters that shall be used to define optimal sites in Honolulu where Shared Space Street design will be successful. Secondly, the analysis will support how Shared Space street design can improve the quality of street life and finally, extract the strengths and challenges evident in U.S. Shared Space designs.

The precedent analysis is a vital step in supporting two main concepts. The first concept is that Shared Space streets provide social benefits that regular streets do not typically offer. The second concept is that Shared Space streets can be applied to many different street layouts and contexts. By encouraging the use of Shared Space streets in the United States it could convince Honolulu planning officials that Shared Space streets can work as an alternative tool for street design.

## Selection

Shared Space streets already exist in the United States, but do in unconventional spaces such as privately owned residential streets, driveways, and alleys. Many though are designed with the purpose of vehicle access and nothing else. Shared Space streets are not commonly found on public streets, commercial streets, or in mixed-use communities. The following Shared Space streets were selected based on its location on public streets in commercial or mixed-use areas.

Rijkstraatweg, Haren, Holland

Terry Avenue, Seattle, Washington

Festival Street @ Davis, Portland, Oregon

Wall Street, Asheville, North Carolina

Addison Circle, Addison, Texas

Kalamazoo Mall, Michigan

## Categories

Each category was chosen in order to provide a basis for comparison in the physical design of Shared Space streets and its context within the urban form. The categories represent important features that help to understand the design, placement, and benefits that each have on their immediate surroundings. The precedent study also looks at crime, economic impacts, and behavioral changes, which are sociological aspects of Shared Space street design to serve as

anecdotal evidence of how Shared Street design can improve street quality.

- Project Background
- Spatial Site Plan
- Project Goals
- Shared Street Length
- Shared Street Section
- Pedestrian: Types of people and types of activities
- Density: Land Use, People, Building Types
- Multi-modal Linkages: Streetcar, Bus Lines, Subways
- Anchors: Institutional, Services, Neighborhood Amenities, Commercial
- Public to Private Building Relationship
- Traffic: Types, Counts, Fatalities
- Materials: Type, Color, Size, Street Furniture
- Landscape: Vegetation, Art, Lighting
- Parking Locations and Inventory
- Social – Crime, Economic Impacts, Behavioral Changes



Figure 2.1 Addison Circle Esplanade, Texas, USA  
(Ron Whitehead, 2008)

## Addison Circle

Addison, Texas, USA

Addison Circle began in 1992 with the idea of bringing an urban city into a suburban area 12 miles north of Dallas. Intended as a Smart Growth Community, Addison Circle was conceived with the following goals in mind:

- Provide distinctive focus for community life and varied special events.
- Expand and balance the existing choices of housing
- Promote a rich mixture of synergistic uses
- Retail may be included, but should be support-service

rather than being a regional destination.

Addison Circle is a 4-1/2 square mile commercial mixed-use center with 6 million sq. ft. of commercial space, 170 restaurants, and 1,330 apartments and condominiums. Mew Streets, which are defined as alleys lined with homes, are a unique aspect of Addison Circle's street hierarchy. The mews were a part of a concept that implied "eyes on the street were a good thing"<sup>1</sup>. Addison Circle therefore designed around urban spaces full of trees, landscaping, and other public spaces to make people feel comfortable in getting out of their homes.

## Design

The Esplanade is a major social space for Addison Circle. It is surrounded by offices, restaurants, and business services, residential, everyday retail, smaller tenant offices, restaurants, and public events space. Conceived as an urban park, being surrounded by the wide mix of uses makes this an attractive place for many community activities and extraneous rendezvous. Paying attention to details in designing the esplanade and its perimeter gave it an identity for pedestrian use. This resulted in more space for pedestrians and a reduced presence of automobiles. By tucking parking structures behind buildings it gives more room for other activities to occur on the street.

Although constructing parking structures holds a higher cost over at-grade parking lots, the benefits outweigh the cost. Reducing the presence of parking lots at-grade increases



the pedestrian-ability of the community, increases density, and creates opportunities for more mixed-uses, therefore increasing activity on the street. All of which reduces a variety of environmental impacts. “Sidewalks are generous, measuring 12 feet deep on residential streets and 14 feet on boulevards. Streets are narrow, lined by shade trees at 25-foot intervals. A pedestrian “mews,” located between buildings, provides fire access, secondary vehicular access, and pedestrian circulation.”<sup>2</sup>

### **Quality of Street Life**

The mews typically have no front yard, curbs, and are built to the property line. Ron Whitehead, Addison City Director said that they initially designed bollards in some of the mews to define the pedestrian space from the motorist space, but found that people never recognized its significance and just walked in the middle of the street.<sup>3</sup> In the mews and other residential areas some residents began eating dinner out to the street, showcasing how if given the space and environment people do naturally open towards the street.

Civic and social activities also occur in the esplanade though curb separate the street from the sidewalk and esplanade. The high use and popularity of the events give pedestrians a familiarity in using the space while the automobile drivers slow down to watch people. If that doesn't work than the paving change from white concrete to red brick gives an indication of pedestrian priority. The neighborhood is a good

example of a medium-density, multimodal transportation, and mixed-use development that uses pedestrianization, Shared Space streets, and smart growth concepts to create a positive impact in a street's purpose in improving the quality of street life.



Figure 2.2 NW Davis, Portland, OR  
(Portland Department of Transportation, 2007)

### **Festival Street at NW Davis and NW 3<sup>rd</sup> Avenue**

Portland, Oregon, USA

Festival Street at NW Davis and NW Flanders is the main feature of a larger revitalization strategy of Portland's Old Town/Chinatown district. Managed by the City of Portland, the plans involve transportation and commercial infrastructure improvements to the aging, underdeveloped, and uninviting

area. Currently home to lower income residents, homeless, and foreign citizens, its history and location gives it great potential in the recent urban renaissance occurring in Portland. The city hopes that their efforts will turn Old Town/Chinatown into a vibrant mixed-use neighborhood like neighboring Pearl District. The Pearl District is now served by the city's first street car, renovated warehouse lofts, block parks, quality sidewalks, and other amenities that make a 24-hour community possible. The city hopes that the redevelopment will improve neighborhood

identity and sustain cultural and economic diversity.”<sup>4</sup>

The Portland Department of Transportation worked with the community to see what they needed. The general consensus was “a lack of public space” says Lloyd Lindley, Lead Urban Designer for the Festival Street project. “We (Portland) always work towards get the most out of our streets.” Therefore, PDOT created “a hybrid street that functions for cars, for parking, and at the same time can conveniently be closed off for local functions and festivals that the neighborhood can engage in.”

Two Festival Streets were completed, one at Davis and one at Flanders two blocks north. Each Shared Space is a block long and identical in design that demarcates the center of the Chinatown District. As a pilot project for the city, both Festival Streets maintain a one block length. Its success will inevitably increase the use of Shared Space streets for other neighborhoods in Portland.

## Design

Lloyd says that, “the things that get in the way in a standard street are curbs, polls, fire hydrants, and utilities. The flat open area creates a pedestrian oriented intersection for easy access (by all types of people) and creates a natural transition from street to the inner Festival Street area.”<sup>5</sup> To

mark the entrances of the space, concrete plinths featuring art work and seating act as public sculpture and guide traffic, cueing drivers to slow down. Parallel parking is provided on each side and demarked from the sidewalk by bollards while the buildings adjacent to the street range from 3 to 5 stories but future development could raise it to 10 stories or more. Most buildings in the area are built to their lot lines and made of traditional materials such as concrete and brick. The location benefits from alternative transportation opportunities with Portland’s bus mall a block to the west and two light rail lines a couple blocks east. Roughly 3,000 vehicles cross and use Davis each day without incident.

## Quality of Street Life

“It is an experiment for Portland.” says Ellen Vanderslice, the PDOT Project Manager and feels that this will be something that other communities will be requesting in their communities in the future. Though focusing on traffic calming and pedestrian experience through physical design is important, the infrastructure project is a means of foundation for a generally underserved community in Portland. “Anytime you make a space that doesn’t say *I’m for cars*, the place then says *I’m for people* and that itself contributes to livability.” Ellen continues to say that the Festival Street is more than design, but also about building community. “The activity of managing the street, the community has to make an entity to manage the

Festival Street and that is an important part of building this community.”<sup>6</sup> The city hopes that the Festival Street meets the need of pedestrians, riders, and the community.

Since the majority is occupied by office and commercial space, community ownership of the Festival Street will be primarily initiated by the Chinatown Business Bureau. Therefore, until more residents live in the area, it will still lack the 24-hour vitality and have fewer eyes on the street. Space that could be better used for outdoor seating and dining are being consumed by parking, which despite the design’s best efforts to increase public space, leaves the Festival street to act like a regular street when there are no large activities occurring on the street. However, knowing that this new street is complete, adjacent businesses can now see an opportunity and reason to use the street to their advantage. In time the Festival Street will be able to transition through this change. This cannot be said for a traditional designed street.



Figure 2.3. Rijkstraatweg, Haren, Netherlands  
(Philip Parker, 2007)

## Rijkstraatweg

Haren, Groningen, Netherlands

The town of Haren developed around a main road that served a larger regional area in Northern Netherlands. As the small town grew to its current population of 25,000 Rijkstraatweg Street developed into the city's main shopping street and civic center. As traffic increased though, it became an inconvenient space for drivers and pedestrians to feel comfortable using the street on a daily or weekly basis. Traffic was slow going through the town center and the amount of traffic brought noise and high speeds. In consequence, the businesses along Rijkstraatweg Street began to suffer as did the

heart of the community. Therefore in 2000, Hans Monderman, the leading expert in Shared Space design in Netherlands, and then the Director of Transportation for Northern Netherlands assisted the city of Haren in redesigning Rijkstraatweg to salvage the heart of the city while improving vehicular flow. Hans Monderman and city officials created a proposal that removed street curbs, lanes, and traffic signs to balance the right-of-ways for drivers, bicyclists, and pedestrians.

## Design

Completed in 2002, the Rijkstraatweg Shared Space transformed the heart of the city into a more functional, welcoming place for all citizens. The 50 to 70 foot street width, which 80% was originally designed for automobiles and bike lanes, was redesigned into a two-lane 18 foot vehicular right-of-way. Today, the right-of-way is loosely defined by trees and bollards placed to blur the separation between various modes of transit. Though there's a general distinction between the area for vehicles and the area for pedestrians, the continuity of pedestrian scaled materials and vague separation between pedestrians and vehicles reduced the speed of the vehicles and made it safer and acceptable for pedestrians to cross anywhere in the street.

In order to function it is important for the street edges to maintain activity as long as possible since this would reinforce drivers to slow down considerably. It has decreased the speed



of traffic to roughly 10 mph. The result of the redesign, which supports 12,000 cars per day with freight traffic, is an example of how Shared Space design can reduce a large main road into a quaint shopping area. Despite reducing the speed that people were accustomed to, removing stop signs and traffic lights has actually decreased traffic queues and bus companies have reported a significant decrease in journey time through the town.<sup>7</sup> Philip Parker, who interviewed officials on the Shared Space design, said that “local cafes have been encouraged to occupy the storefront with tables and chairs.”<sup>8</sup> This was also a tool for businesses to invite people back and strengthen their new found relationship with the street. The unique aspect of Rijkstraatweg Street is the main square where large events are held and people can spill out into the road without a fatal concern for safety.

### **Quality of Street Life**

As the main street in the city, it serves many functions - private and public – tangible and intangible. The street has become more inviting to pedestrians and accidents have decreased considerably since the changes took place. The street itself looks very inviting and acts like a busy piazza. The smaller right-of-way has given store owners the added benefit of animating their storefronts with clothing, products, and tables that entice people to peruse and spend more time on the street. The city of Haren has had so much success

with the change that they are working on two more projects that will introduce shared space in the street. One of them is surrounding a children’s school. Despite initial apprehension, “the shop keepers have been content with the change” says Hans Monderman.



Figure 2.4 Kalamazoo Mall, Kalamazoo, MI, USA  
(Ryan Tobias, 2007)

## Kalamazoo Mall

Kalamazoo, Michigan, USA

Kalamazoo created the first pedestrian mall in 1959. Designed by Victor Gruen, the cavalier move sparked a movement in downtowns across the country as a viable way to compete with the downtown exodus of retail anchors to the suburbs. History has shown though that the concept, despite initial success, failed to sustain over a long period of time. Pedestrian malls eventually had difficulty keeping people's interest, and developed a high tenant turnover rate. The pedestrian mall proved to be a haven for homeless and other illegal activities after hours since downtown workers returned to their suburban home at the end of the day leaving

the pedestrian mall deserted at night.

Although it was one of the more successful pedestrian malls Kalamazoo Mall still dealt with the same dilemmas pedestrian malls across the country dealt with. Forty years later, after much debate within the city government and community, the city decided to allow vehicular traffic back onto the mall. Traffic was only reintroduced on the South Mall - Michigan Avenue to Lovell Street. While the North Mall, which fronted a museum continues to be a pedestrian only mall. The city hoped that reintroducing vehicular traffic would boost retail activity and entice a larger market of drivers to visit, get out of their car and stay. The first phase was completed in 1998 and the rest of the project was completed in 2007.

## Design

While it is not called a Shared Space, reintroducing vehicular traffic on an existing pedestrian mall is the basic foundation of a Shared Space. To include car traffic though, some changes still needed to be made. To define the vehicle space and the pedestrian space, shallow rollover curbs were installed, the separation creates a hard visual separation but physical separation was softened and enforced by bordering an already narrow right-of-way with planters, parking, trees, and picnic benches to slow down the speed of traffic. The street is kept so that it can still be closed to vehicular traffic during major events. The rhythm of storefronts and encouragement

of outdoor seating blurs the line between car, sidewalk, and building. Its separation of space though is quite obvious and negates some of the psychological traffic calming benefits that is necessary for a Shared Space to be successful.

### **Quality of Street Life**

Kenneth Nacci, President of Downtown Kalamazoo, said that, “both road and walkways are constructed of brick pavers with fairly intricate patterns that give you a sense of a special place. The mall has been nearly 100 percent occupied at ground level for the past three years. With the ability to drive down the mall, it is much more visible to many more people than just those who work downtown and use it during their lunch hours.”<sup>9</sup> By including vehicular traffic in the manner that Kalamazoo has done, a street is able to serve multiple public, social, and civic uses.





Figure 2.5 North Terry Avenue, Seattle, WA  
(Courtesy of Lyle Bicknell, 2007)

### **North Terry Avenue** Seattle, Washington, USA

Although the project will not be complete until early 2008, Mayor Greg Nickels plans North Terry Avenue to be a key catalyst in transforming South Lake Union (SLU) into a vibrant community. The North Terry Avenue improvement is part of Mayor Nickels' Action Agenda to attract biotechnology jobs, fix the "Mercer Mess", and build neighborhood amenities for South Lake Union. The city is working with Vulcan Real Estate, led by Microsoft co-founder Paul Allen who owns the majority of land within SLU (about 60 acres) in this mostly underutilized industrial area prominently located north of downtown Seattle,

to improve infrastructure that would attract residents and commerce to the area. Since the Fred Hutchinson Cancer Research Center is already located there, it became beneficial for the city to support and develop this unique asset by developing a new education-based industry.

The city plans "to take advantage of Terry Avenue North's low vehicle use, location, width, and history to create a one-way pedestrian and retail-oriented corridor"<sup>10</sup> that will become the main spine of the whole community which links the waterfront park to the Westlake Transit Center.

### **Design**

The six-block Shared Street varies from 71 to 76 feet in width. Despite the wider than normal street width, the extra space is used to integrate a new street car. The street car, unlike people and vehicles, move on a fixed path which doesn't take away from potential pedestrian activity and in fact encourages more. The streetcar shares space with the automobile which acts as a hazard thus reducing the speed of traffic. Buildings are placed at the property edge and some that are vacant. There are also some areas of large parking lots and undeveloped land. Although the initial condition of space on North Terry Ave is considered "leaky", meaning the street edge lacks a definite edge that creates an "urban room". New projects being planned and constructed in this so called "no man's land" will address these shortfalls. New biomedical

office and mixed-use buildings are being designed to have retail activity on the ground floor with a clear visual relationship to the street. Existing buildings range from 2 to 3 stories but as development continues the density of this area could reach 10 or more stories. This will increase the population density and increase the number of pedestrians along the street providing a presence and place, two important factors in developing community relationships.

The 1.3 mile streetcar route connects Westlake Transit Center to the South and Hutchinson Cancer Center to the North. Since North Terry Avenue resides in an industrial zone, some buildings have loading docks. Experiences in the Pearl District at Portland, Oregon have shown that these areas are perfect for renovated art lofts, or other retail spaces but since there is a 3-4 foot vertical separation from the ground, it may not provide the pedestrian connectivity that a Shared Space street needs in order to slow down traffic unless new activities are created in this area. When complete, the combination of a street car, legal jay-walking and sidewalk activities would create a lively scene reminiscent of the pre-World War I era.

One of the major difficulties that Seattle had in achieving a true Shared Space street were overcoming present transportation planning policies and ADA regulations. "A pervasive risk-management climate, as well as new federal accessibility guidelines, stymied efforts to incorporate all the elements associated with the shared-space model. You cannot build a true Woonerf given the criteria of the federal

government on safety and accessibility" says Ron Scharf, Transportation Project Manager for the Terry Avenue North Project<sup>11</sup>. Therefore, the design team focused on creating a visual connection through the width of the street to hide the small curbs and separation required by code by using non-traditional materials and products to meet the needs of state and federal regulations while integrating it into the unique paving design.

To bring a meaning to this new street typology, the city has called North Terry Avenue an "Inhabitable Street". Inhabitable Street is a play on the literal translation of "Woonerf" which means "Living Yard". The design team envisioned the inhabitable street as a series of spaces experienced laterally instead of linearly. Shannon Nichol, founding partner of Gustafson Guthrie Nichol and a consultant on the Terry Avenue North Project states that "you're not walking along a channelized conduit for people alongside a channelized conduit for vehicles."<sup>12</sup>

### **Quality of Street Life**

Since the project is still under construction it is difficult to see how converting Terry Avenue North has improved the quality of street life in the area. Reviewing the city's design guidelines and position in a larger redevelopment of South Lake Union, one can see a general agreement by the contributors that creating pedestrian friendly streets should have substance and

character as an important factor towards general livability and a community presence. Within the confines of an Inhabited Street design, the city has also added a street car, which as evidence of Portland's streetcar has improved increased the  $\frac{1}{4}$  mile walkable radius of the pedestrian and increased building density by an average of two floors along its route. Based on this experience, one can see that the North Terry Avenue streetcar could hold the same results. The Inhabitable Street as a street typology shows that a balance of "right-of-way functions and (pedestrian) environmental priorities"<sup>13</sup> is vital to improve the quality of street life.



Figure 2.6 Wall Street, Asheville, North Carolina, USA (Flickr.com:Johnnyurban)

## Wall Street

Asheville, North Carolina, USA

Asheville is a liberal community attracting people interested in the arts. In the 1980's the city initiated a downtown rejuvenation project that aimed at preserving historical buildings, and improving infrastructure to attract urban residential living and improving the pedestrian environment. Wall Street was a part of this "Asheville Renaissance". Wall Street began as a service alley for large commercial buildings along major thoroughways of Patton Street and Battery Park Avenue. Built on a hill, Wall Street is a full floor below the ground floor of

buildings along Battery Park Avenue. Vehicular access to this road was allowed, but was a decomposed back alley with cracked sidewalks, overhead wires, and large planters. The condition lacked the pedestrian amenities that would make this a place to visit. The renovation improved the street's visibility to new businesses and convinced buildings to open their door too Wall Street.<sup>14</sup>

## Design

It is the first known Winkelerf (Commercial Shared Street) designed in the United States but was named a "Walking Street". Its naturally narrow street width (40 feet) and pedestrian scaled materials and street furniture makes automobiles drive cautiously through the space. There is a parking structure next to Wall Street that encourages visits by day trippers, daily users, and workers. The parking structure is cleverly hidden by a wall climbing apparatus and retail at the ground floor. Vehicular traffic is low at 400 per day, but the speed stays below 15 mph. The Shared Space street design fits well with the nature of the businesses in the area and provides the flexibility to use it in different ways like a dining area for Oktoberfest or art markets.

## Quality of Street Life

Wall Street hosts many locally owned shops, art galleries, and restaurants that provide the atmosphere for

visitors of all types to use the area. The scale and design of the street makes it a popular evening spot. The downside of the parking structure is its location. It sits on prime real estate that could extensively add more activity in the area. For instance, if residential were to be placed here, there could be an opportunity for the area to have a stronger presence after work and weekends. Since Wall Street is in the heart of the Central Business District, it lays vacant during weekday nights. “Wall Street is truly one of downtown Asheville’s gems,” stated Leisa Barnette, Executive Director of the Asheville Downtown Association. “On any given day, the street is crowded with locals and tourists alike making it a great people watching spot and simply a wonderful place to be.”<sup>15</sup>






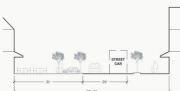
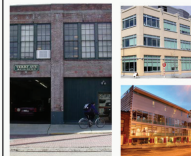

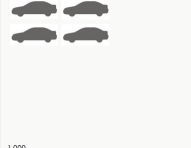







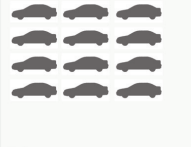




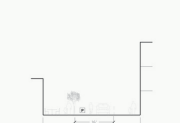














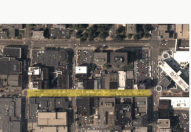

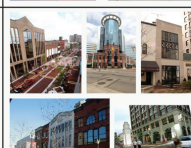





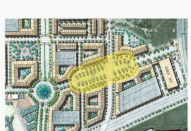
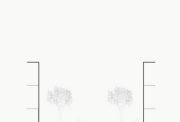

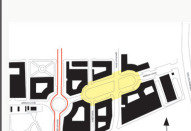
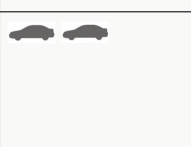

PROJECT	SITE PLAN	AERIAL IMAGE	STREET WIDTH	BUILDING TYPES	MULTIMODAL LINKS	TRAFFIC	PARKING
North Terry Avenue 						 1,000	
Festival Street at Davis 						 3,000	
Wall Street 						 400	
Rijksweg, Haren 						 12,000	
Kalamazoo Mall 						 12,000	
*Addison Circle 						 250 vehicles per day	

Table 2-0. Precedent Study Comparison Chart

## Summary

The Precedent Studies, which vary in city size, density, and locations show that Shared Space is not a product of one “perfect situation” and can be designed to achieve different goals and needs. The following are characteristics that are shared between all of the precedents based on comparing all six precedents (Table 2-0):

### *“Community Centers/Hearts”*

European examples of Shared Space streets are used in places that have a public significance. Places that once were considered the “heart” or “center” of commercial, retail, and civic activities decline due to reduced street livability and dangerous vehicular traffic. In contrast, Seattle intends to use a Shared Street to create a *new* neighborhood center for an underused area of the city.

### *Street Length*

The lengths of each Shared Space street reach up to 1000 ft. Although North Terry Avenue reaches 2600 feet, it is separated by traditional intersections with signs, and lights.

### *Project Location*

Project locations tend to be in older areas of the cities, downtown, and old industrial districts. The older areas reflect a time when there were no setback requirements reminiscent

of the “Main Street” characteristic that these old commercial districts have.

### *Aerial Image*

Aerial image comparisons reveal that the Shared Streets occur in dense urban areas with an overall lack of parks or green spaces.

### *Street Width*

Street widths vary from 40 feet to 60 feet on average. There are two occasions where street widths reach 70 feet, N. Terry Avenue, and Rijkstraatweg, but are temporary occurrences. Half of the streets studied are one-way, while the other half are two-way.

The American examples designed for parking while Rijkstraatweg did not. Keeping parking at a minimum is an important aspect of Shared Space. This ensures visual continuity for pedestrians to freely cross and use the space bringing pedestrians closer to the cars therefore reducing their speed. Although parking should not be totally removed, it should be used to the advantage of the pedestrian as a “traffic calming element” and not a pedestrian hindrance.

### *Building Types*

Buildings are medium density commercial or residential mixed-use. The heights vary from 1 to 8 stories. U.S. Examples have higher building heights in general, but their number



is small. Rijkstraatweg only has building heights of two to three but it is consistent throughout the area. Building types are generally older structures, of brick, concrete, with glass storefronts and outdoor seating.

#### *Outdoor Seating*

Outdoor seating seems to be a major element of Shared Space streets and is placed towards the street and not against the building face.

#### *Multimodal Links*

Each Shared Street has great access to the city's premier mass transit systems whether they are buses, streetcars, or light rail. North Terry Avenue is being designed for a street car line. Both N. Terry Avenue and Festival Street in Portland are only blocks away from three forms of transportation and have the most potential for a pedestrian-oriented community to develop. This is important as it should reduce the demand for parking, which is a major hindrance in achieving a successful Shared Space street design. In every instance, transit typically occurs at cross streets on Shared Space street. All examples, except for Rijkstraatweg have more than one bus line that serves the greater city in form of a hub and spoke transit system.

#### *Traffic*

Traffic can reach up to 3000 vehicles per day. But since many of the U.S. examples are in areas off a major thoroughfare

traffic counts are under 1000. Rijkstraatweg is much more progressive in this category. In this scheme the Shared Space street is combined with round-a-bouts at two intersections that serve 12,000 vehicles per day. North Terry Avenue could triple its vehicle use (currently only 1,000) as infill development occurs and becomes a medium to high density neighborhood.

#### *Curbs*

North Terry Avenue, Kalamazoo Mall and Addison circle have curbs, a form of separation that should be removed if it were a true Shared Space. Addison Circle treats the meow as a residential driveway instead of a through street. In commercial areas, one side has a curb while the other side does not while bollards provide the rest of the separation. Kalamazoo mall provides roll over curbs that create a visual and semi-physical separation. It is semi-physical because the street level does not change. The roll-over curb is a compromise that gives flexibility to the various uses the Pedestrian mall has throughout the year. North Terry Avenue tried their best to have no curbs, but new ADA Regulations made it harder to do so. Designers therefore played with aesthetic materials and make the curb unnoticeable.

#### *Street Path*

Rijkstraatweg is a crooked street that naturally slows down the vehicle and the edges are blurred with areas of black asphalt patterned between swaths of brick paving. The black

asphalt indicates areas where cars are the major directional user and the brick paving indicates areas where pedestrians are the major directional user. There is a degree in which one user trumps the other, but the definition of where each begins and ends is vague.

In all of the U.S. examples, there is a bit more predictability for which space is for who even though it is visually a pedestrian space overall. Streetlights and bollards create a dominant space from the view of the pedestrian or driver. Blurring these edges to be softer, with lights at irregular distances and using a variety of elements in the street that serve the same purpose, e.g. bollard, tree, planter, etc. would be more successful in these situations.

#### *Adjacent Uses*

Rijkstraatweg integrates a town plaza and green space into the Shared Space Street. Around this area are many shops, restaurants and cafes that were encouraged to use the street. With the exception of Kalamazoo Mall and Addison Circle no other street has the adjacent uses compatible to bring people into the street.

Festival Street has a couple restaurants that are securely separated from the street and the amount of space reserved for cars makes this a Shared Space only during special occasions.

## Principles of a Successful Shared Street



Figure 2.7 Pedestrian Paving  
(Weinstein A|U)



Figure 2.8 Rijkstraatweg View  
(Hamilton-Baillie Associates, 2006)

### Public Space First

Pavement types used in a Shared Space must be scaled to the pedestrian throughout. There should be no curb, no regulative signs, and an abundance of small trees, planters, designed to prevent the driver from having an unhindered view of the whole street. This will naturally slow down vehicles entering the street and deter extraneous use.

### Build up to the right-of-way

Since streets are an abstract idea in space, the way buildings are placed next to them defines the character and identity of the street. If buildings are designed to be at the edge of the street it will define space, or an urban room, that pedestrians naturally identify with and slows cars down.

### Mixed-Use Buildings with Active Edges

Building edges should have mixed uses that push social interaction and community into the street. Having people live above the street will put eyes on the street and provide ownership, security, social connectivity. This natural form of security will entice others to walk on the street with a sense of security.

### 40 to 60 foot Street Width

The right-of-Way width can vary from 40 feet, a standard narrow street, to 60 feet with points that reach as much as 70 feet. Anything wider than that would reveal a spatial void between opposite edges which gives drivers an opportunity to drive at higher speeds.

Figure 2.9. Person Crossing,  
Rijkstraatweg, Haren, NL  
(Paul Hopfensperger)



### Support Perpendicular Movement

Provide complementary uses across each other that encourage pedestrian movement perpendicular to the street. This will reduce the speed of traffic and emphasize that this is a street for people.

### Multimodal Links

Providing alternatives to the automobile is essential in a walkable pedestrian community and for a Shared Space. The more connections that a Shared Space has to buses, bike lanes, and rail the better the access for people to use the Shared Street and keep people on the street. This will in turn reduce the amount of vehicular traffic in the area, naturally slow down existing traffic.

Figure 2.10 Bus on Shared Space  
(Taken from the Internet)



### Gateways

Gateways act as a landmark of culture and define meaning to a space and a place to meet. As a driver, it holds the same meaning and culturally conditions the driver to act in a different manner. This prevents the vehicle from driving through under the typical street mentality.

Figure 2.11. Gateway at Festival  
Street, Portland, Oregon, USA  
(Portland Department of  
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# Social Benefits of Shared Space



Figure 3.1. Young Street, Honolulu, Hawaii, USA

Road planning and design in the United States are a product of the policies and regulations created by the Federal Highway Administration (FHWA) and other state and local transportation agencies. Created by the Eisenhower administration in 1956, the FHWA's goal is to enhance mobility through a safe and productive manner. The goals and vision of the FHWA provide a clear emphasis on traffic efficiency. This is indeed a valuable and necessary objective of the FHWA since transportation infrastructure is the foundation of a strong economy. Today the goals and vision of FHWA lists the environment as one of its last priorities and is focused only on ecological topics.

“In recent years, FHWA and our partners have made substantial contributions to the environment and to



communities, through planning and programs that support wetland banking, habitat restoration, historic preservation, air quality improvements, bicycle and pedestrian facilities, context-sensitive solutions, wildlife crossings, public and tribal government involvement, and more.”<sup>1</sup> No where in this summary of Environment goals are there clues to suggest improving the pedestrian quality of streets or the importance in building and maintaining the community values. Many of these areas have been added on as trends and pressure grew. Historic Preservation is something that evolved from the 1970’s and Context-Sensitive Solutions (CSS) from the early 1990’s.

The FHWA’s Freeway program forcefully dissected neighborhoods drastically changing the quality of life in these areas. Stories of fragmented communities and communities that united and protested against freeway construction exist in every city across the nation. Some of the most popular cases are Portland and San Francisco. Today, Portland and San Francisco are attractive urban cities that are known for its pedestrian friendly streets and efficient mass transit networks. This is a result of fierce opposition to the FHWA Freeway program by both cities to prevent the destruction of their neighborhoods and use the funding instead for mass transit systems like Light Rail.

It could be that the FHWA doesn’t see pedestrian street qualities as a part of their jurisdiction. If not, then who is? City Planners would be the next to take that responsibility however their responsibilities would end at the curb. So whether or not FHWA believes that they are responsible of the sidewalk, the

sidewalk is heavily influenced by traffic engineering. There should be more progressive leadership on both sides of the table to build on the relationship between the street and sidewalk.

Context Sensitive Solutions (CSS), however, is the beginning of a new direction in traffic engineering. Using words such as ‘context’ and ‘sensitive’, it recognizes that traffic engineers’ have a greater impact on the built environment and communities than initially thought. ‘Context’ looks at the people who live there and what their needs are in the public realm.

According to Cheryl Soon, former director of the Department of Transportation Services for the City and County of Honolulu, CSS arrived onto the DOT scene around 2004 with its main emphasis to encourage cooperation with the community to meet their needs and concerns. To Cheryl’s knowledge Honolulu does not have a CSS implemented project. But Honolulu has completed a considerable amount of work that shares the same ideology that CSS was intended to enforce. Collaboration similar in nature was done for Kapolei when they changed the group structure of the bus to a spoke-oriented system. The location and design of transit hubs were made to fit in architecturally and be sensitive to the community around it.<sup>2</sup>

Although these important issues are finally being addressed within the Context Sensitive Solutions Program it was only created in 1998. Since most counties must design



their transportation policies to complement state and federal requirements, federal policies influenced state and local transportation policies. Therefore, streets that were created from the inception of the FHA in 1956 to 1998, over 40 years of significant growth, has done so with no foresight into placing importance on street design that balances humanistic needs with mobility needs.

Jane Jacobs, whose blistering attack on modern urban planning in the 1960's, said, "Streets in cities serve many purposes besides carrying vehicles, and city sidewalks – the pedestrian parts of the streets – serve many purposes besides carrying pedestrians."<sup>3</sup> Jane, not an architect or a planner, but a writer and observationist recognized the multifaceted nature that streets and sidewalks have on urban society. Her writing's indeed made a shift in the planning and architectural community to emphasize humanistic values over utopian and egotistical values. Considering that streets consume on average 25-35 percent of a city's developed land<sup>4</sup>, it makes sense that the street would need to serve so many functions. Allan Jacobs believes that "if we can develop and design streets so that they are wonderful, fulfilling places to be, community-building places, attractive public places for all people of cities and neighborhoods, then we will have successfully designed about one-third of the city directly and will have had an immense impact on the rest."<sup>5</sup>

The outcome of transportation planning policies, however, seemed to have ignored such reasoning. Streets



Figure 3.2 Bourbon Street, New Orleans, LA, USA

are still designed primarily by engineers, not planners and architects, and serve a singular function - efficient mobility. In any mode, whether they are vehicles, people, or bicyclists, views of traffic or crowds were seen as a failure of traffic engineering because if any mode overlapped into another's than efficiency and safety would decrease.

Occasions where streets succeeded in serving both humanistic and vehicular functions are rare. Streets such as Market Street in San Francisco, Seventh Avenue in Manhattan, and Bourbon Street in New Orleans (Fig. 3.2) which are prized, written, and visited, seem to exist as a sole anomaly in a city of streets. These famous streets existed before the creation of FWHA policies.

In order to reach Efficient Mobility, “buildings were set in the space between streets rather than on them.” Land use followed this overarching goal of efficiency to segregate land uses to serve a single function including distancing itself from the street. This practice therefore brought more people away from the street and imploded the definition of street space that was created when building face and street formed and formed instead a streetscape. The segregation of people and vehicles, made streets more open and clear for faster speeds and higher efficiencies. In urban cities where land use segregation was not possible, segregation also occurred through “decks, bridges or subways. Many developments constructed using such layouts has had significant social problems and has either been demolished or undergone major regeneration.”<sup>6</sup>

“The trend from living to lifeless cities and residential areas that has accompanied industrialization, segregation of various city functions, and reliance on the automobile also has caused cities to become duller and more monotonous. This points to another important need, namely the need for stimulation.”<sup>7</sup>

“For decades the principal objective of transport planners and highway engineers has been the provision of a road network that would accommodate rapidly growing numbers of cars as safely and efficiently as possible. This has resulted in a streetscape dominated by features designed for the safety and convenience of people moving at 30 miles per hour, and for the provision of somewhere convenient to park when they reach their destinations.”<sup>8</sup>

## Traffic Fatalities

For efficiency and safety of vehicular movement, signs, laws, traffic signs, curbs, traffic lanes, crosswalks, and other features are used to create legible streets that define boundaries for vehicles and pedestrians. These objects are placed on the sidewalk and not on the street to ensure vehicular efficiency. This is a clear indication that pedestrians are secondary to the automobile. Hans Monderman the leading designer of Shared Spaces in the Netherlands says, “a wide road with a lot of signs is telling a story, it’s saying, go ahead, don’t worry, go as fast as you want, there’s no need to pay attention to your surroundings. And that’s a very dangerous message.”<sup>9</sup>

Traffic safety has been one of the highest concerns of communities across the United States. According to National Highway Traffic Safety Administration, 4,784 pedestrians were killed and 61,000 injured in the United States in 2006.<sup>10</sup> Accidents are often used to describe these incidents but an accident implies “anything that happens by chance without an apparent cause”.<sup>11</sup> Despite an invested effort by communities and the government to reduce accidents and deaths through traffic safety education and laws, communities still see traffic safety to be a major problem. Safe lawful driving has come to a point where there are so many rules, signs, and traffic signs on the street that many signs are ignored by the driver through information overload. This is in direct contrast with Traffic Engineers who’s main focus are “providing sufficient road

space to meet forecast demand, synchronising traffic lights, and organising other priority measures to ensure maximum flow, providing signage and other road markings that can be read at speed, planning for ever more crashworthy vehicles, and making roads more forgiving of careless driving.”<sup>12</sup>

### **An Inherit Design Flaw**

It’s clear there is a need for alternative ways to improve traffic safety and quality of street life reconciling the adversarial relationship between pedestrian and vehicle that modern thinking has incidentally developed. The development of Traffic Calming programs is evidence that there is an inherit design flaw in traditional street design and its pure goal is to address that problem. Using bulb-outs, islands, and speed bumps to slow down vehicles, it acts as only a band-aid to the larger design deficiency. Traffic Calming programs assume that slowing down traffic will make a place more inviting to pedestrians. This is only partially true because traffic calming programs do not make a street any more inviting to be a place for social activity. If a roundabout is built there more than likely won’t be people spending time in it.

But are making crosswalks safer the end-all solution in improving the quality of street life? Shouldn’t crosswalks be safe without spending more and making them more pronounced in the conceptual world of traffic engineering? No, drivers are naturally inclined to drive at a rate that is comfortable to



Figure 3.3. West Palm Beach, FL, USA  
(Center for Context Sensitive Solutions)

their surroundings. For instance, John Adams, a psychologist focusing in traffic psychology says that, “pedestrians and cyclists react not just to the volume of motorised traffic, but also to its speed. Some heavily trafficked roads in central London with little pedestrian street life became, after the introduction of congestion charging, even more intimidating to vulnerable road users. Without measures to encourage more pedestrian and cycling activity, the reduced flows of traffic go faster.”<sup>13</sup> This highlights the gap that traffic engineers have in fulfilling the intangible consequences of street design and the intricate relationship that the street has with many activities that, for the last fifty years, have never took heed. Improving the quality and attractiveness of street life is not only about reducing traffic speeds and numbers, but promoting pedestrian activities to fill

the void.<sup>14</sup> Filling that void is where positive economic, social, and aesthetic impacts can occur.

Ian Lockwood, the transportation manager for West Palm Beach sees the design flaw as an inherent conflict between traffic efficiency and traffic safety. Ian was in charge of redesigning vital streets in downtown West Palm Beach to be more pedestrian-friendly and has done so by removing traffic signals, narrowing lane widths, and bringing people and cars closer together which has resulted in slower speeds and fewer accidents. “I think the future of transportation in our cities is slowing down the roads, when you try to speed things up, the system tends to fail, and then you’re stuck with a design that moves traffic inefficiently and is hostile to pedestrians and human exchange.”<sup>15</sup>

Cheryl Soon, past director of the Department of Transportation for the City and County of Honolulu says that “we have to deal with pedestrian fatality problems and we can and must move forward.” Cheryl continues by saying that, “It begins with intersections. [We must] identify long intersections and must move on immediately. That includes Kalihi just outside of downtown that have a tremendous amount of cut through traffic. King Street, Nu’uanu Street (below Pali Highway), Makiki/Mo’ili’ili, and all the areas that have high volume vehicles and area areas that needs to be addressed first. The second thing we must do is ensure that the types of buildings in town are reviewed before constructed to ensure that street life is present.” As an example, Cheryl referred to the Wal-mart on Ke’eaumoku Street. When it was first reviewed, it was going

to be a blank wall so the urban design committee requested that Wal-mart include small storefronts at this edge. Cheryl believes that we need glass windows and not painted walls so people can interact with the building and street because sometimes people shop to get out of the hot air.<sup>16</sup>

### **Improving Quality of Street Life**

Shared Space provide a “new” street typology that addresses the limitations that traditional street design has in improving pedestrian safety and the quality of street life. It is new in terms of its applicability in the United States, but the concept has existed in streets under one “shared” relationship or another. Using second generation traffic calming methods such as Risk Compensation, a key theory behind the function of Shared Space, it can improve the quality of street life for every street user and resident. “In terms of safety, studies in Germany, Denmark, Japan, and Israel show that there are over 20 percent fewer accidents in shared streets over 50 percent fewer severe accidents compared with standard residential streets.”<sup>17</sup> The following are examples of how Shared Space Streets around the world have reduced traffic collisions without signs, signals, traffic cameras, or expensive policing.

In the city of Oosterwolde, Netherlands, a major road intersection with traffic lights, signs, lanes, and crosswalks, was transformed into a large open space with a round-about in the center. Resembling a traditional plaza, vehicles, bicycles, and pedestrians now shared the space. As the round-a-bout

being the only guide for drivers, the intersection serves a major shopping mall, theaters, businesses, and 5,000 cars per day. Despite losing all “order”, no serious accidents have occurred since its transformation in 1999.<sup>18</sup>

In Colorado, eight year long study on the traffic safety of ‘Skinny Streets’ revealed that “as street width widens, accidents per mile per year increase exponentially.”<sup>19</sup> The study illustrates that widening streets to absorb predicted traffic numbers cannot ensure safe environments for pedestrians and when given a narrower right-of-way drivers intuitively slow down. John Adams says that “people moving at three miles per hour view the world at a higher level of resolution than those moving ten times faster. The fine detail that can be appreciated at walking speeds is invisible to the motorist.”<sup>20</sup> This brings up two points. First, as drivers slow down to narrower streets they begin to clearly see pedestrians and both parties have more time to react if a collision was inevitable. Second, as drivers slow down, they begin to see some of the details that pedestrians see at three miles per hour. If drivers find intrigue in the environment that they are driving in then they would be more willing to slow down versus speeding up. Details that intrigue pedestrians will also intrigue drivers. A part of the impatient nature of drivers is that many roads are not intriguing at three miles per hour. This is the same for pedestrians and when quality is missing, people drive faster.

“A busy intersection at the centre of the Danish town of Christiansfeld witnessed an average of three people killed or seriously injured each year during the 1990s, despite

traffic signals, warning signs and road markings. In a bold move, every trace of traffic engineering was removed, and the junction resurfaced to tie in with its role as the focal point of the town. Movement and priority for all traffic, cyclists and pedestrians rely solely on the use of eye-contact, and vehicles cross the intersection at speeds of 10-15 mph. In the two-and-a-half years since completion, the scheme has seen no serious accidents and, to many engineers’ surprise, the capacity of the junction appears to have improved!”<sup>21</sup>

These are only a few examples of how Shared Spaces significantly reduce pedestrian injuries and fatalities. The benefits are tangible enough that Western Europe is pushing the limits that Shared Spaces can offer over and above reduced traffic deaths. In many of these examples Danish Traffic Directorate studies have found that at Shared Space intersections, such as the one in Oosterwolde “traffic backups during peak hours have actually decreased.” The reason is because ‘it has improved capacity and results in fewer delays than the original traffic-signal controlled intersection.’<sup>22</sup> The success of Shared Space abroad has increased its implementation throughout the continent.

The difficulties of separating the pedestrians and vehicle to reduce collisions are contributed to the minimized points in which cars and pedestrians actually intersect. In places where they constantly intersect, such as parking lots, speeds are typically slow and pedestrian-related accidents are extremely uncommon. “Consider the number of right of way incidents in the accident statistics – 60 to 70% of all



accidents are so-called ‘right-of-way accidents’” says Michael Southworth, author of *Streets and the Shaping of Towns and Cities*. “By restoring interaction in those sites where social behaviour is obvious, the number of accidents can be reduced considerably.”<sup>23</sup> In the Shared Space approach, the design of a public space must encourage social behaviour. Southworth continues to note that less regulations of traffic through signs and boundaries will bring forth self-regulating by the people therefore encouraging more social behavior (Fig. 3.4)

## Community

Community can be defined as a group of people living in a localized area that interact with each other. Such interactions include social, commercial, civic, and safety. Since streets have been converted into spaces for vehicular mobility, these activities have moved out of the street and into parks and shopping malls. Comparing the differences between two Shared Spaces has an advantage over the shopping mall.

The typical suburb consists of a network of collector streets that begins at the cul-de-sac and ends at the freeway. Despite the efforts in planning for traffic and parking, it seems like there is never enough parking spaces. Furthermore, the spacious, tree-lined throughways of suburbs regulate a vehicular speed that is seldom followed. The suburbs fulfill a commercialized fantasy of a country home where privacy and quietness is king. The reality though is homeowners who can high-five their neighbor from the kitchen window. Cars drive so

fast on some residential streets that kids are scared to play in the front of their home and vehicles consume the front door of every house which push neighborly interactions further away from the street.

The typical urban center consists of a street network with grid streets that ends at the freeway. In the last fifty years, streets have widened and new freeways were built to support the growing use of automobiles. The goal was to enforce the street flow and network established successfully in suburbs into the older neighborhoods. Traditional shopping areas in downtown and along main streets, as a result, faltered when people stopped walking on the streets and chose to drive. If there was no parking, then they did not shop at those stores. Downtowns across the United States found it hard to compete for parking with the suburbs since free land was scarce and parking structures were much more expensive to build. But places where parking structures stand were designed to add no element of pedestrian intrigue or uses at the street level.

In both networks though, modern land-use zoning, which is singular in nature, has pushed places where interactions take place into large centralized areas that server regional or city needs instead of smaller community needs. It makes traveling to these places reachable only by car and when these places are closed or in a lull they are relegated to security guards and beat cops to ensure its security. In consequence, it raises the price of doing business and is an inefficient use of resources. Before, such resources weren’t necessary because people and their continued presence in these places were self-governing



Figure 3.4. deBrink, Oosterwolde, NL  
(Hamilton-Baillie Associates)

entities that provided “eyes on the street”.

Speed is also an important factor towards the health of a community. Jan Gehl who studied human interaction in public places said that, “the freeway and the pedestrian mall each have a traffic rate of 85 persons per minute.” In the mall, however, more than twenty times as many people are in view at any specific time, because many people are sitting and standing, and because the speed of movement is 3 miles per hour rather than 60 miles per hour. If the speed of movement is reduced from 60 to 35 miles per hour, the number of people on the streets will appear to be ten times greater, because each person will be within visual range ten times longer.<sup>24</sup> Therefore,

slow traffic is the result of a lively area. Shared Spaces not only slow down traffic to make it safer for pedestrians, but it visually enhances the activity going on in the street.

Based on Jan’s general rule that people attract more people, perhaps having drivers slow down to see the interaction would entice them to use the space more often as well. This would get people to be more attentive to what happens in their community, use their car less, create a relationship with the public realm and encourage the city to expand similar spaces throughout the region, further gearing the city to be more pedestrian-minded in their way of life.

Movements of the last twenty years, most recently the New Urbanism movement of the mid 1990’s has realized these deficiencies and proposed planning principles to ensure a healthier pedestrian oriented environment that promotes interactions which improves the cohesiveness of community. A manual created by the London Department of Transport says that:

- “Well connected permeable street networks encourage more people to walk and cycle to local destinations, improving their health while reducing motor traffic, energy use and pollution;
- More people on the streets leads to improved personal security and road safety – research shows that the presence of pedestrians on streets causes drivers to travel more slowly;
- People meeting one another on a casual basis



strengthens communities and encourages a sense of pride in local environments;

- People who live in good-quality environments are more likely to have a sense of ownership and a stake in maintaining the quality of their local streets and public spaces.”<sup>25</sup>

These are the same principles that Jane Jacobs discovered during her observations of urban life in New York City and Boston and New Urbanism aims to achieve the same goals. Shared Space design puts “pedestrians, children at play, bicyclists, parked cars, and moving cars all (in) the same street space.”<sup>26</sup> Putting people on the street puts eyes on the street which induces safety, ownership, pride, and thus community. Therefore, putting people on the street is the key to improving community and quality of street life for the neighborhood. The challenge is then to understand why current street design isn’t doing that and then find ways to naturally bring people onto the street.

## **Conclusion**

There is an inherent design flaw in street design. Most of it is due to regulation by all levels of government that see streets as an inorganic urban element designed solely for efficient transportation. Traffic engineers ignore and planners are not situated to address the other important function of streets - the social function that sustains and builds community

identity, ownership, and pride. There is still a clear need for vehicular mobility that is efficient and safe but traffic engineers must recognize that efficiency isn’t always the highest priority on every street. They are now realizing this with the creation of the Context Sensitive Solutions program. However, there is a lot of work to be done in repairing communities who have fell victim to traditional streets design.

Shared Spaces improves the quality of street life and shows how much the design of the urban environment impacts our daily lives. Shared Spaces can provide the needs that planners, architects, and communities realize have been lost and should be used in coordination with the current system to create areas of pedestrian-oriented centers for neighborhoods to once again emerge from the shopping malls and business parks into everyday street life.

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# Instantaneous Precedent Study

Precedent studies of Shared Space streets in the United States and Europe and research regarding the history and purpose of Shared Space show a clear relationship between the pedestrian and the automobile. In situations where many people are close or in the driver's right of way, the driver immediately slows down and drives cautiously.

Honolulu doesn't have an official Shared Space but experience shows that such spaces do exist in alleys and during special occasions. For instance, the moment before a parade, people walk the street to find places to sit or cross while cars are still making their way out of the parade route. Other instances include before and after a major sporting or concert event. Here, people are usually seen flowing out of buildings or parks to their hotel room or vehicle while cars are picking people up, finding parking, or driving through. There are other instances where narrow sidewalks cannot support the number of people which then pushes people to walk in the street to get through heavy crowds.

The goal is to witness these instantaneous activities, analyze and record observations. The purpose is to prove that a Shared Space will work in Honolulu, overcoming the notions of "social culture" and "car culture" that would seem to negate a Shared Space proposition. Since Honolulu has a high East Asian population from Japan, Korea, and China, culture should be irrelevant because these countries share streets with a much higher concentration of bicycles, pedestrians, and vehicles and seem to do so without much alarm or extreme danger relatively speaking.

The study looks at areas of higher population density, such as Waikīkī, Downtown Honolulu, and Chinatown. The result of these studies showcases four different concepts of Shared Space in each of these areas.



Figure 4.1. South Beretania and Bishop Street

### South Beretania x Bishop Street

A traffic barricade placed for a construction site forced pedestrians onto the street. Unaware pedestrians end up walking on the side of the street against on coming traffic because it is the faster route to the bus stop. Some people do this after seeing other people do it. But after getting to the intersection they are now squeezed in a tight corner of a busy intersection with cars turning towards them.

The situation can be viewed in many ways - the fragility of pedestrians to the dominance of the car or the lack of planning by the city to provide a safe and sensible path around the detour. But in the case of psychological traffic calming, this instantaneous Shared Space shows how people and drivers interact given this unusual circumstance.

When drivers notice the barricade, they tend to slow down and take a more conscientious left turn. The speeds are fast, the turning radius is equal to the barricade radius, and the cars accelerate as soon as the turn is cleared. However, when people are squeezed against this barricade, drivers slow down considerably. The driver's turning radius become wider and they accelerate long after the turn is made, perhaps to ensure that no one else is around the corner. An important aspect to this situation is the driver's eye contact with the pedestrian, whether it is to show care, or silently mumble their irritation with the situation, the drivers look at the pedestrians while making their turn.



Figure 4.2. Costco Parking Lot, Iwilei, Honolulu

### Costco Parking Lot, Iwilei

Costco is a wholesale membership-discount store generally designed to have a wide lane at the main entrance for vehicle loading and circulation. The Costco entrance is uniquely located at the corner of the building with a food court and Tire Center occupying the front face. Since the vehicle lane separates the parking lot from Costco's main entrance, a large number of people cross the vehicle lane.

Since the vehicle lane serves also as pedestrian access and vehicle circulation the Costco parking lot becomes an unofficial Shared Space. More than just a Shared Space, the corner entrance creates a Shared Space where vehicles converge from four directions and people scatter in all directions. There are no curbs separating pedestrians from vehicles or signs telling cars or pedestrians how to cross the street. There are painted cross walks and speed bumps, but the shoppers disregard it and walk freely in the direction they need to go. Vehicles dealing with the unpredictability of pedestrians negotiate through the crowd at cautious speeds of 1-2 miles per hour.

Despite the pure chaos that occurs here, pedestrians and drivers get through the space at a respectable pace and understand that this is a part of the Costco experience. By removing curbs and using bollards in its place it still can maintain a sense of safety.





Figure 4.3. Duke's Lane, Waikiki

### Duke's Lane, Waikīkī

Duke's Lane is a narrow one-way service street that connects to the International Marketplace and has vendors along one side. The lane connects Kalākaua Avenue and Kūhiō Avenue while crossing a paved pedestrian crossing at both edges and at the middle where the International Marketplace food court and Duke's Lane street vendors meet. Since there is no sidewalk, the alley is shared by pedestrian and vehicles.

The pedestrian paving on Kalākaua Avenue continues through the entrance to Duke's Lane that signals the driver to be aware of the surroundings and adjust driving habits. After negotiating through the sidewalk, the paving returns to asphalt, but the driver continues down the alley where there are people scattered along the street talking or walking maintaining their cautious speed. Vehicles then slow down considerably when they approach the pedestrian paved crossing to the International Marketplace food court. The slow speed is contributed to the various alcoves and hidden areas along the building edge because the driver is unaware of what is around the next corner.

After the driver passes this area, it is a clear shot to the end of the alley and it becomes easier to see what is ahead. If people are present, they negotiate with the pedestrians which walk toward the center of the street. This is a good example of how Shared Streets conceptually function and shows that designing such an arrangement is not far fetched or out of reach.



Figure 4.4. 'First Friday', Chinatown, Honolulu

### **“First Friday”, Chinatown, Honolulu**

First Friday is a monthly event that invites the public to visit Chinatown’s booming art and club scene. Like a grand open house, art galleries open and extend their activities into the street where bands play and art is displayed. The popularity of this event brings thousands of people into the narrow sidewalks of Chinatown. On this night, vehicles are secondary on the street and situations occur where, for an instant, the street is shared.

The police officers prevented people from jaywalking therefore skewing the results of how pedestrians and vehicles negotiate crossing. Despite that, people freely crossed the street at marked crosswalks. The traffic crawled along, due to a traffic light at Hotel Street. People looked briefly to see if there were oncoming cars and then casually crossed the street.

In other areas, where people took up on-street parking space to display art, or play music, cars slowed down in these areas. There is most likely a correlation between the speed of a vehicle and the distance of another object beside the vehicle as it passes. For instance, vehicle speeds tend to be faster when there are no cars parallel parked. Likewise, vehicle speeds are faster when there are no people adjacent to the road. Therefore, when vehicles pass by an art kiosk, or audience seating on an on-street parking space, cars slow down for two reasons. First is the anticipation for unpredictable pedestrian movement along the vehicle and another is rubbernecking by the driver trying to see what is going on.



Another location, Bethel Street, has a high number of jaywalkers crossing at mid-block from Hawai'i Theater. The bar gives people a reason to cross where there is no delineated cross walk. This supports the concept of the need for Shared Space to be designed for perpendicular pedestrian movements to induce slower vehicle speeds. This is also based on Seattle's Inhabitable Streets. By encouraging perpendicular movement on streets, the street becomes atypical and drivers must compensate. Therefore, in designing a Shared Space for Honolulu it becomes important to develop multiple reasons for people to cross along any point of the block.

In conclusion, there is evidence that shows that the vital relationship between pedestrian and vehicle does exist in Honolulu. Analysis shows that removing the curbs in the right situations and locations can naturally reduce the speed of the automobile without the use of repetitive signs, lines, or other traffic control elements. The relationship is natural and doesn't require an extensive training program. Did Costco train their customers how to cross the street drive through the street? It is a common courtesy that when streets are shared that the pedestrian always has the right-of-way which reveals itself through visual communication between the pedestrian and the driver.

# Shared Space Themes and Concepts

## **Contextual Theories of Shared Space**

The purpose of this chapter is to review and analyze the broader themes defining the social environment which Shared Space has evolved from. How have these themes affected the perception and use of Shared Space? Why has there been a recent investment from cities to redesign select streets with Shared Space? Is this the beginning of a broader evolution of urban thinking or a renewed push by a new generation of urbanists to rediscover a forgotten concept?

## **The Shared Space Program**

At its core, a Shared Street is a typology of Shared Space. The term Shared Space is used to define a street where people, bicycles, and automobiles share a right-of-way instead of being separated into lanes. Shared Space also refers to a wide variety of urban scales and locations. Past examples of Shared Space projects include small residential areas, school districts, busy intersections, shopping streets, and dense urban areas. Pilot projects using Shared Space and the continued development of Shared Space is supported by the *Interreg IIIB-North Sea Programme*. The *Interreg IIIB-North Sea Programme* is a European Union led program that focuses on improving transnational cooperation between countries surrounding the North Sea - England, Netherlands, Germany, Belgium, Sweden, Norway, and Denmark – in order to develop innovative and sustainable communities.<sup>1</sup>

The Shared Space project “aims to develop new policies and new methods for an integral approach of the planning of public space for which man and his surroundings are taken as the basis.”<sup>2</sup> Since the project’s establishment in 2000, there have been seven Shared Space pilot projects located in the following locations: Province of Fryslân (Lead Partner, the Netherlands), Municipality of Emmen (the Netherlands), Municipality of Haren (the Netherlands), Municipality of Ejby (Denmark), Municipality of Bohmte (Germany), Suffolk County Council (United Kingdom) and Municipality of Oostend (Belgium).<sup>3</sup>

The Shared Space project, “encapsulates a new philosophy and set of principles for the design, management and maintenance of streets and public spaces, based on the integration of traffic with other forms of human activity.” The entity believes that the definition of public space as a whole has been wrongly dominated by traffic-related functions reducing the pedestrian’s role to be only a small part of the ‘general’ nature that public space is intended to be for. The consequence of this imbalance is the “interference of social needs of the individual and group” which therefore erodes the *pluralistic society*<sup>4</sup> that Europe was founded on.<sup>5</sup>

In summary, the European Shared Space project has led the way to confronting the effects of traffic in communities with an innovative design solution that improves safety and increases the quantity and quality of existing public spaces. Therefore it influences positive social, cultural, and behavioral interactions through disassembling the modern understanding

of the street and reinventing it.

## **Risk and the City**

Shared Space requires that multiple modes of transportation and users remove the security blanket of separation created by transportation engineers and planners and freely use the space. To ask the average person to participate in this would instill, at the least, apprehension and, at the most, concern. The common pedestrian or driver would envision more car accidents, higher traffic, and a higher death rate. The consensus would generally think of Shared Space as a step backwards because we our conscious connects streets with high speed traffic. But for street life to improve, we as a community must be willing to experiment since traditional street design is only one of many ways that a public space can be designed and perceived to be. This apprehension and fear comes from a heightened perception of risk and the unknown.

But after explaining the concept and showing pictures, people are more open and willing to take the risk. Why? Cities and companies are always seeking out new talent and creative ideas to improve products, systems, or other elements. They do this to compete with other companies and to survive and do it in the face of an extremely litigious environment. Charles Landry, author for Commission of Architecture and the Built Environment (CABE), contests that cities should act more like a company and be doing the same to attract industries, talent, and creative types because such people bring culture, a healthy



Figure 5.1. Forecourt Fountain, Portland, OR, USA  
(Vicki Jean Beauchamp)

tax status, and an identity that helps to expand markets and industries.<sup>6</sup> For example, Neil Takemoto, founder of CoolTown Studios, works with communities and small business owners to “develop creative, sustainable, profitable urban buildings and destinations that serve as both a model and anchor for future surrounding development designed to attract creative, entrepreneurial markets that significantly impact the local economy and quality of life.”<sup>7</sup> Cities should begin to try new and bold ideas because the culture and people’s needs are rapidly changing. Charles states three things that are changing the social climate:

- awareness of environmental sustainability;
- creation of more aesthetically satisfying places and;
- capacity of places to retain and attract the talent that can make them economically successful.<sup>8</sup>

The creation of quality public space has had an inverse relationship to risk. Partly because the government wants to minimize the possibility of lawsuits, increase safety, and comply with ADA and other Federal regulations. Beautiful public spaces such as Forecourt Fountain in Portland, Oregon (Fig. 5.1) and Tamarind Park in downtown Honolulu could not be built today under today’s rules and regulations. Shopping malls have rules prohibiting animals, picture taking or video filming, soliciting, and other activities. But aren’t these some of the things that makes a public space real, interesting, and exciting? The excitement and fun associated with a great public space comes from the unique characters, activities, and surprises that are found. This is what makes a space unique, authentic, and respected. Just about the only reason Shopping centers are designed today is to consume. Industries rate success on averaging the number of dollars spent per person per visit. There are however shopping malls that are designed to be more than just a place to shop, but these diamonds in the rough are only now taking ground and are still far and few between. The shopping mall is a privatized shopping street removed of the unexpected pleasures of walking in the street. Therefore, “this, then, is an essential tension in public space

– whether to remove risk, and so erase danger, or to tolerate or even encourage risk, and so enjoy the unexpectedness of our cities and fellow citizens.”<sup>9</sup>

Creativity and inventiveness needs to be done with the same vigor as companies. Positive risks need to be taken. “People want more from their cities so the quality-of-life and livability agendas have come to the fore. These highlight walkability, a public realm and associated infrastructure that foster increased interaction between people, and urban settings that allow simultaneously for excitement and reflection.”<sup>10</sup> This is evident in the popularity of the outdoor café’s and the lifestyle centers which are ultimately dressed up shopping malls with more investment in privatized public spaces.

The Shared Space program is not the only group of urban designers working to balance priorities in public space. The New Urbanism movement in the United States has brought considerable change to public space. Other developments include Transit-Oriented Development, Traditional Neighborhood Developments, and Smart Growth that emphasize multiple modes of transportation and creating space for people instead of the car.

### **Risk Compensation and the Street**

So if signs, lanes, and any indications dictating vehicular space and pedestrian space are removed, then why do traffic related injuries go down instead of up? Why have places that have redesigned their streets to be a Shared Space

increased in social and community activity instead of desertion from fear of being hit by a car? Shared Space owes its success to the concept of Risk Compensation or also known as Risk Homeostasis. Risk Compensation is defined as the balance between perceived risk and the consequences of taking the risk. Everyone has a natural inclination to take risks based on the perceived consequences whether they consciously think about it or not.

If a car is being driven at 70 mph in a car that has high safety standards and in a street that is wide and well kept, with no police enforcement, an easily visible path, and barricades to prevent people or things from jumping in front of them, then the possibility of a negative consequence from occurring would be very low, making the risk of getting into an accident while driving at 70 mph or higher would be low. To an extent, this is the situation in which drivers use the road today.

However, any changes to this hypothetical environment would be unconsciously reassessed by the driver. For instance, if there was a car driving in front at 60 mph, then the risk of hitting that car going 70 mph would be high and to adjust and reduce that risk the driver would slow down to 60 mph to match the speed of the other car. Risk Compensation is therefore a behavioral reaction to an environmental change.

Shared Space employs risk compensation in the same manner. By reducing the number of barriers and forms of separation, risk becomes higher. All street users now must compensate for the change in urban environment. Drivers without the assistance of signs, lanes, and other recognizable

markers react by slowing down and being more aware of their surroundings to ensure a safe passage through the space. Pedestrians whom seldom take the risk of crossing a busy and high speed street would suddenly find a Shared Space to be much more accommodating to make that trek across the street at any point to which he or she feels fit.

By reducing the speed of the car and designing the street to be pedestrian friendly, people feel inclined to cross the street at will without being ticketed, or injured from cars because the driver is now looking out for you instead of vice versa. This is done without signs, painted lanes, or other regulations set in place to ensure safety in a separated environment. The benefit is more space for the pedestrian in streets where signs clog and mess up a nice street façade. Trees could grow naturally without being chopped down from blocking traffic signage.

“Separating traffic flows often increases the feeling of safety, but in practice it appears to be counterproductive – the number of accidents with injuries increases. Separating traffic flow blinkers people and causes an increase in speed. Because everyone has their own lane, people take less account of other road users.”<sup>11</sup> Despite decades of installing signs, crosswalks, laws, fences, and traffic cameras, preventing pedestrian accidents seem to have reached its potential. The case has been made that new methods and ideas should be tested in places that we tend to take for granted in design.

John Adams, author of *Risk*, looks at the perception of streets in North America to the perception of streets in England with interesting results.

*“By almost all the quantifiable criteria used by road safety planners and regulators to guide the design and implementation of their safety measures, North American roads should be safer; its vehicles are more crash-worthy; its roads are wider and straighter, its drivers drive more slowly and its pedestrians are more disciplined. And subjectively, British traffic feels to me, and to many others I have questioned over the ears, more dangerous. But statistically the average North American is about twice as likely to be killed in a road accident as the average Briton.”<sup>12</sup>*

USA Road deaths per 100,000 population	16.0
Great Britain Road deaths per 100,000 population	8.1

Table 5-1. USA Road Deaths vs. Great Britain Road Deaths (John Adams, 1995)

The excerpt and Table 5-1 suggest that a behavioral response to the perceived risk results in drivers and pedestrians being more aware of their surroundings. The death rate doubled in an environment of better behaved drivers and pedestrians contributing to higher speeds, efficiency, and a reduction of perceived risk that result in a higher percentage of accidents



with a lower rate of survival.

Another example of risk compensation's effect on driving behavior occurred in Sweden on September 1967. All drivers were forced to reverse the direction of driving from the left side to the right side basically rejecting a persons driving habits and forcing them to establish new habits. The initial anticipation of carnage was unfounded and what resulted were the safest months in a long time.<sup>13</sup>

### The Separation Theory

So when did we begin to separate cars from everything else? What were the key developments that got us to where we are now? One of the first and most noted projects was Radburn, New Jersey. Radburn was a planned suburban community built in 1929. It was promoted as “a town for the motor age” that separated pedestrians and vehicles. Like oil and water, the two never mixed. Streets were designed solely for cars and pedestrian walked on ribbon parks in “residential super blocks” behind single family homes. Whenever a pedestrian path had to cross a street, it crossed either over or under the street. The streets connected to the interstates and garages while the pedestrian walk connected to residential cul-de-sacs and public facilities such as schools. It had a street hierarchy that consisted of the access road that connected to the homes, collector roads that connected neighborhoods, main roads that connected districts and highways that connected to communities beyond Radburn. The streets curved to cul-



Figure 5.2. Plan, Radburn NJ, USA (Carmen Hass-Klau, 1990)

de-sacs. The landscaped and tree-lined streets, according to Carmen Hass-Klau, were derived from the road design of landscape architects in Britain.<sup>14</sup>

This is in stark contrast to the street gridiron pattern that was built for Manhattan and San Francisco. For children to get to school without ever crossing the path of a vehicle was a freedom that people living in urban areas didn't have and the concept and execution of Radburn became a prime example of many other suburban developments throughout the United States "and many of its underlying assumptions were written directly into traffic codes."<sup>15</sup>

## **Romantic Movement**

Before the completion of Radburn though, a series of movements led to the extreme off-shoot of the traditional urban street grid-iron network. The Romantic Movement was the first of many. It began in England around the mid 19<sup>th</sup> century. At the time, England landscape gardening was lead by Frederick Law Olmstead, who designed natural landscapes. Before the Romantic Movement, landscape was often associated with the formal gardens of France and Italy where symmetry ruled. In the Romantic period though, landscapes were designed to mimic the natural landscapes of England. Frederick Law Olmstead's work and popularity gave him the nickname "the father of Landscape Architecture" and designed parks for English's elite before coming the American and designing Central Park

in New York among others. Central Park is a perfect example of how the Romantic Movement influenced Radburn and other suburban developments. Central Park, designed in 1858, mimicked an untouched landscape of a grand lake, rolling hills, and pockets of forests and lawns. It also had curvilinear roads and walkways. Just like Radburn, Central Park had multiple layers of paths that were overlaid through a series of tunnels and over passes. Each path system was designed specifically for pedestrians, horses, or vehicles.

## **Traffic Calming**

Traffic Calming emerged in Europe as a way to reduce the speed of cars to reduce accidents with other cars, but more importantly, pedestrians. There was little recognition at the time to design streets that were sensitive to its context. Speeds were maximized everywhere regardless. Colin Buchanan, often considered the father of Traffic Calming, realized this contradiction and the damage vehicles would have on the urban environment in 1963. Colin is famously regarded for proposing environmental zones, in which traffic speeds were greatly reduced and noise and air pollution decreased to offer a more inviting environment for pedestrians to safely return to the streets. The edges of each zone are streets designed for vehicular efficiency.

"We know that if a car has an accident with a pedestrian at 70 kph (45mph), the likelihood that the pedestrian will be

fatally injured is 83 per cent, while at 25 kph (15 mph) it will be 3.5 per cent. A reduction of motor speed is normally carried out either by physical changes of the carriageway, such as chicanes, parking at right-angles, bottlenecks, raised crossings, and/or traffic signs which restrict the speed of motor traffic.”<sup>16</sup> These were heavily used in Europe only gaining traction in the United States in the early 1990’s. To this day, the use of these “first generation” traffic calming devices are often considered experimental and approached with apprehension by the public. The largest complaint of these devices is the damage it would inflict upon the car and the extended time it would take for traffic to move through it.

Cheryl Soon, former Director of the Department of Transportation Services for the City and County of Honolulu talked about her experience and perspectives of Honolulu’s Traffic Calming program which began under her tenure. The concepts of Traffic Calming was quite receptive by the community anxious to slow traffic down and willing to experiment with roundabouts, curb extensions, and bulb-outs to do this. But it was not unanimous; some didn’t see speed as a problem and were slow in accepting any change. From this experience Cheryl felt that more efforts could have been done to get a greater acceptance by talking to more people.

Shared Space, on the other hand, doesn’t prohibit the car. Traffic calming features were disguised as everyday objects of the person and environment. “A tree is an obstacle but it is also part of the greenery; a small hill can force cars to the side, but it is also be an object for children’s play; a pillar in

front of your door prevents cars from passing by too close, but it also marks your entrance, and it is easy to put your bike up against.”<sup>17</sup> These objects thus send a message to the driver that they are for other purposes besides controlling him.

Another type of traffic calming is called Pedestrianization. Termed by Carmen Hass-Klau, Pedestrianization is redesigning streets to create more space for bicyclists and pedestrians, resulting in lesser traffic lanes and wider sidewalks and bicycle lanes. “It is an attempt to mix the different transport modes and create a form of peaceful coexistence between them which according to the character of the road will vary. The result is that in most cases the urban environment is considerably improved.”<sup>18</sup> In the United States, Pedestrianization has caught on in the field of transportation planning under the term *Road Diet*. “A survey in Seattle demonstrates that Road Diets often result in higher traffic capacity with significantly reduced collisions.”<sup>19</sup>

The evolution of traffic calming deals less with literal physical barriers applied to an existing street and emphasizes psychological methods and integration instead of separation. Called *Second Generation Traffic Calming*, the use of trees and planters that narrow the field of vision for the driver are part of the evolution. Shared Space is the key design tool that employs all of the elements of first and second generation traffic calming thinking. Hans Monderman designed an intersection in Drachtten, Netherlands that creates shared space in an intersection using planters, water fountains, and a round-a-bout.

It is important to note however that the perception of traffic calming being a purely traffic engineering endeavor is inaccurate. Since traffic calming deals with not only reducing traffic speeds, but creating more pedestrian space and reducing negative environmental impacts, implementing traffic calming projects require a concerted effort by planners, landscapers, architects, and traffic engineers. It should also be a part of a comprehensive effort over a larger area and not piecemealed throughout the city. Past efforts that have not kept the larger picture in mind ended up moving the traffic to other streets unable to cope with the change. Sole instances of traffic calming would also be unable to be as effective in reducing environmental impacts and improving pedestrian activity. “We can only be serious with traffic calming if we are willing to ‘hurt’ all motor vehicle users and give substantially more ground to the weaker road participants.”<sup>20</sup>

## **Planning Theory**

The field of traffic engineering dealt solely with quantifiable and linear information that lacked the quantifiable and non-linear research of architects and planners. Unlike the subway or train the automobile was, at the time, an unregulated transportation system. As automobile ownership soared in the 1920’s efforts were made to control its growth. The development of the automobile using transportation engineers was the key as a similar effort was used in planning subways and trains.

Since the expertise of a traffic engineer focused on designing a functional street system they dealt with quantitative information, unable to forecast the automobiles’ social and environmental effect on the city. Such research was done forty years later by Colin Buchanan. This did not occur in the United States and planners therefore evolved as a subservient entity to the requirements of the transportation engineer and focused instead on housing and land use reform to “improve and control overcrowded city centers and plan for its eventual growth. It was not the ‘business’ of American planners to develop ideas on overall urban land use and transport policies.”<sup>21</sup> Since traffic engineers worked alone in developing needed transportation infrastructure for future growth, planners focused on the impact of automobile traffic on the city from the realm of land use.

“Approximately 24,000 people were killed annually and 600,000 injured by motor vehicles in 1925.” Traffic safety became a high concern of the American public back then. In response, a conference was held where it was agreed that “residential areas should be designed in such a way that they would protect residents from car accidents.” This became the planning policy of Radburn and Greenbelt towns soon after.<sup>22</sup>

Another aspect of planning that developed in the 1930’s was the theory of Functionalism. Concurrent with the modernist movement lead after World War I by the Bauhaus movement, Functionalism was the theory that buildings should be removed of ornament or historical precedents and be a machine for healthy living. In contrast to the dense and overcrowded urban centers, Regional Planning and Functionalism emphasized

health through land use policies that gave everyone sufficient access to air, sun, light, and open space.<sup>23</sup>

To meet these standards, new buildings were oriented towards the sun and setback from the street therefore leaving the street to be designed by the traffic engineer as an abstract object for vehicular movement. The separation of building face and street signified the absence of recognizing the street as an organizing element to social and psychological well-being. It was felt that the self contained building would take the place of human's environmental needs and support the psychological and social well-being of the citizens. The Cerda Plan for Barcelona in 1859 was designed for better access to sun, air, and the natural environment as well. However, the buildings were built around the now famous chamfered blocks never turned away from the street. Green spaces were located at the center of each block and the streets were designed to incorporate an on grade rail system and other, at the time, new transportation technologies.

Between the Functionalist plans of the United States and Barcelona, we can see two directions in city development. The Cerda Plan of Barcelona, to escape the cramped and degradation of the old city, built an expansion plan that addressed the street. The El Eixample district has a high level of pedestrian activity reinforced by ground floor retail and residential or office above. Jan Gehl observed the American Functionalist plan and said that,

*“one sees buildings and cars, but few people, if*

*any, because pedestrian traffic is more or less impossible, and because conditions for outdoor stays in the public areas near buildings are very poor. Outdoor spaces are large and impersonal. With great distances in the urban plan, there is nothing much to experience outdoors and the few activities that do take place are spread out in time and space. Under these conditions most residents prefer to remain indoors in front of the television or on their balcony or in other comparably private outdoor spaces.”<sup>24</sup>*

Saying that this is a “modernized” plan is sarcastic commentary by Jan. How can something that is “modern” and “better” than what was there before be so cold, impersonal, and dysfunctional? The “modernized” plan is inferior in terms of pedestrian traffic and quality outdoor public space. These are two different ideologies where one isn't necessarily better than the other. But to evaluate the condition of the United State's urban environment in comparison to those that value humanistic qualities would disprove this.

## **New Urbanism**

New Urbanism is an alternative approach to redesigning the American city which, after the World Wars, has evolved into 'placeless' suburbs that is 'unsustainable and inefficient'. The suburb is theoretical manifestation of the “country home”.

Popularized by sit-coms from the 1950's featuring suburbs as a safe, clean, quiet place away from the grunge and the shortcomings of the urban city, this ideal of "suburban living" has been commoditized to the masses and the result was the consumption of farm land and resources that we are realizing today have dire effects on our environment. Our standard of living has increased runoff, air pollution, and pushed natural habitats to smaller less suitable areas and is seen by New Urbanists and other planners as an inefficient use of land and infrastructure. The epitome of such developments is the foundation of cities such as Los Angeles, California and Atlanta, Georgia.

In the early 1990's the New Urbanism movement began with the joining of pioneers that all worked towards designing mixed-use, pedestrian-scaled communities. In 1996, the pioneers, Peter Calthorpe, Michael Corbett, Andrés Duany, Elizabeth Moule, Elizabeth Plater-Zyberk, Stefanos Polyzoides, and Daniel Solomon, created a Charter of their collective goals and aspirations that would eventually constitute the Congress for the New Urbanism.

Peter Calthorpe is considered the pioneer of Transit-Oriented Development (TOD), Andres Duany and Elizabeth Plater-Zyberk, husband and wife, were pivotal in creating the idea of the "Transect" which "arranges in useful order the elements of urbanism by classifying them from rural to urban," thus creating "immersive environments which the whole becomes greater than the sum of its parts."<sup>25</sup> These were a small group of people charged by their own experiences and

local communities to reverse the environmental and social damage of traditional suburban design. The goal was to create places for pedestrians and create a self-sufficient neighborhood in a suburban setting. Today, the Congress of New Urbanism accounts for over 200 members worldwide.

Within the charter are seven main principles to New Urbanism's approach. Summed up, the principles focused on:

- creating walkable neighborhoods that were human-scaled;
- creating streets to be the preeminent form of public space;
- create equal access to transportation types; and
- a network street pattern that provided the porous accessibility for pedestrians and other modes of transit to get from one neighborhood to another.

These principles are reminiscent of how cities were built before the personal automobile. Critics of New Urbanism see New Urbanism as an attempt to commoditize America's nostalgic pastime and irrelevant to the issues of today's society and population growth. But if one were to simply look at the seven main principles, there is no requirement to make the city look like the 1920's. Just as policies have been made to organize transportation and land-use for the vehicle, New Urbanism clearly establishes a policy of organizing transportation and



	Street Network Network vs. Collector	Transportation System Mass Transit vs. Personal Automobile	Retail Shopping Street vs. Shopping Center	Residential Interface Front Door vs. Garage	Parking Hidden and Multi-level vs. Streetfront and one-level	Building Types Sidewalk Activity vs. Drive-Thru
Urban	 a	 b	 c	 d	 e	 f
Suburban	 g	 h	 i	 j	 k	 l

Table 5-2. Land Response to Urban Form

a. Chinatown, HI; b. Denver, CO; c. New Orleans, LA; d+e. Honolulu, HI; f. Denver, CO; g. Irvine, CA; h-l. Honolulu, HI

land-use for pedestrians. All of which coincide with the main principles for a successful Shared Space. Beyond that, their research and discoveries in comparing suburban development and mixed-use urban development support the foundational theories and themes that have given Shared Space the opportunity to flourish.

### **Smart Growth**

Another development theory that has similar concepts to New Urbanism is Smart Growth. Smart Growth is a city expansion proposal whose theory focuses on neighborhood livability, wider access to the city by decreasing traffic, emphasizing future growth in existing parts of the city, mixing income classes in neighborhoods and preserving open green space for recreation or preservation. The main policies towards achieving this urban development proposal are mixing land-use to bring people closer to where they work, taking advantage of existing community assets to reduce new development, promoting alternate modes of transportation, and encouraging citizen and stakeholder participation in development. Portland is the leading city implementing these concepts and many other cities and developments are following these trends. Honolulu, for instance has adopted some of the principles of Smart Growth and Addison Circle uses Smart Growth as the foundation of their design.

The New Urbanism and Smart Growth movements have strived to steer the direction of suburban development into a

more sustainable, humanistic, and socially beneficial direction. The founders of the Congress of New Urbanism are to suburbs as Jane Jacobs is to modern urbanism. As Jane Jacob's book, *The Death and Life of Great American Cities*, made the first effort in rethinking modern planning in the 1960's, the 1970's brought forth the historic preservation movement and a strong activism towards community design. Although the 1990's saw the development of New Urbanism, the 21<sup>st</sup> century brought forth the "Green" environmental movement. The Green movement is having profound impacts on every aspect of daily life, from the products we use, to the homes we live in.

### **Conclusion**

Risk is a part of every day life. No matter how much a city tries to reduce it, risk will never vanish. There is nothing wrong with reducing risk in the public realm, but one must consider its effect on creativity. The consequence prevents opportunities from existing great public spaces that designers and architects draw inspiration from to evolve or be recreated. The result is the design of public space such as parks, plazas, and sidewalks that have become mundane. As elements that make streets, parks, and plazas exciting are removed, these public spaces become uninteresting and desirable to the pedestrian user. The businesses along these spaces struggle, close, or have limited hours. The underperformance make cities and private developers less inclined to provide such space in the future.

One can see that evaluating the themes and theories

that have led to Shared Space is a result of past leaders that placed traffic efficiency over the pedestrian's physical and psychological well-being. Those needs were envisioned to be served in the privacy of a person's home. There could have been opportunities for engineer, architect or planner to come together in realizing the dual importance to evaluate quantitative and qualitative aspects of the street. This could have preserved the streetcar systems that existed throughout the United States, something which cities, such as Portland and Seattle, are ironically reinstalling. But it was long established in the industrial age that efficiency was king.

Separating the automobile from the pedestrian and all other transportation modes has reduced conflicts between pedestrian and automobile. After half a century, there has been an extensive amount of research and testing to make driving safer and protect the 'unpredictable' pedestrian from being hit in crosswalks. Though accidents and pedestrian deaths have fallen in this time, it has reached a leveling point and is on the rise. As more people abandon smaller towns for the big city, pedestrian-vehicle conflicts will continue to reflect this.

The Shared Space concept embodies all of the issues, themes, and theories of street life, public space, and quality of life. Granted that the first thought of entering a Shared Space sounds extremely dangerous, the drivers feel the exact same way. The next generation of traffic calming focuses on psychological behavior and gives the pedestrian great power in taking control over the streets. With the growth and strength of the "green", context-sensitive solutions, and creative class

movements supporting new concepts in urban development, Shared Space typologies provide synergetic values to New Urbanism, Pedestrianization, and Smart Growth.

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# Evaluating Honolulu's Streetscape

The intent of this exercise is to use the knowledge and analyses gained from the precedent study and select a street for design. There are two extremes to street usage. One extreme is the human extreme, where streets are used only for pedestrians. Also known as Pedestrian Malls, this street typology has its own principles of use, location, width, density, and aesthetic. The other extreme is the vehicular extreme. Also known as the freeway or highway, this street typology has its own principles of use, location, width, density, and aesthetic. Unlike a medium-use street or Main Street where pedestrians and vehicles co-exist in separate zones, Shared Streets provides a new typology that has its own definition and principles and can be used on smaller residential neighborhoods or medium to high density mixed use neighborhoods. Therefore, it is important to know how and when each situation would be appropriate for Shared Space to occur for success. Therefore, street selection becomes an important step to define where a Shared Space street typology would be most appropriate and beneficial.

As a method for selecting streets in Honolulu, certain categories used in the Precedent Study were reorganized into a matrix (Table 6-11). This information produced Shared Space street principles that act as evaluation criteria for each area.

## Site Extent

The sites (Fig 6.1) were limited to Central and East Honolulu Primary Urban Core neighborhood centers and future rail stations:

- Waikīkī
- Downtown Honolulu
- Chinatown
- Ala Moana
- Kapahulu
- Makiki
- Kaka'ako/Ward
- Diamond Head
- Wai'alae
- University

## Selection Criteria

### Macro

1. Mass-Transit Lines
2. Land Use
3. Parking Resources

### Micro

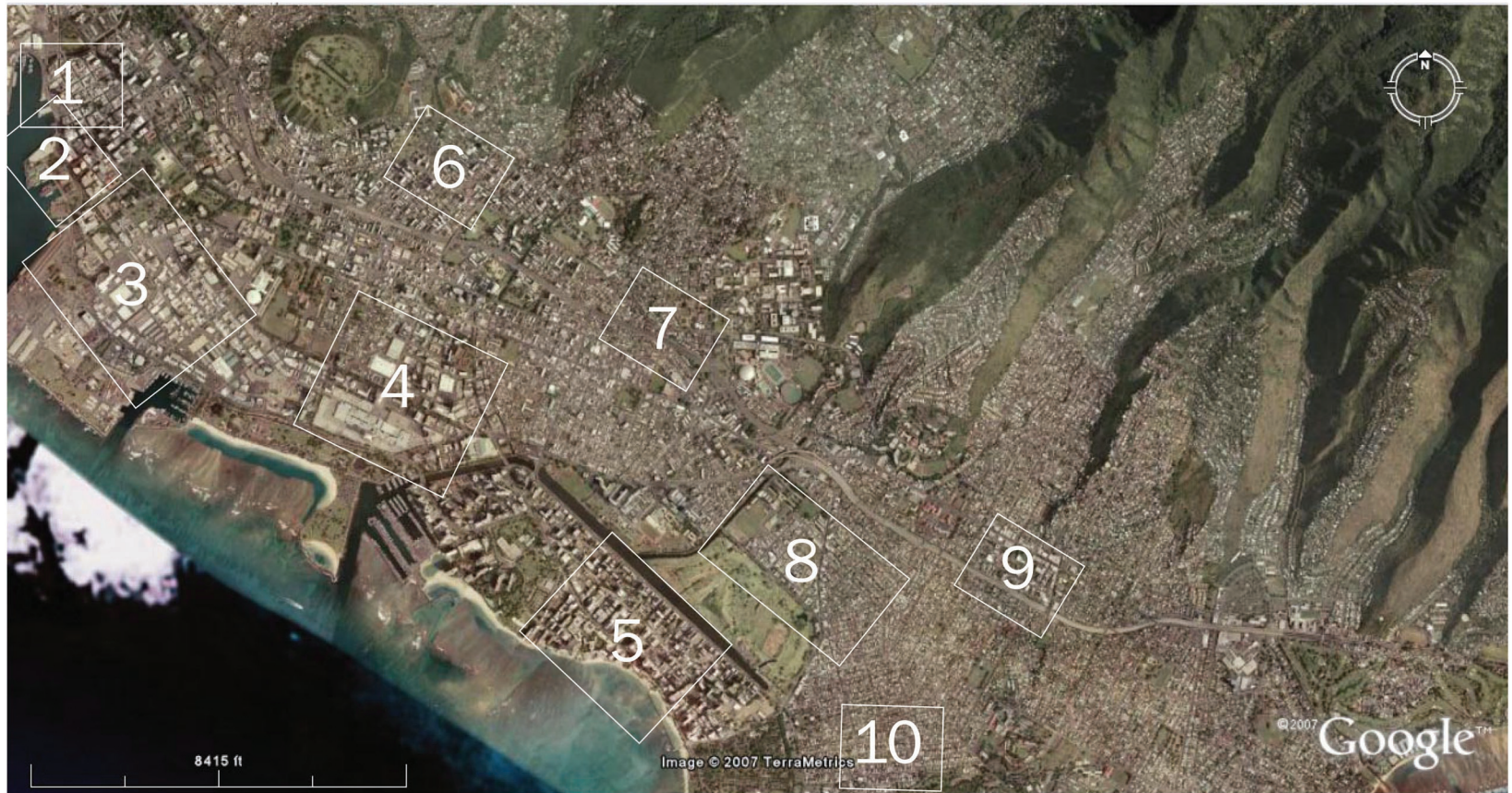
1. Street Width
2. Mixed Land Use
3. Visual Inventory

4. Residential Population Density
5. Building Types
6. Amenities

## Selection Process

Graphic aerial maps were created diagramming macro-categories such as Multimodal Links (Bus, Rail, and Bikes), Land Use, and Parking Resources. The information gathered through both the macro and micro topics was then evaluated and compared through a grading matrix outlining the strengths and weaknesses of each neighborhood based on the macro and micro selection topics. The two highest rated neighborhoods were chosen for a visual analysis to select a street. Streets within the ¼ mile walking distance from the neighborhood center or transit stop were evaluated by looking at the street width, building types, visual interest, and access to services or public properties such as theaters, schools, markets, or other attractions. Looking at the larger street network and challenges of the current functioning of streets were also looked at in selecting a street. The site boundary will be defined by surrounding uses and length. All shared streets though would begin and end at an intersection.





**SITE SELECTION MACRO STUDY**

- A. TRANSPORTATION
- B. LAND USE
- C. PARKING

- 1\_Chinatown
- 2\_Downtown
- 3\_Kakaako/Ward
- 4\_Ala Moana
- 5\_Waikiki
- 6\_Makiki
- 7\_University
- 8\_Kapahulu
- 9\_Waialae
- 10\_Diamond Head

Figure 6.1. Overall Aerial of Neighborhoods (Google Maps)

## Chinatown

Chinatown is one of the only preservation districts in Hawai'i. What has survived is a culturally rich area of downtown Honolulu that maintains many of the buildings it had before statehood in 1959. Its location next to Honolulu Harbor and Downtown Honolulu, the trade and financial capitol of Hawai'i, makes this neighborhood a heavily used area each day. Although the number of people living in Chinatown is mostly compacted to high rises mauka of Chinatown, recent reinvestment in the area and crime safety investments have encouraged more residential opportunities in the area although it still tends to be a lonely place at night.

Table 6-1. Chinatown Neighborhood Analysis

Mass Transit	Chinatown will have one stop at the SW corner of the district. The station will be raised above Nimitz Highway but there is heavy debate to whether an on-grade stop would be more beneficial.
Mixed Land Use	Chinatown is zoned for high-density Business Mixed Use and is currently not zoned for residential. Residential is located in apartment districts at the mauka end of the neighborhood.
Parking Resources	Chinatown and Downtown share a wealth of parking resources. Every parking space is highly sought after though street parking can be found.
Population Density (1 mile radius)	Living Population: 35,500 / sq. mi. Daytime Population: 85,000/ sq. mi < <a href="http://www.loopnet.com/xNet/MainSite/Listing/Profile/PrintAllISE.aspx?LID=15335154">http://www.loopnet.com/xNet/MainSite/Listing/Profile/PrintAllISE.aspx?LID=15335154</a> >
Street Width (40-60 ft)	15 blocks, 55 feet width, Grid Layout
Building Types	Older buildings built up to the right-of-way ranging from one to two stories
Amenities	Oahu Market, Kekaulike Street Pedestrian Mall, Restaurants, Bars, Art Galleries, Hawaii Theatre
Visual Inventory	Historic Buildings, Hidden Alleys, Oasis in building complexes Outdoor food and lei markets.



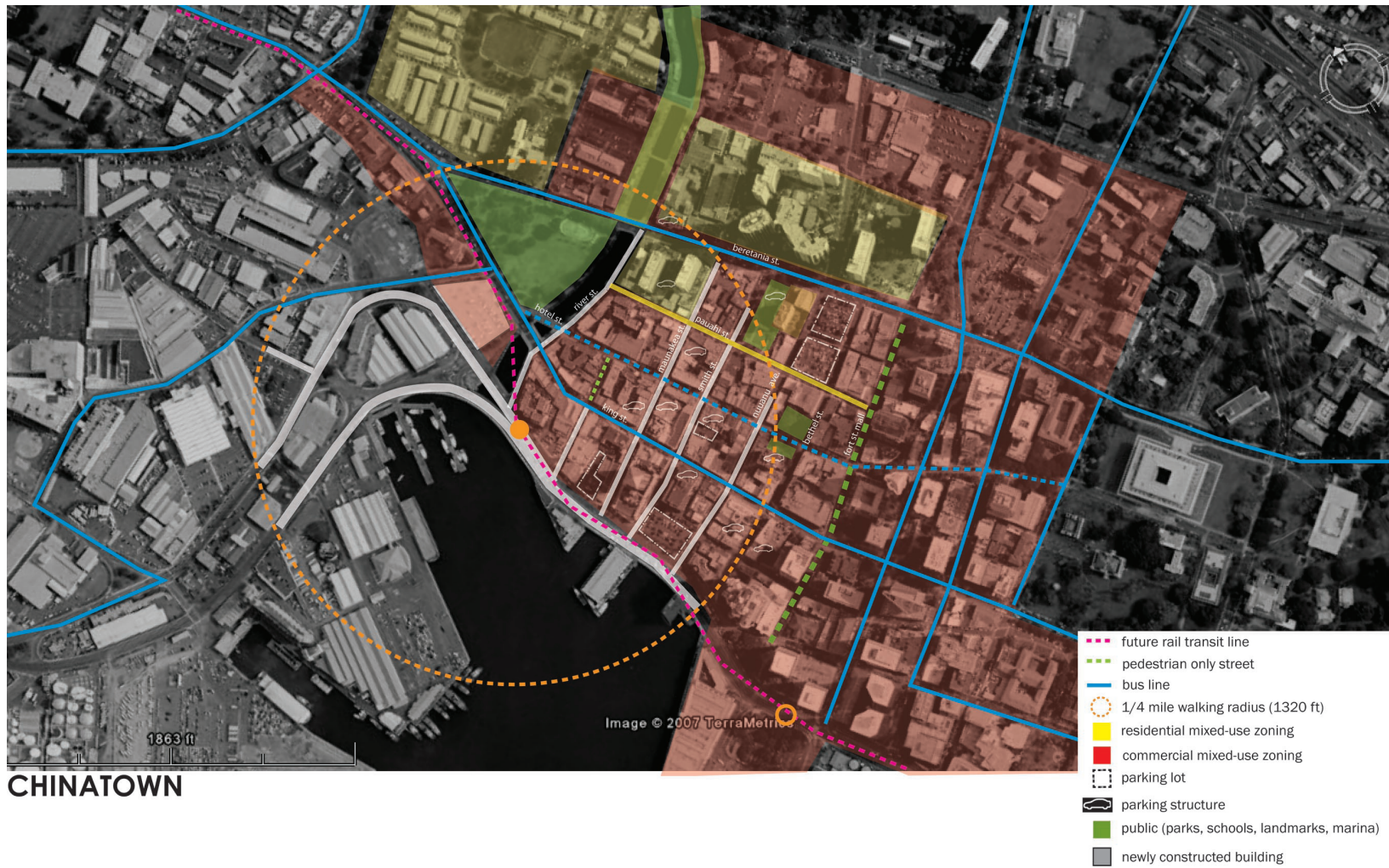


Figure 6.2 Chinatown Graphic Analysis Map

## Downtown

Downtown Honolulu is Hawai'i's Financial, Government, and Commercial center. There are a high number of restaurants and businesses, but it lacks the residential mix to support staying open on weekends and after work hours. There are however, two major condominium developments near completion. Downtown's wealth of public squares, a pedestrian mall, and high pedestrian density during the day makes it a viable place for a Shared Space on Fort Street Mall or lesser cross streets.

Table 6-2. Downtown Neighborhood Analysis

Mass Transit	One stop on Nimitz Highway between Bishop and Fort Street Mall. All major buses arrive and depart from Downtown through every street.
Mixed Land Use	Yes. Small mix of residential condominiums.
Parking Resources	Chinatown and Downtown share a wealth of parking resources. Every parking space is highly sought after. Many commute in buses or carpools.
Population Density (1 mile radius)	Living Population: 35,500 / sq. mi. Daytime Population: 85,000/ sq. mi < <a href="http://www.loopnet.com/xNet/MainSite/Listing/Profile/PrintAllSE.aspx?LID=15335154">http://www.loopnet.com/xNet/MainSite/Listing/Profile/PrintAllSE.aspx?LID=15335154</a> >
Street Width (40-60 ft)	60 at cross streets, 80 feet on mauka-makai streets
Building Types	High Density office buildings with Parking structures at grade. Buildings are older built to the ROW. Newer buildings are set back
Amenities	Fort Street Mall, Financial and Business Capital, Chinatown, Bars, Restaurants, Aloha Tower Marketplace, Public Squares
Visual Inventory	Historic Buildings, Commercial Towers, Public Squares, Hidden Pedestrian alleys and walks, Trees



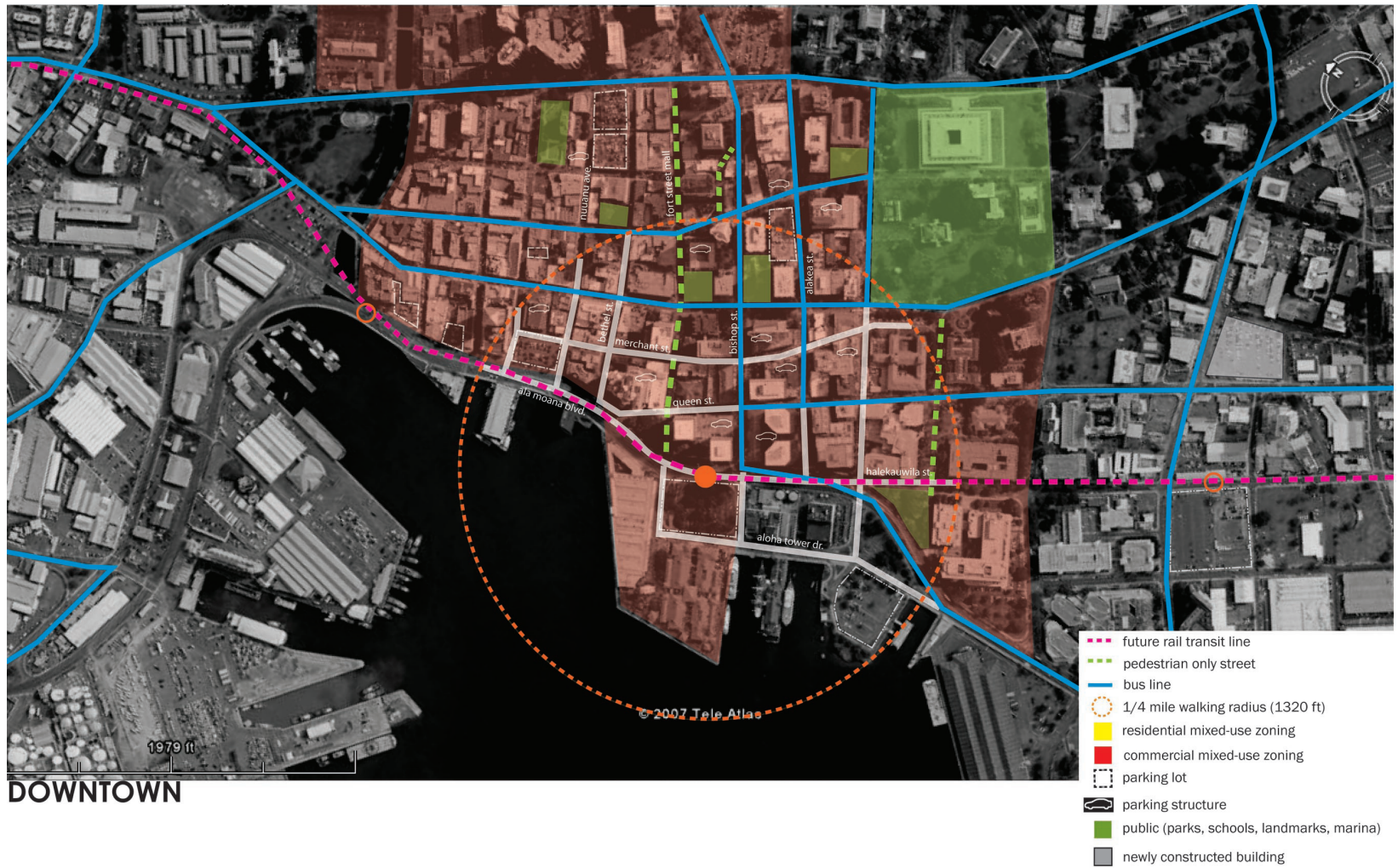


Figure 6.3. Downtown Graphic Analysis

## Kaka'ako/Ward

Kaka'ako and Ward are underdeveloped light industrial communities that are geared for redevelopment and considerable growth in the next 20 years. These two communities benefit the most in creating a new, walkable, mixed-use residential neighborhood, the key ingredients for a Shared Space Street to be successful.

Table 6-3. Kaka'ako/Ward Neighborhood Analysis

Mass Transit	Two stops Bus lines surround each transit station
Mixed Land Use	Medium-density Mixed use-residential surrounded by High-density Business mixed use
Parking Resources	Empty lots are used for parking. As development occurs, the city has established planning policies to increase multi-leveled parking, reduce on grade parking, and build to the street.
Population Density (1 mile radius)	Living Population: 22,825/ sq. mi. Daytime Population: 74,589/ sq. mi < <a href="http://listing.loopnet.com/15391579">http://listing.loopnet.com/15391579</a> >
Street Width (40-60 ft)	50-60 ft
Building Types	Old Warehouses. Existing residential buildings are 4-8 stories and face the street.
Amenities	Ward Shopping UH Medical Center Cancer Research Center
Visual Inventory	Eventually. The site is lacking at the moment.





**KAKA'AKO/WARD**

- future rail transit line
- pedestrian only street
- bus line
- 1/4 mile walking radius (1320 ft)
- residential mixed-use zoning
- commercial mixed-use zoning
- parking lot
- ▭ parking structure
- public (parks, schools, landmarks, marina)
- newly constructed building

Figure 6.4. Kaka'ako /Ward Graphic Analysis Map

## Ala Moana

Ala Moana is home to the largest open air shopping mall in the United States. It is also the largest shopping mall in Hawaii. Ala Moana also borders Ward which has a large number of high rise luxury condominiums. Ala Moana's walkable radius from the future transit stop is limited due to underdeveloped light industrial areas and a red-light district.

Table 6-4. Ala Moana Neighborhood Analysis

Mass Transit	There will be one stop, at the center of Ala Moana Shopping Center. Ala Moana Shopping Center acts as a large Bus Transit center servicing central Honolulu's Primary Urban Center.
Mixed Land Use	No. High rise business or commercial offices and high rise luxury condominiums. Lower residential areas Mauka to the transit stop are mixed one to three story single family homes and apartment buildings.
Parking Resources	Ala Moana Shopping Center stands as a great parking resource for the area.
Population Density (1 mile radius)	Living Population: 43,121 Daytime Population: 65,069 < <a href="http://listing.loopnet.com/15289466">http://listing.loopnet.com/15289466</a> >
Street Width (40-60 ft)	Side streets: 55 feet Kapi'olani Ave, Ke'eaumoku Street: 80 feet
Building Types	Old low rise buildings, new high rise towers, warehouses. Most are set back from the street.
Amenities	Ala Moana Shopping Center, Hawai'i Convention Center, McKinley High School, Wal-mart, Local restaurants, bars, and stores.
Visual Inventory	Red Light District, Kapi'olani Ave is a tree-lined street.



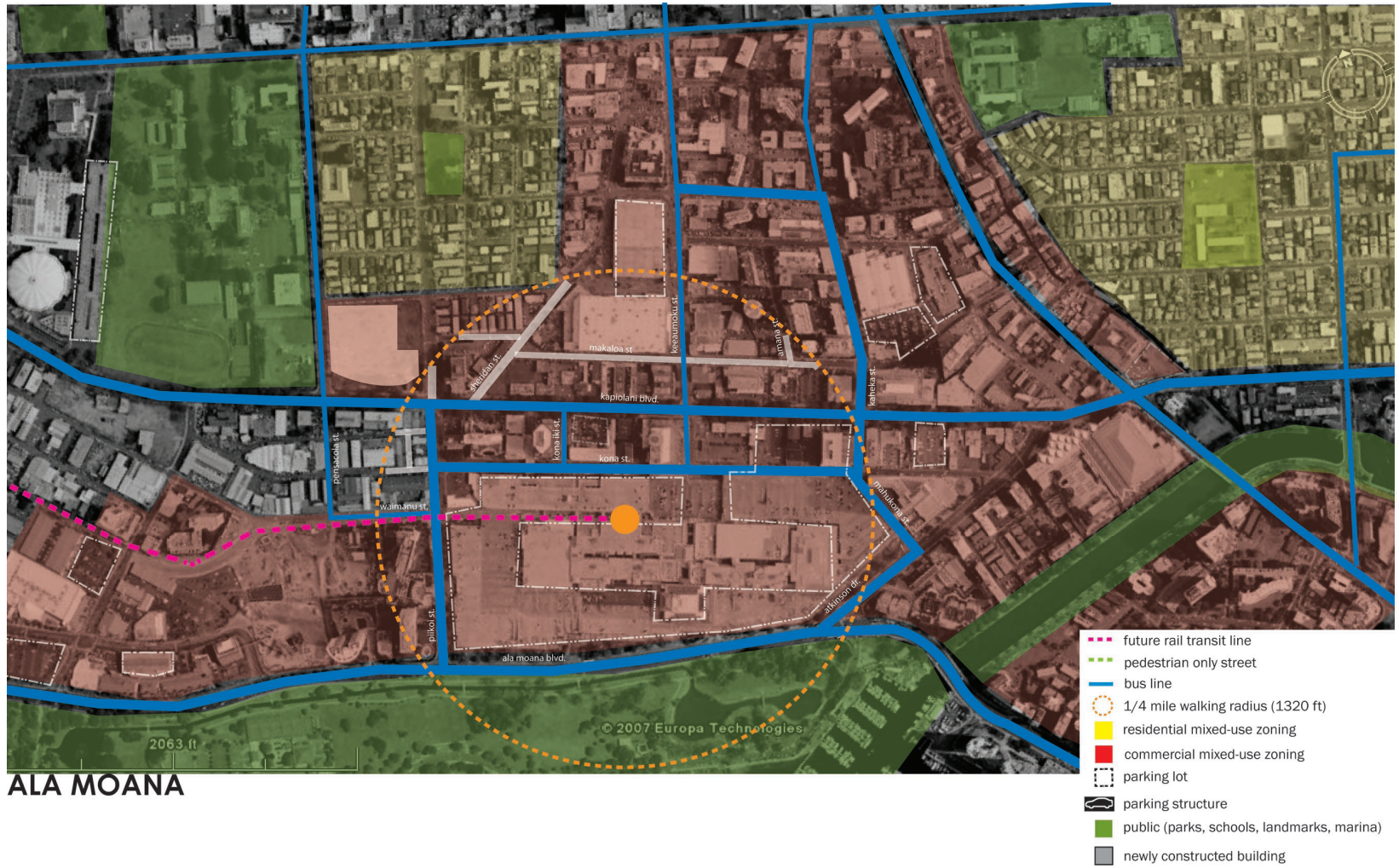


Figure 6.5. Ala Moana Graphic Analysis Map

## Waikīkī

Waikīkī's population density and old street grid and alleys make it a great place for a Shared Space. As a tourist Mecca the pedestrian density is already great. Waikiki also has a high number of local residents living north of Kūhiō Avenue making Waikīkī a natural choice.

Table 6-5. Waikīkī Neighborhood Analysis

Mass Transit	In 2020 a spur line as a part of the second phase that include the extension to the UH Manoa campus. Bus Tours and Tourist Trolleys take people in and out of Waikīkī
Mixed Land Use	Yes. The properties address the street with a high number of retail and restaurant establishments. Beyond Kūhiō Avenue is high density mixed-use residential properties with various offices, retail, stores, and restaurants sprinkled within.
Parking Resources	Parking is at a premium here, but the wealth of parking resources is very high in order to support the tourists and workers. When the rail enters, it should relieve space initial taken up by parking for other uses.
Population Density (1 mile radius)	Living Population: 51,592 Daytime Population: 71,987 < <a href="http://listing.loopnet.com/15331930">http://listing.loopnet.com/15331930</a> >
Street Width (40-60 ft)	40-80 feet
Building Types	Hotel high-rises with retail at the ground level activate the edges along the street. Hotels generally have an active front and a service-related back.
Amenities	Waikīkī Beach, High Quality Restaurants, Variety of Shopping stores, centers, Business Offices, Tourist Events and activities, such as Sunset on the Beach, Kapi'olani Park
Visual Inventory	High population density, variety of shops, street performers. Emphasis on pedestrian walking Kalākaua Avenue and Kūhiō Avenue



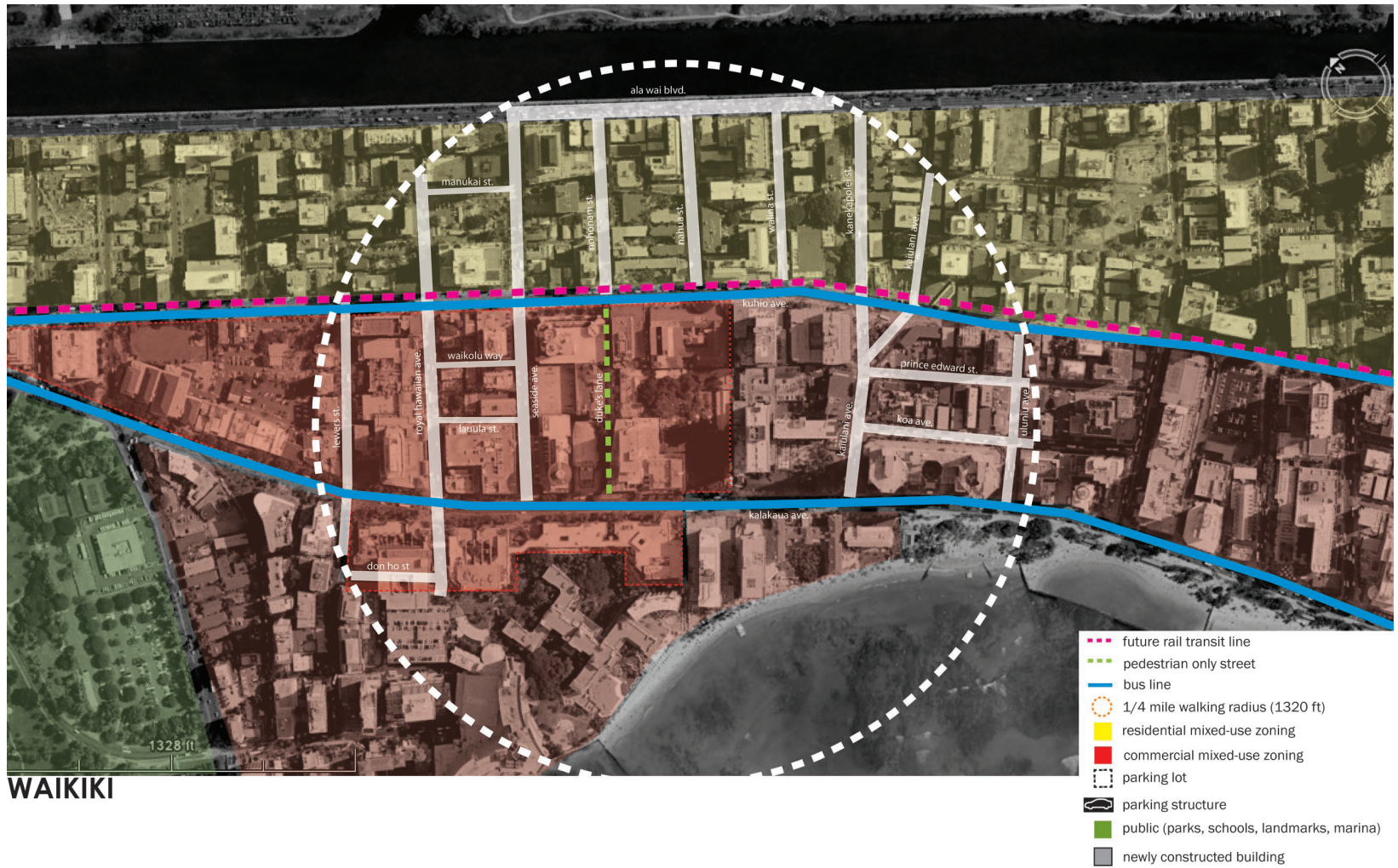


Figure 6.6. Waikīkī Graphic Analysis Map

## Makiki

Makiki is a high density bedroom community for Downtown Honolulu and neighboring industries. Makiki is known for having a lack of park space per person based on the U.S. average. Within the community that extends from the H-1 freeway to the mountains is a small neighborhood commercial center on busy Wilder Avenue. Makiki's density and need for public space at their small community commercial center makes it a viable place for a Shared Space to improve the quality of street life.

Table 6-6. Makiki Neighborhood Analysis

Mass Transit	No; 2 Bus Lines. One line circles the neighborhood and one goes through the neighborhood.
Mixed Land Use	No. Medium to High-density residential. As the only commercial area in the community, it stands of great importance to make it a place that people want to be at.
Parking Resources	Only on-street parking and residential complex parking which has over exceeded its capacity. Parking has greatly
Population Density (1 mile radius)	Living Population: 45,000 <Census Tract Honolulu 2000>
Street Width (40-60 ft)	Minor side street: 45 feet Side streets: 55 feet Wilder Ave: 70 feet
Building Types	Low Rise Apartments, One to Two story single family homes, Small commercial corner stores
Amenities	Supermarket, Café, Restaurants, Church
Visual Inventory	Old Homes, Historical Church, Good





Figure 6.7. Makiki Graphic Analysis Map

## University

The University of Hawai'i at Mānoa (UHM) is the flagship campus for the only state funded university in Hawaii. Attendance each year stands at 18,000 and growing. Due to the limited space for on-campus housing, many commute to the University each day from all over the island. Its effect on traffic is greatly felt when school is in session and is one of the main reasons for extending the rail line to the Manoa campus. The intersection of University and King is the college town center of the University of Hawai'i.

University was intended to be the final stop in the initial phase however due to budgeting concerns it was left out and will be added after the first phase is complete.

Table 6-7. University Neighborhood Analysis

Mass Transit	Yes in 2020. Location of stop is under debate.
Mixed Land Use	The intersection is mainly commercial but is surrounded by medium density apartments and single family homes
Parking Resources	UHM has a high number of parking structures but the surrounding communities are crunched with parked cars because there are a high number of commuters. With rail, demand will decrease therefore increasing land for on-campus housing expansion.
Population Density (1 mile radius)	Living Population: 47,005 Daytime Population: 55,570 < <a href="http://listing.loopnet.com/15191443">http://listing.loopnet.com/15191443</a> >
Street Width (40-60 ft)	50 feet at side roads, 100 feet at major thoroughfares such as King Street, Beretania Street, and University Avenue.
Building Types	Older buildings built to the street edge. 2-3 stories with some reaching 6 stories.
Amenities	UHM Campus, Mo'ili'i Community Center, Cafes, Restaurants, Bars Star Market, Japanese Cultural Center
Visual Inventory	Cars, Strip Malls, Lacking



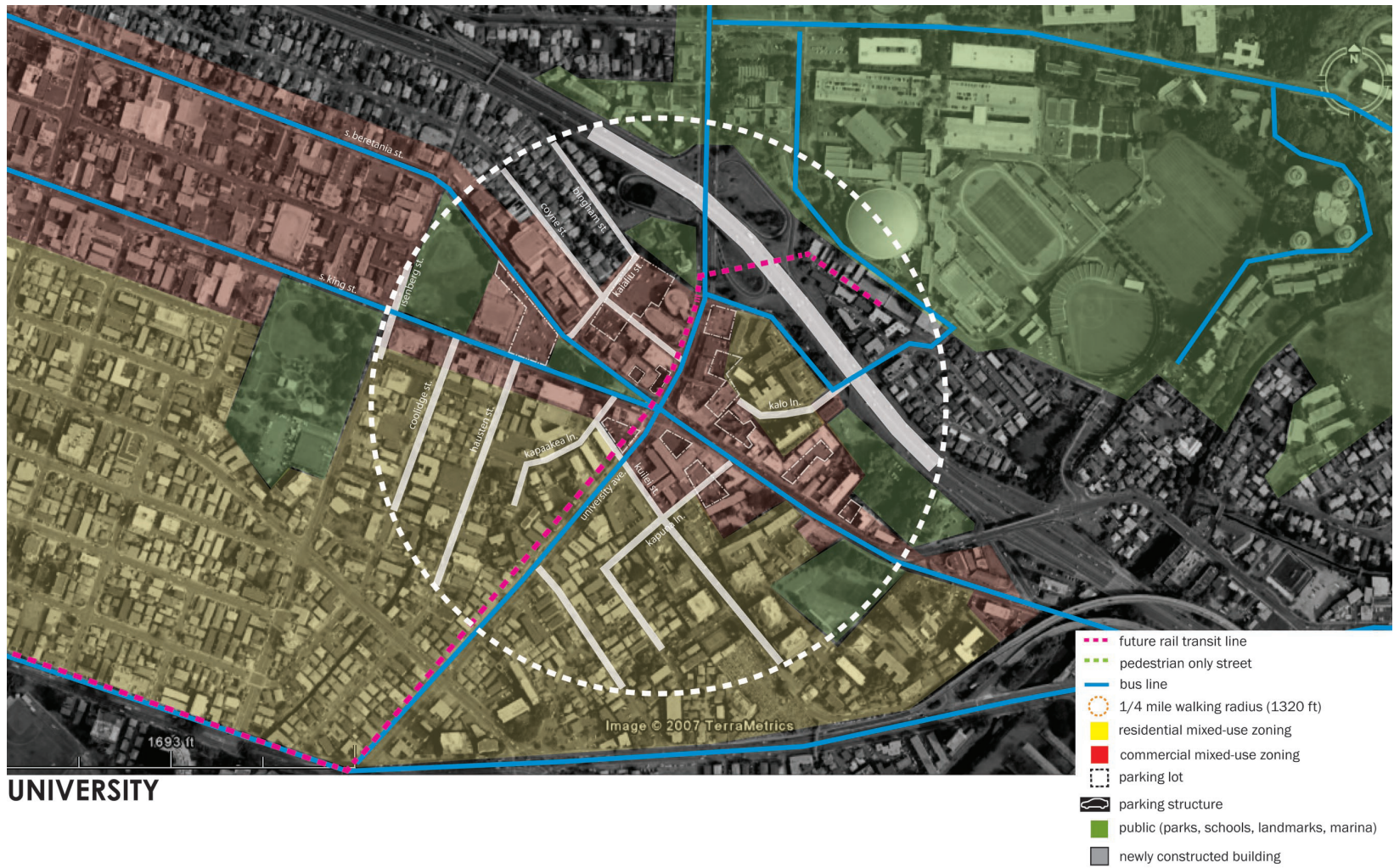


Figure 6.8. University Graphic Analysis Map

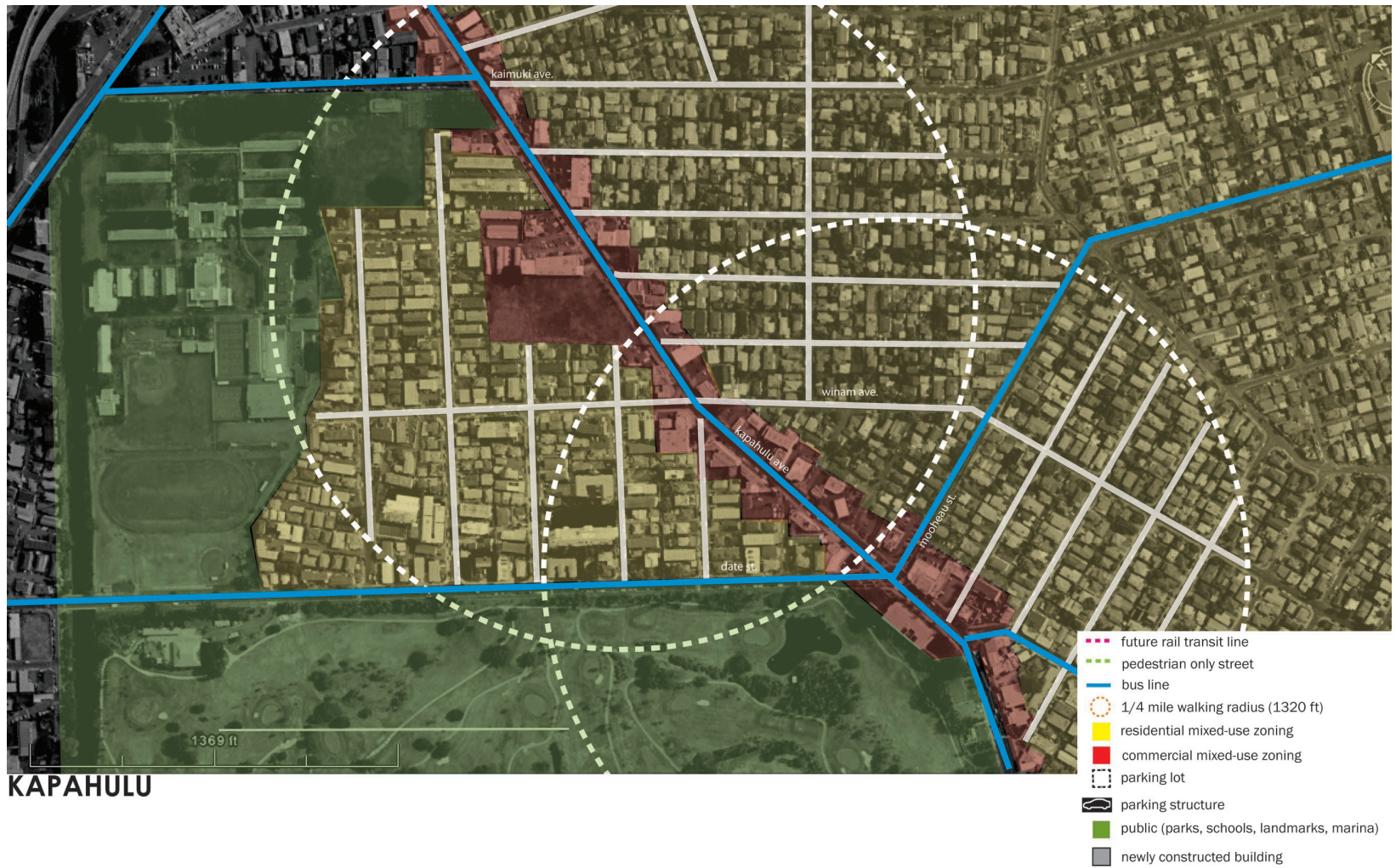
## Kapahulu

Kapahulu Avenue has great resources for making a Shared Space successful. Kapahulu is a very busy street since it is the main throughway to the H-1 freeway from Waikiki and at times dangerous for pedestrians to cross. Kapahulu has the ingredients but needs to build to the street and find a solution to the high traffic.

Table 6-8. Kapahulu Neighborhood Analysis

Mass Transit	No Rail, 3 bus lines on Kapahulu
Mixed Land Use	Kapahulu is an old main street that has a great variety of popular restaurants, bars, café's, and other services mixed with residential.
Parking Resources	Development has maintained a typical strip mall form. Buildings were built away from the street or perpendicular to the street to make room for vehicular parking. Parking can be difficult at times.
Population Density (1 mile radius)	Total Population: 14,665 < <a href="http://listing.loopnet.com/15170763">http://listing.loopnet.com/15170763</a> >
Street Width (40-60 ft)	60-70 feet
Building Types	Older one to two story commercial buildings with older residential housing and multi-storied buildings. There are blocks with buildings that are built up to the street, but across from these blocks are typical strip mall developments.
Amenities	New Safeway complex, Popular Restaurants, Bars, Cafes, Banks
Visual Inventory	Historic Buildings Mixed with Strip Malls, Ala Wai





**KAPAHULU**

Figure 6.9. Kapahulu Graphic Analysis Map

## Wai'alae

Wai'alae is an older bedroom community for the Waikīkī and Honolulu working centers. The homes have a unique character and vegetation is full grown, creating wonderfully scaled streets. Traffic though is an issue and kids seldom use the street for playing. The Wai'alae town center has a variety of public and private services for the neighborhood, making it a popular place for community involvement. This area holds great potential for a Shared Space because it has maintained its historical character along the street and has active storefronts. Recently, the community has redesigned Wai'alae Avenue at the town center to be more pedestrian friendly by widening sidewalks and adding nice paving and trees.

Table 6-9. Wai'alae Neighborhood Analysis

Mass Transit	Three Bus Lines circle Wai'alae Town Center
Mixed Land Use	Mostly low-rise apartments and single family homes. Wai'alae Ave has a mix of commercial and residential.
Parking Resources	Parking is inside the block and buildings are built up against the street.
Residential Density (1 mile radius)	Total Population: 27,836 Daytime Population: 29,392 < <a href="http://listing.loopnet.com/14714179">http://listing.loopnet.com/14714179</a> >
Street Width (40-60 ft)	50 to 60 feet
Building Types	Older one to three story buildings built up to the right-of-way, Raised Apartment Complexes, Business Complexes
Amenities	Recent pedestrian improvements on Wai'alae Ave., Many popular cafes, restaurants, and other services, School, Church, Community Center.
Visual Inventory	Historic Buildings and Theatre, Pedestrianized main street, Alternative Businesses



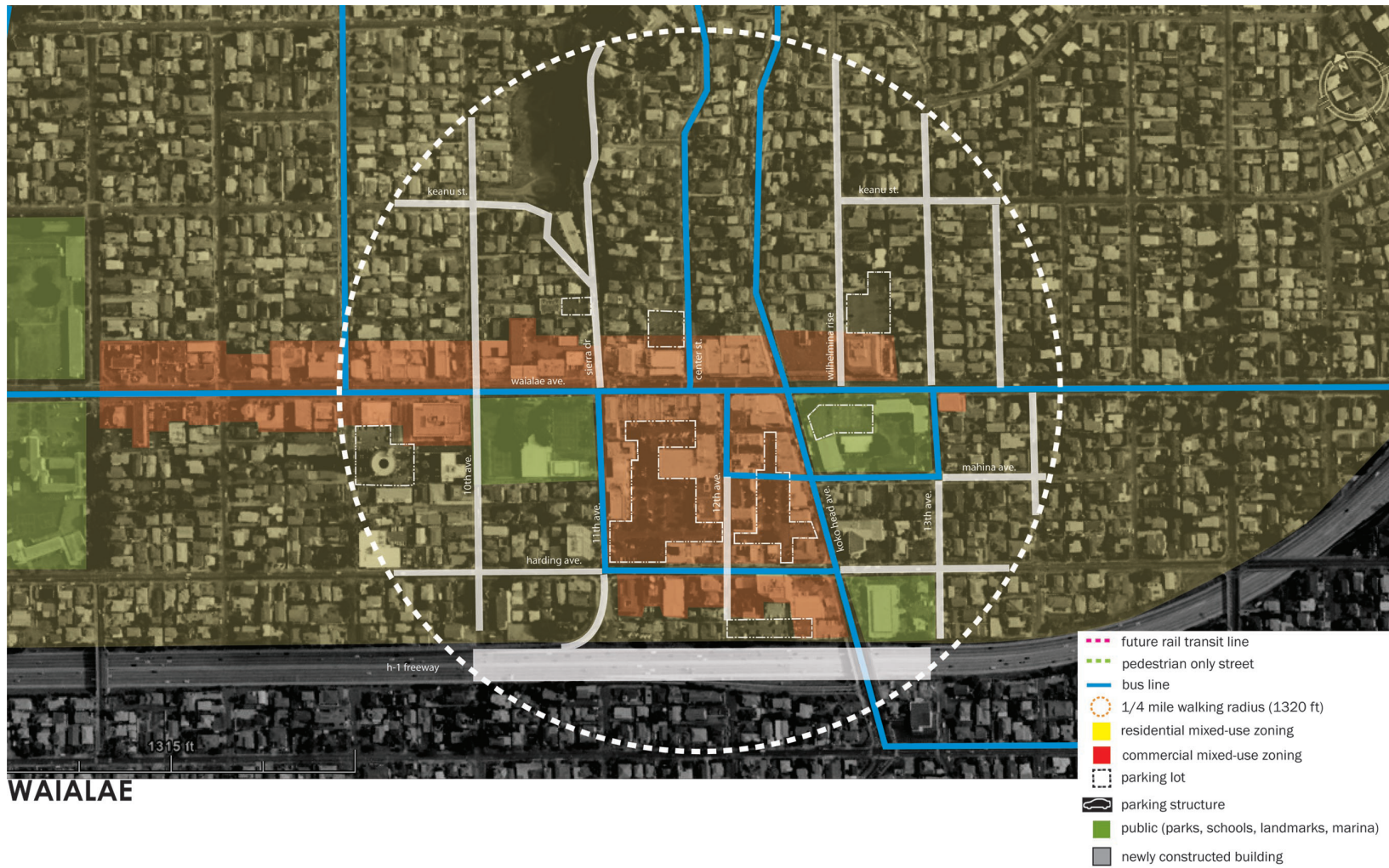


Figure 6.10. Wai'alae Graphic Analysis Map

## Diamond Head

Monsarrat goes through a low density residential community. There is one block of older one-story buildings that serves the community through restaurants, markets, a church and other services. Recent tall buildings have been set back from the street and rotated from the street, creating loose edges. Couple the fact that there is a very low residential density; it becomes much harder for a Shared Space street unless there are more activities closer to the street.

Table 6-10 Diamond Head Neighborhood Analysis

Mass Transit	No rail, Two Bus Lines
Mixed Land Use	No
Parking Resources	On-Street Parking Only
Residential Density (1 mile radius)	Total Population: 43,233 Daytime Population: 46,705 < <a href="http://listing.loopnet.com/15170763">http://listing.loopnet.com/15170763</a> >
Street Width (40-60 ft)	60-70 feet.
Building Types	Single Family Home Small Neighborhood Restaurants and Shops
Amenities	Corner Store Restaurants Church
Visual Inventory	Quaint Upper-class single family housing neighborhood. Trees, Diamond Head





Figure 6.11. Diamond Head Graphic Analysis Map

## Site Selection Matrix for a Shared Street Analysis

The matrix (Table 6-11) compares the urban form of ten neighborhood centers. The following are summaries of each site from lowest to highest:

### 1. *Diamond Head Monsarrat Avenue*

This neighborhood had the lowest score of each neighborhood. It maintained a decent street width and a good selection of retail, public, and private services, but the retail shops and stores are set back by 20 or more feet from the street edge destroying an otherwise good street scale. The single family residential homes serve as another disadvantage making population density very low. Future mixed-use infill development along the street would solve this problem making Monsarrat Avenue a viable site.

### 2. *Makiki – Wilder Avenue*

Makiki has a high proportion of medium and high-density residential for a car-oriented population which makes parking very hard to come by. Wilder Avenue borders on being too wide for a typical Shared Space and serves as a divider between mauka and makai. However, the side streets that cross Wilder have high potential for a Shared Space as it receives localized

traffic in comparison to Wilder.

### 3. *Kapahulu Avenue*

Kapahulu, as the gateway to Diamond Head, Waikiki, and University is a very busy four lane road in need of some relief. The narrow sidewalks and number of jaywalkers and bicyclists getting injured raise concern. There is a great mix of local restaurants, shops, and other neighborhood amenities. There are a few setbacks that need to be addressed. First is the strip malls and drive-thru fast food restaurants and second is the neighborhood's low population density. The strip malls and drive-thru's damage the streets "spatial dynamic". Pushing buildings away from the street makes it a much more dangerous pedestrian environment. Infilling these open gaps with new storefronts, green areas, or other people gathering activities would need to be created before a Shared Space can work.

### 4. *Wai'alaie Avenue*

Wai'alaie Avenue's "Top of the Hill" neighborhood center would be perfect for a Shared Space. All it needs is a higher population density, or at least more residential mixed-use at its center.

### 5. *Downtown Honolulu*

Downtown needs a larger residential population. Some new residential towers are being constructed along Beretania Street. The rest of the residential properties are at the outskirts of downtown. Whether this is a result of land prices or the zoning code, both should be reevaluated since downtown has all the amenities for a pedestrian-friendly neighborhood.

#### 6. *Ala Moana*

Ala Moana has a large shopping center, access to multiple alternative transportation options, a large oceanfront park, and lots of other residential, commercial amenities and services. Ala Moana Shopping center however consumes most of the ¼ mile walking radius.

#### 7. *University Avenue*

University Avenue is a victim of being located next to the H-1 freeway and being commuter University. University Avenue is such a major throughway to Mānoa Valley that narrowing it could cause harm to traffic in surrounding neighborhoods. Side roads such as Coyne Street, however, could serve as new centers for a pedestrian friendly college town.

#### 8. *Kaka'ako/Ward*

Kaka'ako and Ward are underdeveloped neighborhoods that are planned to be a smart growth community serving a new biomedical and technology industry. Although Kaka'ako lacks the population density, mixed-use development, and street and amenities, its future would suggest that these will be developed. Shared Spaces could serve as an additional street typology further emphasizing the pedestrian-friendly neighborhood the city envisions.

#### 9. *Waikīkī*

Waikīkī has the mixed-use developments, population density, street widths, and mass transit infrastructure to have a successful Shared Space almost anywhere.

#### 10. *Chinatown*

With the exception of a higher living population, Chinatown has the urban form suitable for a Shared Space to be beneficial to the neighborhood.

## **Grading Matrix**

### *Mass Transit*

3-5 bus lines +0.5

5+ bus lines and/or other modes. +1

### *Mixed-Use Buildings*

Scattered/Low Density +0.5

Majority/Medium Density +1

### *Parking Resources*

Parking Lots +0.5

Parking Structure +1

### *Population Density*

35,000 - 45,000 people/sq.m. radius +0.5

45,000+ people/sq.m. radius +1

### *Street Width (40-60 ft)*

Some Streets +0.5

Majority of Streets +1

### *Building Types*

Some retail street frontage +0.5

Majority have retail street frontage +1

### *Amenities (Leisure/Pedestrian attractions/Workforce Centers)*

Scattered +0.5

Many and walkable to +1



SITE SELECTION MATRIX FOR FUNCTIONAL SHARED STREET

	Chinatown	Downtown Honolulu	Ward Kakaako	Ala Moana Kapiolani Ave.	Waikiki	Makiki Wilder Ave	University Ave.	Kapahulu Ave.	Waialae Ave.	Diamond Head Monsarrat Ave.
Mass Transit Links	●	●	●	●	●		●	○	○	
Mixed Land Use	○	○	●	○	●		●	○	○	
Parking Resources	●	○	●	●	○		○	○	○	○
Population Density	●	●	●	●	●	○	●			
Street Width (40-60 ft)	●	○	●	○	●	●	○	○	●	○
Building Types	●	○	●	○	●	○	○	○	○	
Amenities	●	●	○	●	●	○	●	●	●	○
Other										
Total	6.5	5	6.5	5.5	6.5	2.5	5.5	3.5	4	1.5

- Possible - +0.5
- Future Potential
- Suitable - +1
- Not Suitable - 0

Table 6-11 Site Selection Matrix for Functional Shared Street

# Pauahi Street Overview



Figure 7.1 Pauahi Street, Honolulu, Hawaii

Pauahi Street  
Chinatown, Honolulu  
Length: 1200 feet  
Width: 50 feet

## **Background/Context**

Next to downtown Honolulu, Chinatown is home to the largest number of historic buildings maintaining an urban form pre-dating the personal automobile. Space requirements for the automobile however have squeezed pedestrian space to very narrow sidewalks. Chinatown has a good mix of retail, restaurants, office, and other services. The location next to downtown Honolulu supports a high number of users during the

day. However at night most of the population leaves downtown with the exception of undesirables. Though the number of people living in Chinatown is mostly compacted to high rises mauka of Chinatown, recent reinvestment in the area and crime safety programs have developed encouraging people to reinvest in the area.

### **Quality of Street Life**

Street life fluctuates between residents, workers from downtown Honolulu, students from Hawai'i Pacific University, and artist visitors. Pauahi Street is made up of a mix of one to three-story historical structures from the early and mid 20<sup>th</sup> century. These buildings are built up to the sidewalk that define the street edge and create street space that is comfortable. Pauahi Street has direct access to a public park, three parking structures, Nu'uuanu River, Restaurants, Theaters, Art Galleries, Residential Towers, and a Community Center.

### **Why Pauahi Street?**

Looking at Chinatown, prime open spaces are typically hidden in the center of blocks, e.g. Maunakea Marketplace, and away from the street. This is perhaps a response to the limited sidewalk space along the street and the strength for security and management since there are a high number of undesirables that live here. There are a couple pedestrian-only streets existing in Chinatown already. The Kekaulike Mall

is home to a large produce and food market that serves the neighborhood. The other pedestrian-only street, Fort Street Mall, dissects downtown Honolulu but doesn't directly serve Chinatown. Maunakea Street is the traditional shopping street that serves as the cultural and business center of Chinatown. Both Maunakea Street and Kekaulike Mall seem to be quite successful, working well with its surroundings and culture, therefore serving as supportive evidence for a Shared Space design in its vicinity.

Since Pauahi Street is strategically located less than a 1/4 mile walking distance of the Hotel Street Bus Mall, the future Mass Transit station, and the high-density apartment district to the north, it has the most potential. Pauahi is a minor East-West Street that begins at River Street and ends at Fort Street Mall. Pauahi Street could act as a neighborhood spine for community activities since it also crosses through the heart of the Chinatown Art District, Hawai'i Theater and Chinatown's main strip, Maunakea Street. Prior visits have shown that when special activities occur at any of these activity generators, people are squeezed within a narrow sidewalk. Redesigning Pauahi into a Shared Street could enhance the activities and functions being undertaken here.

Despite Pauahi Streets optimal location as the only quiet east-west road, a mid block street to the high rise residential district and historical Chinatown, and direct access to five districts, Pauahi Street has many urban physical and quality issues that prevent it from functioning as an asset to the community.

### *Community Needs*

- A need for public space outside private property
- Adjusting to future growth
- Adjusting to mass transit

### *Street Design*

- Sidewalk too narrow
- Removing sidewalk amenities based on fear

### *First Friday and Other Events*

Street events, such as First Friday and Chinese New Years are great events to introduce the population to new restaurants, shops, galleries, and other services, but the success of these events are only as successful as the streets they are held in. If the existing streetscape and spatial definition of the street do not share a level of quality and sensibility preferred by its users then First Friday will simply be an isolated event that vendors rely on to make the month's rent. Creating Third Thursday, and Second Saturday events will not make the quality of street space any better. It's like pumping air in a raft with a hole in it. Further investment into public facilities and infrastructure is needed to elevate Pauahi Street and the whole district to move beyond a "once-a-month venue" and into a 24-hour community and daily local destination.

## **Why will it work on Pauahi Street and why is it needed in Honolulu?**

Honolulu hosts a variety of tangible and intangible reasons why the concept of Shared Space will not only work here, but is needed here.

- *Lifestyle:* Hawai'i as a whole shares a lifestyle that is friendly, personable
- *Culture:* People living in Chinatown come from countries and urban cities where the public realm serves public and semi-public needs since housing is typically cramped or overcrowded, such as the Singaporean Shop House. Many Asian countries use the street as a place for trade and commerce in the likes of open markets, storefront vendors, hawker stands, etc.
- *Environment:* Our year round warm climate make outdoor activities first nature and situated in great shade or coverage can be much more comfortable than indoors.
- *Future Growth:* Chinatown, the nearest urban area to downtown Honolulu will see continued growth and economic changes through time. There is already a high residential population within

walking distance living in high rises that are limited in urban recreational choices. Fort Street Mall only serves the central business district, while Pauahi serves a larger variety of people from a wide background of education, economic status, and culture.

- *Urban Space Quality:* As baby boomers, which have more money than their parents, retire, they will seek communities that have walking access to a high number of amenities, with good pedestrian and transportation infrastructure. Meanwhile, young professionals, who have lived in the suburbs as a child are seeing value in walkable communities and finding ways to avoid traffic gridlock.
- *Community center as public space:* Public Spaces in Honolulu include shopping malls or shopping centers (Kahala Mall, Mililani Shopping Center), squares (Bishop Square) and streets (Kalākaua Street/Waikiki Beach). The problem with shopping centers, other than the obvious hours of business is that it's on private property, often limiting the type of activities that make a public space "public" and memorable. Bishop square is the same. Kalākaua Avenue is one of the few streets that have the great street quality

and source of memory and center of community activities. There needs to be more places like this in Honolulu's communities.

- *Risk:* We need to fight against our litigious society to encourage for projects that add value and, in return, individual responsibility for our actions. What we have lost in the public realm can very well stymie the independent thinking, creativity, and responsibility of our future generations. A Shared Space can become the catalyst where memories and experiences cultivate ideas, values, and an intuitive curiosity of another way the world works.



## **PART II: FORMING THE SHARED SPACE ENVIRONMENT**

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# Forming the Shared Space Environment

*“A characteristic common to all optional, recreational, and social activities is that they take place only when the external conditions for stopping and moving about are good, when a maximum number of advantages and a minimum of disadvantages are offered physically, psychologically, and socially, and when it is in every respect pleasant to be in the environment.”<sup>1</sup>*

Jan Gehl

A Street is an abstract idea. Only when it is placed within a neighborhood with people, buildings, and activities does it begin to become a place with “both/and” qualities. “Both/and” qualities are defined as spaces that exhibit a dual purpose of function and emotional connectivity. Every space emits a psychological response or experience based on the people, buildings, activities, and context. These variables develop an experience that psychologically shapes to be good, bad, or indifferent. Likewise, a Shared Space on Pauahi Street without analysis and certain street edge improvements may not succeed in its purpose or maximize its potential. Therefore, a Shared Space design needs a contextual solution as well.

The authoritative works of urbanists and urban designers in the last forty years have focused on the social psychology of public spaces. Authors such as Jane Jacobs, William H. Whyte, Jan Gehl, Kevin Lynch, and Daniel Appleyard

created a foundation of quantitative and qualitative research on the most basic human needs and interactions in public space. Their research proves to be timeless being just as applicable today as it was in the 1970's and 1980's. Since a Shared Space is designed for pedestrians as the primary user, it is only appropriate that attention to design should be placed as such. Therefore, these works will be the prototypical urban design

framework in support of strengthening and maintaining urban life on Pauahi Street. The framework is of a nature that it may be used as a reference for any future Shared Space designs.

### **The Framework**

The framework will look at why each of these activities is necessary to the success of public spaces and provide examples of a hierarchy of examples from good to bad. Recommendations would therefore establish a rationale, priority, and suggestion for preferred street design solutions to make Pauahi Street an example of urban living and experiences for Honolulu.

The following are basic pedestrian activities that will be explored. Their order represents a sequence where the proper design of one leads to the next activity. For example, in order for hearing, talking, dancing, and singing to occur, the space must be suitable for sitting, walking and crossing, looking, and removed of vehicular hindrance.

Places for Vehicles

Places for Looking

Places for Walking

Places for Crossing

Places for Sitting

Places for Hearing, Talking, Dancing, Singing

## Places for Vehicles

Jan Gehl, in his book *Life Between Buildings* states that Woonerf Streets, or Shared Spaces are “by far the best solution with regard to safety and the feeling of security” and that “Woonerf principles of slow vehicular traffic in predominantly pedestrian and bicycle streets represent a remarkable improvement compared with the situation commonly found in city streets”.<sup>2</sup> The personal automobile, however, is a necessity for economy, safety, and leisure. Despite being perceived as a negative influence to the design of public space for the pedestrian, it will forever be ingrained in our society and since Shared Space gives equal use to various modes of movement, automobiles should be designed as an integral part of the Shared Space environment but as a secondary user of the street.

Separating the pedestrian and vehicle or removing the car from the city altogether has only been successful in a few locations, one being Venice. The United States has focused typically on separating vehicles and pedestrians for the efficiency of high speed automobile traffic. Examples include Radburn, New Jersey, which creates separate networks for automobiles and pedestrians, the pedestrian mall, and ribbon parks.

As a pedestrian, one has the freedom to sit and move in any direction in public space but once a pedestrian enters a car it enters a world of rules that should not be broken or

strayed from. For example, a driver must drive on the right side of the road at a certain speed and park in a designated parking spot. Therefore, giving a driver the freedom that a pedestrian would receive in a Shared Space would cause considerable problems to the functioning of the street. Shared Space is rightfully a dance between the pedestrian and the vehicle. Therefore, in order to control and support the vehicle without degrading Shared Space quality, unique solutions must be created regarding separation, intersections, and parking.

### Separation

In concept, a Shared Space should be free of separation from vehicle and pedestrian but, case studies show that a sense of separation still exists in some form. There are places where separation is necessary. Examples include places for parking to define how close a car can get out of the preferred “through zone” and areas fronting a building entrance. It is customary for a driver to park as close to their destination as possible and if the driver had the choice they would drive up to the front door. This situation comes in conflict with building exiting and encouraging activity at the street edge. The goal of separation is to make it difficult to decipher the vehicular zone from the driver’s perspective. This will inevitably slow the vehicle down and control the whims of the driver while providing any and every space of the street to be pedestrian space anytime a car is not occupying it. Typical elements of separation include the bollard and street light. Integrating softer edges such as trees,

bushes, and planters also blur the line of separation have while providing a more dynamic and humanistic street environment.

## Parking

A parking space and the area it takes to access it consumes on average 350 square feet per vehicle, this is equivalent to a small residential studio. Parking is one of the key culprits of space consumption in every city and is in absolute conflict with the pedestrian-oriented environment Shared Space. Parking is a necessity to commerce and important to business owners, but its inappropriate scale to the pedestrian and solo-spatial function conflicts with the concept of Shared Space. Therefore, it is important to find ways to balance the needs of drivers and pedestrians without turning the whole street into a parking lot. There are a few ways to overcome this.

The preferred choice is to not have parking on the street and only places for loading. This could only happen if parking is available in subterranean structures along the street or in-filled in the center of a block and if the number of Pauahi Street users lived within walking distance or used the mass transit was large enough that street parking had negligible effect on business. Another choice is to create opportunities where parking spaces can have alternative uses during off peak times, such as playing spaces for children, transient vendors, and café seating.

The following are recommendations for preferred parking locations, groupings, and orientations based on the research of Jan Gehl, case studies, and Design Guidelines for North Terry Avenue.

- “When cars are parked at the entrance, only cars will be found in the street.”<sup>3</sup> Therefore parking should not be located in front of building or storefront entrances. Lengthening the distance from the car and store entrance will increase the opportunities for chance meetings and a larger pedestrian presence on the street.
- “When cars are parked at the curb, people as well as cars will be found in the street. Greater opportunities for neighborhood contacts will materialize.”<sup>4</sup>
- Angled Parking is found to slow vehicular traffic better than parallel parking, but Parallel parking is easier to use for alternative activities, such as transient vendors, mini concerts, and café seating.
- “No more than 12 parking stalls or 3 groups per block should be allowed. The minimum dimension between groups should be 60 feet.”<sup>5</sup>

## Intersections

There are three types of intersections used in a



Shared Space: Roundabout, Open Intersection or Plaza, and Raised Intersection. The Roundabout is typically used at four-way intersections. As prior research has shown, some cities have successfully used roundabouts to control high volumes of traffic as a Shared Space and proved to be more efficient than a four-way stop light intersection. For narrower right-of-ways like Pauahi Street, small roundabouts have been used with equal success. In one example, the Seven Dials project in central London by Ben Hamilton-Baille, the leading Shared Space expert in England, has created a small roundabout with a statue that encourages people to use it to sit, watch, or meet.

The Open Intersection or Plaza is used at complex intersections where two or more roads meet. Hans Monderman used this technique at deBrink, in Oosterwolde, Netherlands to turn a complicated intersection into a public square. An open intersection can also work in smaller right-of-ways at one-way intersections, such as those on Pauahi Street. What results is a Plaza, similar of those in Europe where drivers must negotiate through without the assistance of traffic signals or signs.

The Raised Intersection has not been used in Europe because most Shared Spaces exist in dense urban areas where speeds are typically slower and streets designed in the pre-automobile era. These streets commonly have people walking along or in the middle of the street. It has, however, found success in West Palm Beach, Florida. The Raised Intersection is a compromise between a typical intersection and an Open Intersection and serves as an important traffic calming device

to the American driver who is use to speeds above 25 miles-per-hour and provides a transition for the driver entering a different driving environment like a private driveway.

# PLACES FOR VEHICLES

## Separation



PREFERRED

- Pro
- Pedestrian-scaled
  - Separation **ambiguously** defined.

- Con
- None



STANDARD

- Pro
- Pedestrian-scaled

- Con
- Separation **occasionally** defined.



INSUFFICIENT

- Pro
- Pedestrian-scaled

- Con
- Separation **clearly** defined with Roll-over curb.

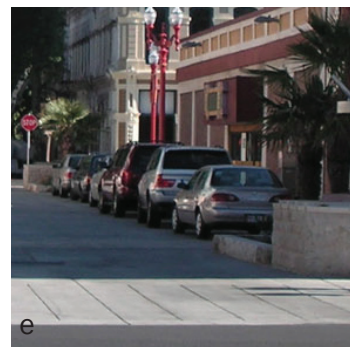
## Parking



PREFERRED

- Pro
- No designated parking spaces. Park where you can on the side of the road.

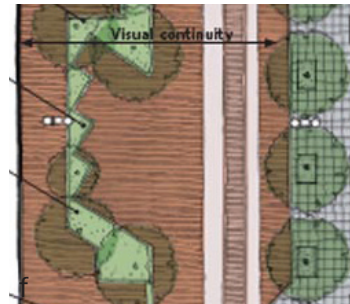
- Con
- Difficult for driver to know where it is appropriate to park.



STANDARD

- Pro
- Short Term Parking capable for use in other street related activities.

- Con
- Parallel parking restricts perpendicular pedestrian movement



STANDARD

- Pro
- Angled Parking intuitively slows traffic
  - Use small bays 3-4 stalls

- Con
- Space for parking designed as a solo function and separated from the pedestrian path.
  - Place away from building entrances.

Table 8-1. Places for Vehicles: Separation and Parking

a. debrink, Netherlands; b. Wall Street, NC; Kalamazoo Mall, MI; Rijkstraatweg, NL; Festival Street, Portland, OR; Terry Avenue, Seattle, WA.

# PLACES FOR VEHICLES

## Intersections



**Small Round-about**

Pro

- No Stoplights and traffic signs
- Creates a place for people in the intersection.

Con

- May be difficult for emergency vehicles to navigate through quickly

**PREFERRED**



**Open Plaza**

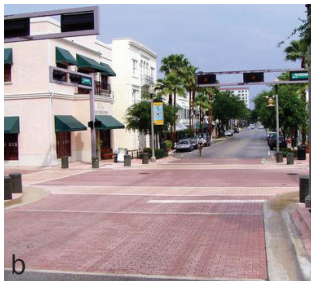
Pro

- No stop lights and traffic signs
- Creates a place for people in the intersection.

Con

- None

**PREFERRED**



**Raised Intersection**

Pro

- No stop lights
- Raised intersection gives drivers notice that they are entering a Shared Space.

Cons

- No place for people in the intersection.
- Traffic signs may be used for driver transition.

**STANDARD**



**Typical Intersection**

Pro

- None

Con

- Stoplights and traffic signs
- Separation between people and vehicles
- Vehicles have right-of-way
- No place for people in the intersection

**INSUFFICIENT**

Table 8-2 Places for Vehicles: Intersections

a. Seven Dials, London; b. West Palm Beach, FL; c. Pauahi Street, Honolulu, HI; d. deBrink, NL

## Places for Looking

Generally, looking leads to all other activities – walking, standing, sitting, eating, etc – and if “activities grow from the edge toward the middle”, then the edge becomes a vital element to the success of the street. “If the edge fails, then the space never becomes lively.”<sup>6</sup>

There are two aspects of looking - aesthetic details and windows. The goal is to balance visual interest with landscape details, windows, and a building’s interior needs. Building and landscape details give the pedestrian a reason to pause and appreciate the little nuances of the street while windows soften a building edge and provide the pedestrian with a taste of what is inside. Optimal places for looking include parks, gardens, and places that exhibit food or exciting interior activities, such as cooking.

Another element that make optimal places for looking are “Colonnades, awnings, and sunshades along the facades” says Jan Gehl because it “provide(s) comparably attractive possibilities for people to linger and observe while remaining unobserved.”<sup>7</sup> Other detail elements include recesses, corners, gateways, columns, trees, street lamps, and bollards, which make great places for people to stand. Without an array of these elements, it becomes difficult for people to stop, thus preventing any other activity from occurring.

It is understandable not every street edge should be opened up with windows since windows are expensive to

maintain and can interfere with the privacy of some interior activities. Hawai’i Theatre for instance cannot afford to let outside light affect the quality of the viewing experience within. A blank wall, though, is still considered a dead space to a pedestrian and a place more suitable for walking through and not staying in. It provides, however, a perfect opportunity for other activities to occur, such as transient vendors, community events, concerts and other street entertainment which cannot take place in front of storefront windows.

Undesirable views are places that need to be clear or create an unwelcoming perception. Such places include those which have power and electric boxes, chain link fences, metal security bars, and trash bins.







## Places for Walking

“It is not enough merely to create spaces that enable people to come and go. Favorable conditions for moving about in and lingering in the spaces must also exist, as well as those for participating in a wide range of social and recreational activities.”

*Jan Gehl*

Walking is the basic human activity that takes a person from point A to point B. The destination often varies on the attitude and purpose but it is the activity that often leads to other social activities such as sitting, eating, exercising, and resting. Therefore it is important that the activity of walking should be interesting and comfortable so other activities can occur.

### *Comfort*

“Walking demands space without being pushed or maneuver too much.”<sup>8</sup> A sidewalk that is too narrow, not maintained, and cluttered with poles, trees, newspaper stands, and fire hydrants can make walking unpleasant. Pauahi Street makes for a pleasant walk during the day when you seldom have another person cross your path. But during events, such as First Friday, walking along Pauahi Street is quite unpleasant. Widening is the first thought to fix this problem, but if sidewalks

are too wide then it needs more people on it to look full and interactions between people that you would normally get on a narrow sidewalk are lost. This is the reason why sidewalks on typical urban streets range from a width of eight to fifteen feet.

Uneven sidewalks are also barriers for wheelchairs and baby stroller users as well. One of the biggest barriers for this group of people is mid-block interruptions where a sidewalk is interrupted by a curb for a vehicular exit. Studies have shown that addressing these shortfalls can have a considerable impact on the number and type of people that visit.<sup>9</sup> Based on this evidence a comfortable walking experience can greatly increase the amount of pedestrian traffic which is a reflection of a quality public space.

### *Interest*

A path can be physically designed to be wide and level, but it is only a supporting element to a street's interest. The quality of space has an inseparable relationship to the size and location of the space and if the quality of the space decreases so does the amount of activity. Therefore, the interest of the path and its edges, e.g. the building edge, is an important factor in creating a quality public space. Many concepts of creating interest are shared by other disciplines, such as Landscape design. Nothing makes a walk more uninteresting like a parking lot, a building face with no windows, or anything else that spans along the street a considerable distance. The

best things to do are to create the illusion of narrow storefronts, break bleak stretches of walls with windows, vary patches of shade with sunlight, or have a pedestrian path vanish around a curve. Another method, which is harder to control, is the distance between intersections. Pedestrian-Oriented literature states that block perimeters should not be more than 1350'. These are all designed to make a walk seem shorter and more interesting.

Another key element to walking interest is attention to detail. As a pedestrian, the speed of travel and ability to stop makes attention to detail very important. Creating elements that provide interest can include the types of plants, size and shape of paving patterns, signage, window and façade treatments, statues, and other elements. Spaces with a strong identity typically share an attention to detail that appeal to a pedestrian's interest.

# PLACES FOR WALKING

## Comfort



- Pro
- Clear of signs and clutter
  - Width for large groups.

- Con  
None



- Pro
- Pedestrian-scaled pavers

- Con  
None



- Pro
- Clear of signs and clutter
  - Width for small groups

- Con
- Typical concrete sidewalk



- Pro  
None

- Con
- Path cluttered with signs, and trash.
  - Narrow path for one or two people.



- Pro  
None

- Con
- Pedestrian path interruptions.

Table 8-4 Places for Walking: Comfort

a. Festival Street, Portland, OR; b. Auahi Street, Honolulu, HI; c. Chinatown, Honolulu, HI; d. West Palm Beach, FL; e. Pauahi Street, Chinatown, HI.

# PLACES FOR WALKING

## Visual Interest



PREFERRED

Pro  
 • Pedestrian paths that wind increase visual interest.

Con  
 None



INSUFFICIENT

Pro  
 • Sometimes a blank wall can initiate other activities such as performances

Con  
 • Too many buildings with no window or door frontage, decrease visual interest



INSUFFICIENT

Pro  
 None

Con  
 • Parking lots decrease visual interest.



PREFERRED

Pro  
 • Small semi-private pockets increase interest by breaking up the spatial monotony of the street.

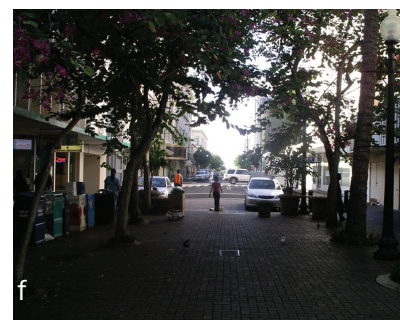
Con  
 • Capable only if building edge allows.



STANDARD

Pro  
 • Narrow storefronts with many windows make increase visual interest.

Con  
 None



INSUFFICIENT

Pro  
 None

Con  
 • Dark walks reduce interest.

Table 8-5 Places for Walking: Visual Interest  
 a. Denmark; b-e. Pauahi Street, Honolulu, HI;

## Places for Crossing

According to Jan Gel, “in trafficked streets the tendency is to follow the shortest route instead of the safest one. Only where automobile traffic is very heavy, where the streets are very wide, or where pedestrian crosswalks are very well placed is there effective use of crosswalks.”<sup>10</sup> This is an interesting observation and is a simple explanation to how people cross the street. In a typical street, such an action is called “Jaywalking”. A typical street was not designed for such an action and out of safety “Jaywalking” is illegal. It is especially problematic situation in Chinatown where police officers sit on street corners giving tickets to those who do. A Shared Space, on the other hand, encourages jay-walking in order to maintain a pedestrian priority in the street. Thus, this will lend police officers to place resources towards other more serious infractions.



# PLACES FOR CROSSING

## Typical System



**STANDARD**

Bicyclist crossing Smith Street cautiously

## Shared Space System



**PREFERRED**

Bicyclists are still able to use the street and with more freedom and flexibility.



**INSUFFICIENT**

Pedestrians jaywalk frequently between River and Maunakea Street since it is one of the longer blocks in the neighborhood and centered between numerous residential complexes and a major open-air market.



**PREFERRED**

Jaywalking is encouraged in order to maintain a pedestrian priority in the public space.

Table 8-6 Places for Crossing

a+b. Pauahi Street, Chinatown, HI; c.Haslach, Germany; Rijkstraatweg, Haren, NL.

## Places for Sitting

Sitting is the foundation for many other activities to occur. If the opportunities are high there tends to be an extended presence on the street that encourages more people to participate. Sitting is also a requirement for a wide subset of activities such as eating, studying, watching people, having long conversations, sketching, playing portable videogames, reading, and other simple hobbies.

There are two types of seating, primary seating and secondary seating. Primary seating refers to chairs, benches, and other products design specifically for sitting or resting. Secondary seating refers to planters, bollards, or other flat surfaces where sitting is a secondary function. Choosing a seat depends on who they are with, activity, cost, view, wind direction, sun, and age. Therefore preference is placed on seating accessibility and flexibility:

1. Moveable Chairs
2. Moveable Benches
3. Fixed Chairs
4. Fixed Benches
5. Fixed Secondary Seating
6. Moveable Secondary Seating

Whether seating is primary or secondary, the placement and use share the same fundamentals. “The most popular places to sit can be found at the edges of open spaces, where

the sitter’s back is protected, the view unobstructed, and the local climate most favorable”<sup>11</sup> An edge does not only refer to a wall, but also at the edge of a small planter or bushes. The notion that, “if you build it, they will come”, does not hold true with seating as witnessed by Jan Gehl and other researchers. Benches placed in the center of large spaces are not inviting and rarely used give empty benches a sense that a place is deserted, therefore secondary seating should perhaps be more abundant than primary seating opportunities.

Christopher Alexander, an architect known for his work in creating a pattern language that describes our intuitive use and organization of a number of building types and public spaces has prescribed a couple patterns regarding the street that supports the findings of other urbanists. To create a sitting wall, Alexander suggests to, “surround any natural outdoor area, and make minor boundaries between outdoor areas with low walls, about 16 inches high, and wide enough to sit on, at least 12 inches wide.”<sup>12</sup> Alexander also encourages cafes to become an integral part of the street. “Make them intimate places, with several rooms, open to a busy path, where people can sit with coffee or a drink and watch the world go by. Build the front of the cafe so that a set of tables stretch out of the cafe, right into the street.”<sup>13</sup>

# PLACES FOR SITTING

## Primary Seating



Pro  
• Built-in public seating

Con  
None

PREFERRED



Pro  
• Public table seating

Con  
None

PREFERRED



Pro  
• Private cafe seating

Con  
• For patron use only

STANDARD

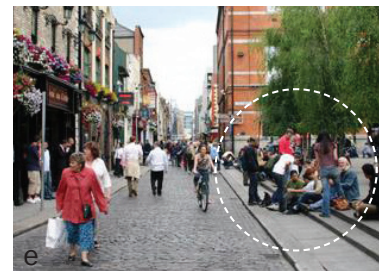
## Secondary Seating



Pro  
• Planters and bollards as seats

Con  
None

PREFERRED



Pro  
• Steps as seats

Con  
• Rain and dirt will deter steps to be used as seats and needs to be maintained

PREFERRED



Pro  
• Unconventional Secondary seating at building face.

Con  
• Seating is uncomfortable and meant for only brief rests

STANDARD

Table 8-7 Places for Sitting: Primary and Secondary Seating

a. Bilbao, Spain; b. Pearl Street Mall, Boulder, CO; c. Pauahi Street, Honolulu, HI; d. Festival Street, Portland, OR; e. Dublin, Ireland; f. Pauahi Street, Honolulu HI.

## **Places for Hearing, Talking, Dancing, Singing**

To an extent places for hearing and talking are a by-product of the aspects of the Shared Space or street environment previously discussed: Walking, Standing, Looking, and Sitting. To design a place where the preceding activities can occur would naturally increase the amount of talking and hearing, both important activities to develop a connection to the place as a visitor or strengthening relationships and ties within the community. The Shared Space concept works well in reinvigorating neighborhood centers because it provides more opportunities for this to occur in places unrealized in the typical street model.

Besides this qualitative analysis for hearing and talking many researchers who have studied human interaction in cities have varying perspectives on the quantitative aspects for hearing and talking. Jan Gehl proposes distances that hearing, seeing, and talking can occur. These distances however, seem to be theoretical and rule of thumbs but not directly applicable to this design process.

William Whyte on the other hand proposed the theory of “triangulation” which is the “process by which some external stimulus provides a linkage between people and prompts strangers to talk to each other as though they were not.”<sup>14</sup> Triangulation could also occur between friends, family, colleagues, and acquaintances and evolve to not only two people, but a group of people. Even if a connection is made

between the external stimulus and a single person, there is an opportunity for pause so one or the other may listen.

External stimuli could be an inanimate object, such as sculpture, or an animate object, such as a salesman or exuberant crossing guard. In both cases its interaction with people as an observer or participant can add varying levels of triangulation. For instance, the sculpture can be a node for admiration, wonderment, or confusion. But if the sculpture is activated by human interaction with the five senses then it can create a two-fold interaction between those who are directly engaged and indirectly engaged in the object. Examples of these types of external stimuli include: street performers, concerts, small performances, performing artisans, water fountains, and interactive art. It is free entertainment at its finest and can make a street memorable and enjoyable - the activity of people watching at its finest.



# PLACES FOR HEARING - TALKING - DANCING - SINGING



PREFERRED

Pro  
 • Music can provide an ambiance and a place to connect, discuss, and listen.

Con  
 None



PREFERRED

Pro  
 • Street performances can attract people and include audience participation.

Con  
 None



PREFERRED

Pro  
 • Water features that encourage people to touch it.

Con  
 • High maintenance costs



STANDARD

Pro  
 • Fine architecture or an activity in a building.

Con  
 • Architecture must already exist and a primary magnet for tourists.



STANDARD

Pro  
 • Art that can act as a landmark to meet or wait for people.

Con  
 • It could detract rather than enrich if it looks hideous.



STANDARD

Pro  
 • Kinetic Art that attracts the curious

Con  
 • It could detract rather than enrich if it looks hideous.

Table 8-8 Places for Hearing – Talking – Dancing - Singing  
 a. Barcelona, Spain; b. Eyre Square, Ireland; c. Washington D.C.; d+e. Barcelona, Spain; f. Stuttgart, Germany.



**ENDNOTES**

- 1 Gehl, Jan. *Life Between Buildings: using public space*.  
New York : Van Nostrand Reinhold, pg 173, 1987.
- 2 Ibid 1. pg 176.
- 3 Ibid 1 pg 139.
- 4 Ibid 1 pg 139.
- 5 Weinstein A|U. *Terry Avenue North: Street Design Guidelines*.  
Seattle Department of Transportation, March 2005
- 6 Alexander, Christopher. *A pattern language : towns, buildings, construction*.  
New York : Oxford University Press, 1977.
- 7 Ibid 1 pg 153.
- 8 Ibid 1. pg. 136.
- 9 “What space requirements can mean to baby carriage traffic was demonstrated when Stroget, the main street in Copenhagen, was converted from a mixed street with motor traffic and closely packed sidewalks to a walking street with a pedestrian area four times as wide. While the number of pedestrians increased during the first year by approximately 35 percent the number of baby carriages increased by 400 percent.” Ibid 1. pg. 136.
- 10 Ibid 1. pg. 139.
- 11 Ibid 1. pg 158.
- 12 Ibid 6 pg 1124.
- 13 Ibid 6 pg 436.
- 14 Whyte, William. *The Social life of small urban spaces*.  
Washington D.C., Conversation Foundation, 1980. pg.94.

## **PART III: PAUAHI STREET - A STREET FOR LIVING**

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# Stakeholder Interviews

Those who would have the most impact to a Shared Space, the business owners of Pauahi Street were contacted through electronic mail, telephone, and in-person interviews. As much interest people had about the concept and what it could bring to their community, many were hesitant in committing themselves to attend an informational meeting since they were already involved in other community group activities, events, and their own business.

The goal of the stakeholder interviews were to:

- Communicate the opportunities and benefits that a Shared Street can bring to Pauahi Street and the larger neighborhood.
- Explain the process of choosing Pauahi Street as an ideal location for a Shared Space.
- Understand the perspectives of everyday life on Pauahi Street while gauging interest and other opportunities that a Shared Space design may bring to the community.
- Create an appropriate street program to address current and future needs.
- Develop a concept for a Shared Space on Pauahi Street.
- Develop goals that would inform Shared Space design solutions.

Interviews were held through personal and groups with the following people:

*Marites Fiesta – Dean, Student Life & First-Year Programs,  
Hawai'i Pacific University*

*Anthony Ching – Executive Officer, City and County of Honolulu  
DPP*

*Roy Venters – Owner, Roy Venters Gallery*

*Burton White – Creative Director, Hawai'i Theatre*

*Nathan Miyake – Director of Business Operations, Kai Hawai'i  
Structural*

*Marsha Rose – Pacific Traditions Gallery*

*Phuong Tran – The Art Treasures Gallery*

*Wiwik Bunjamin-Mau – Community Facilitator, The Arts at  
Marks Garage*

The meeting began by introducing the project process and background of Shared Spaces followed by an in depth discussion on the strengths, opportunities, weaknesses, and challenges for Pauahi Street and its context. The following points were expressed and for the sake of clarity have been organized into “Context/Existing” and “Shared Space Design”. “Context/Existing” is defined as issues existing on the street and adjacent areas. “Shared Space Design” is defined as areas that could occur if a Shared Space was designed for Pauahi Street.



Figure 9.1. Stakeholder Meeting, Pacific Traditions Gallery, Chinatown, HI



Figure 9.2. Stakeholder Meeting, Pacific Traditions Gallery, Chinatown, HI

## Site Challenges and Weaknesses

The following are points expressed during the meeting that pertain to the existing political challenges and functional weaknesses that must be addressed to make a Shared Space on Pauahi Street a reality. Each point expressed is accompanied with a response of how or when it would be best to address it.

- There is no need or destinations for college students on Pauahi Street. How can we encourage HPU students to venture beyond Fort Street Mall?
  - o RESPONSE: Taking a larger role along Pauahi Street to add student related “third places” and facilities are one way. rRed Elephant is a perfect example that serves both the art and college crowd. Most of these are programmatic needs such as, Coffee Shops, Mixed-use living, bookstores, and study centers. The ultimate goal is to develop spaces for students to gather, rally, hang out and enjoy the weather and urban atmosphere as they do on Fort Street Mall and engage the students to use the street as their recreational room. Perhaps extending Fort Street Mall into Pauahi Street with like activities could encourage a larger
- student population onto Pauahi Street. Another recommendation is to use Pauahi Street as the center for Hawai'i Pacific University's future campus expansion.
- The Park is gated off and seems to separate itself from the street's public realm.
  - o RESPONSE: The rationale of the gates serves a security need and doesn't restrict the view into the park. This is fine for now but it is agreed by the group that it is a nice park even with the fence. Things could be done to improve its purpose in the community. Perhaps in the future as the safety dynamics of Chinatown changes that new solutions should be developed to provide a stronger physical connection of the park into the street.
- How do you deal with intersections, especially during rush hour on Bethel and Nu'uuanu?
  - o RESPONSE: The Shared Space concept should not affect the current flow of traffic since there are no stoplights or stop signs at the intersections of Pauahi-Nu'uuanu and Pauahi-Bethel.



- Where will the parking go?
  - o RESPONSE: Parking will be kept but recommended to be short term to encourage a high turnover and more daily activities along the street and designed to be integrated into the shared space.
  
- Need public restrooms
  - o RESPONSE: I will look into opportunities for the “Self-cleaning restrooms to be placed near neighborhood facilities.
  
- How do you encourage business owners to take ownership and care of their street fronts if it is public land?
  - o RESPONSE: Shared Space is a new street type to the city and would require a new program to ensure its effectiveness. A solution to this problem should come from this activity.
  
- Restaurant owners throw dirty water and oil into the streets
  - o RESPONSE: This is mostly an issue on the North-South streets and not a specific problem on Pauahi Street except for a couple places. Pauahi Street is



Figure 9.3. Stakeholder Meeting, Pacific Traditions Gallery, Chinatown, HI



Figure 9.4. Stakeholder Meeting, Pacific Traditions Gallery, Chinatown, HI

generally made up of services and good shopping.

- Pauahi Street is within the Special District limiting what you can and cannot do
  - o RESPONSE: After reviewing the Special District Guidelines, I feel confident that the Guidelines actually support the needs for a Shared Space and should be able to meet the objectives of the Special District Guidelines.
- How do you deal with water drainage?
  - o RESPONSE: This is an excellent question and there are multiple solutions that can work. This will be a consideration in the design, but testing and verification if the size will support the storm capacity will be left to be determined in the next phase.
- There are no reliable records to indicate where the location of utilities. There are bottles and bones below the street that could cause considerable challenges in converting Pauahi into a Shared Space.
  - o RESPONSE: This is a question that will be left to be solved if a Shared Space

continues to the next phase of design.

- There is no end destination at River Street and Pauahi Street.
  - o RESPONSE: One option, a pedestrian bridge, was proposed last year and won an award by the city and county. Verifying its worth as a solution, this will become a central design component at this edge.
- How do you deal with the transient population that steal, damage, or abuse outdoor seating and other public amenities?
  - o RESPONSE: Unfortunately, this issue is something that architecture or urban design cannot fully solve or successfully address without the comprehensive effort of the city, community, and experts in multiple areas of social sciences. This would involve an entirely different thesis topic. The design, however, can be cognoscente of the issue. Ultimately, more people in the street means the transients would either move further away or become unnoticed since they have been diluted into the crowd. This may not be the most responsible way to

deal with the problem, but it is in reality the most probable solution in regards to the design.

- Trash is lined up at street edge and homeless peruse through trash to find bottles and food.
  - o RESPONSE: Create Recycling centers or a program to donate funds to River of Life or shelters.

### **Lessons Learned**

Those who attended were genuinely interested in the concept and the benefits that a Shared Space concept would add to their community. People in the neighborhood immediately saw the merits in the “lifestyle” that a Shared Space will bring and feel that if the design reflects these sensitivities, that it could take the next step. Police officers who saw an informational document on the project were enlightened to see the concept. The reaction was surprising considering that they constantly deal with public safety issues in the neighborhood. Their reaction was possibly warranted by the tedious duty of ticketing jaywalkers and other minor traffic infractions. The Shared Space would encourage such activities while maintaining safety and an opportunity to use their effort and the people’s tax money on more serious infractions.

Despite the positive and enthusiastic reaction to a Shared Space, everyone was often caught up in the details of legal issues or constraints put on them. Most of these conflicts stemmed

from the city government’s efforts in depriving business owners on the street from engaging in a larger ownership of the street. For instance, one business owner proposed to have art vendors post their art on the Smith Street Park fence to sell. The city denied the request stating that it would be in violation of the “private business on city property” law. Another example is the removal of any form of seating area of brick wall in concern that it attracts undesirables scaring away customers. These barriers frustrate business owners and residents.

Engaging in a participatory design process to any degree takes a lot of planning, assistance, and flexibility. The people in this neighborhood are often affected and relied on by other research activities, business proposals, master plans, and other urban envisioning projects due to its unique location, history, and culture that some in the community has, to an extent, become apathetic to these exercises. A major part of this mindset has come from the lost efforts in numerous city projects that requested community participation, created excitement and hope only for it to never materialize due to government red tape, or city politics says Wiwik Bunjamin-Mau, Community Facilitator for the Arts at Mark’s Garage. Those who do participate in some of the more public academic community facilitation exercises sometimes become targets in supporting one future over another.

There is a delicate balance between those who believe that Chinatown shouldn’t change at all and respect its historical status and diverse cultures, and those who feel that Chinatown should evolve into a more modern community. Although the

Special Design District retains from such sweeping changes from happening, there is nothing to stop the area from becoming heavily commercialized and disingenuous. This is a side of community politics that make even academic community participatory projects real. There is a reality forming that community members that assist or even attend certain publicized academic projects leaning more towards gentrification that you could be threatening the mom and pop stores and ethnic citizens that gentrification would surely remove.

### **Transients and Undesirables**

Chinatown has a long standing identity of being a seedy neighborhood. The number of low-income housing projects in and around the community exasperates that notion. Although illegal activities have decreased and crime prevention programs have reduced the amount of crime in the area, it continues to be a problem and main reason why many people choose to not visit. This and the homeless problem is a chief factor of the poor state of public space quality on and around Pauahi Street. To reduce the crime and homeless problem, city and business officials had no choice but to cannibalize the urban amenities that make their customers come in the first place. Benches, fountains, planters and other pedestrian amenities were removed to keep the undesirables moving. Allan Jacobs, author of *Great Streets* has witnessed the complaint against public sitting places and has said that convincing shopkeepers

to pursue other counterintuitive solutions is quite difficult.

This problem is not unique to Honolulu and has been an issue of concern for every city in the United States. William Whyte, author of *The Social Life of Small Urban Spaces*, wrote about this issue in his studies on urban open spaces in Manhattan. His solution to the problem presents an alternate perspective to those taken by governments and improvement districts. Whyte feels that it is not the undesirables that are the problem but the actions to cope with them. There is sense to his claim. What does a pedestrian street expect to gain from removing the very elements that make it a nice pedestrian street in the first place? Removing street amenities may solve the problem or it may not, in either case what results is a street that is not as interesting, comfortable, or welcoming as it once was or could be. Street design alone cannot solve or deny the presence of large social problem like homelessness.<sup>1</sup> Ultimately, “the way people use a place mirrors expectations – a sense of freedom to use a space creates a sense of self-policing and responsibility or respect versus a place with rules, protocol, and video cameras.”<sup>2</sup>

Considering the tenet that people attracts more people removing street amenities is a losing outcome for everyone. “The best way to handle the problem of undesirables is to make a place attractive to everyone else” since they “are probably as safe a place as you can find during the times that people use them.”<sup>3</sup> Another solution that William has found to assist with monitoring undesirables is “mayors”. The “mayor” would be someone who works in the space everyday like a vendor,

guard, or another who doesn't exert a large sense of authority to the naked eye but becomes a liaison to those who are. This type of self policing helps building community and is affordable in comparison to security cameras.

### Site Analysis Conclusion

Pauahi Street's existing physical, social, and cultural amenities serve as an optimal location to create a Shared Space. However, as a mid-block service road, Pauahi Street doesn't meet the public space, culture, environment, growth, community space, and urban space quality needs of an evolving community. In a community as urban and dense as Chinatown, the streets are the primary public space of the community. A Shared Space can meet those needs. Designing and implementing a Shared Space on Pauahi Street does, however, come with a number of issues and hurdles as presented in the stakeholder meeting that have stalled rejuvenation projects in the past.

The more complex issues dealt with Chinatown's seedy neighborhood identity and the rigid Special District Zoning requirements. Solving these issues will require a concerted effort by the community and a political figure to champion comprehensive solutions through the lengthy government process which may or may not happen within the next twenty years. The changes that come with the mass transit system could be the catalyst that forces a reevaluation of each issue.

Whether or not those changes occur, it is important to realize that a Shared Space concept on Pauahi Street becomes even more appropriate through this analysis.

### SECTION ENDNOTES

- 1 "Nor will the argument that street design cannot be expected to solve or deny the existence of major social problems, hopefully the transient ones. But there are ways to solve that problem, not the least of which is nonviolent yet determined public enforcement that permits everyone to have an unmolested chance at a sitting place. Societies enforce other rules, such as for aberrant driving and parking behavior, often at great expense. Places to sit, in the meantime, help to make fine streets."  
Whyte, William H. *The Social Life of Small Urban Space*.  
The Conservation Foundation, Washington, D.C
- 2 Ibid 1.pg 64
- 3 Ibid 1. pg 64



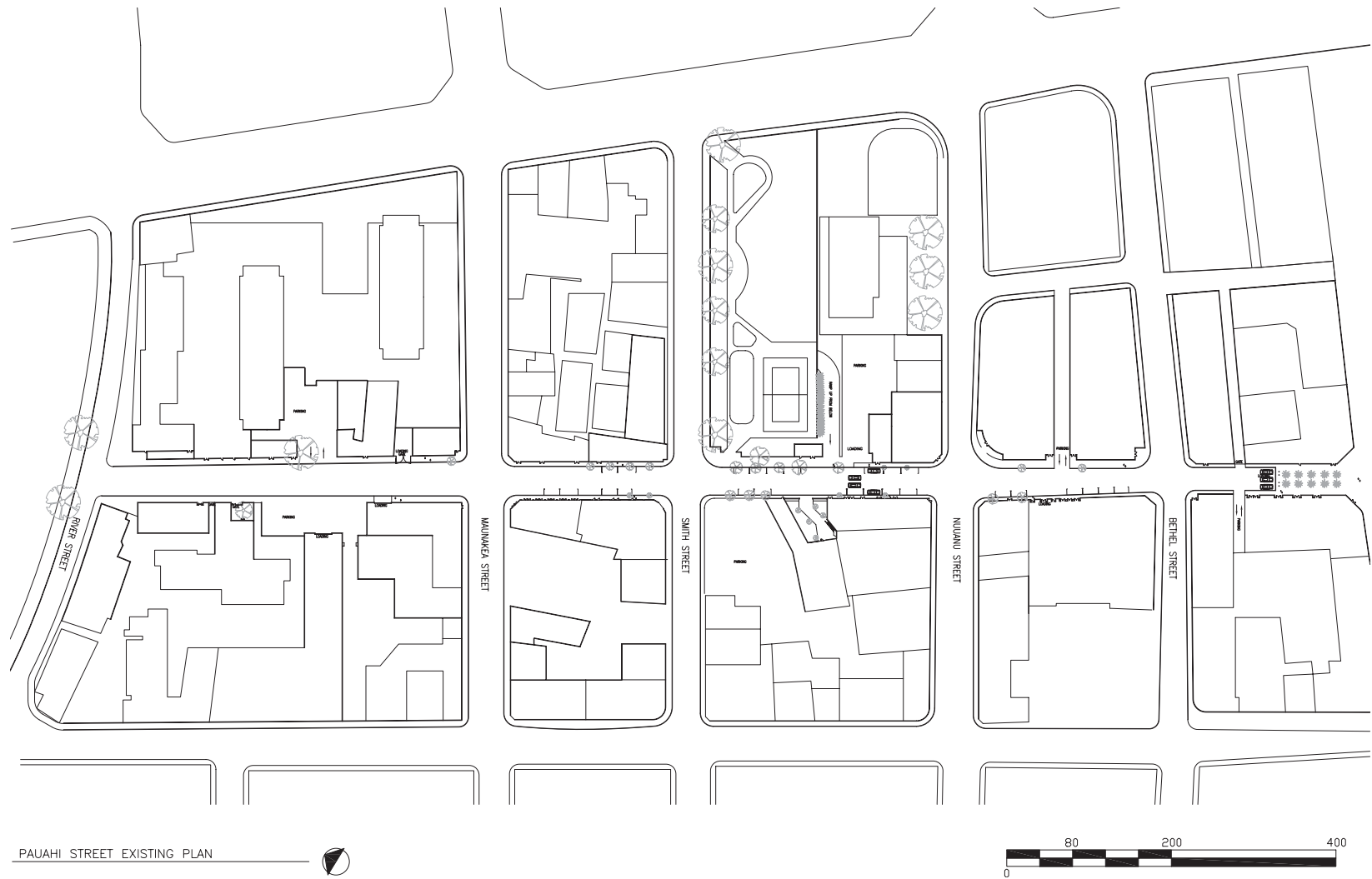


Figure 9.5. Pauahi Street Existing Plan

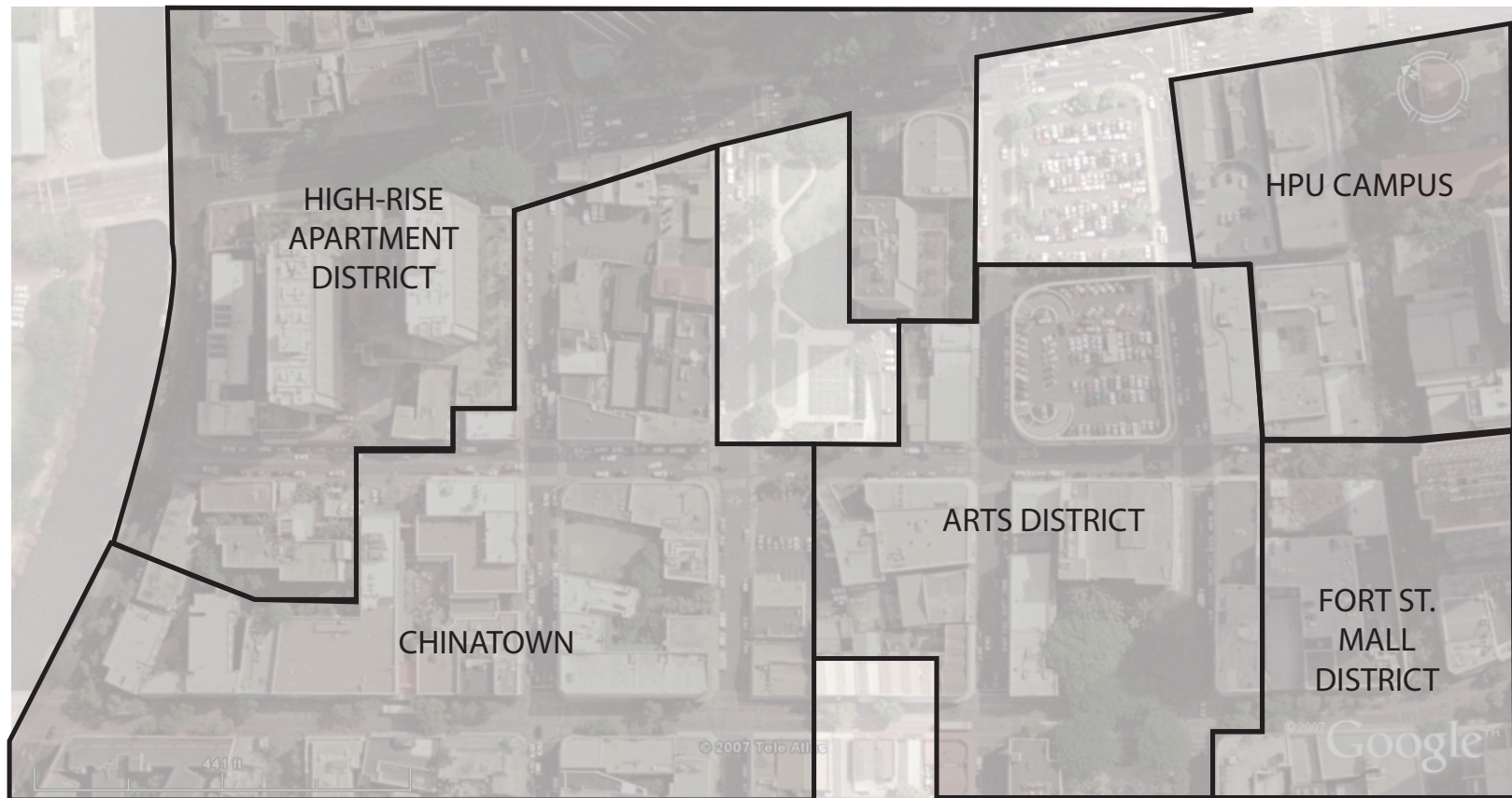


Figure 9.6. Pauahi Street Districts



Site Analysis  
Pauhi Street

Figure 9.7. Pauhi Street Site Analysis



Figure 9.8. Pauahi Street Path Analysis



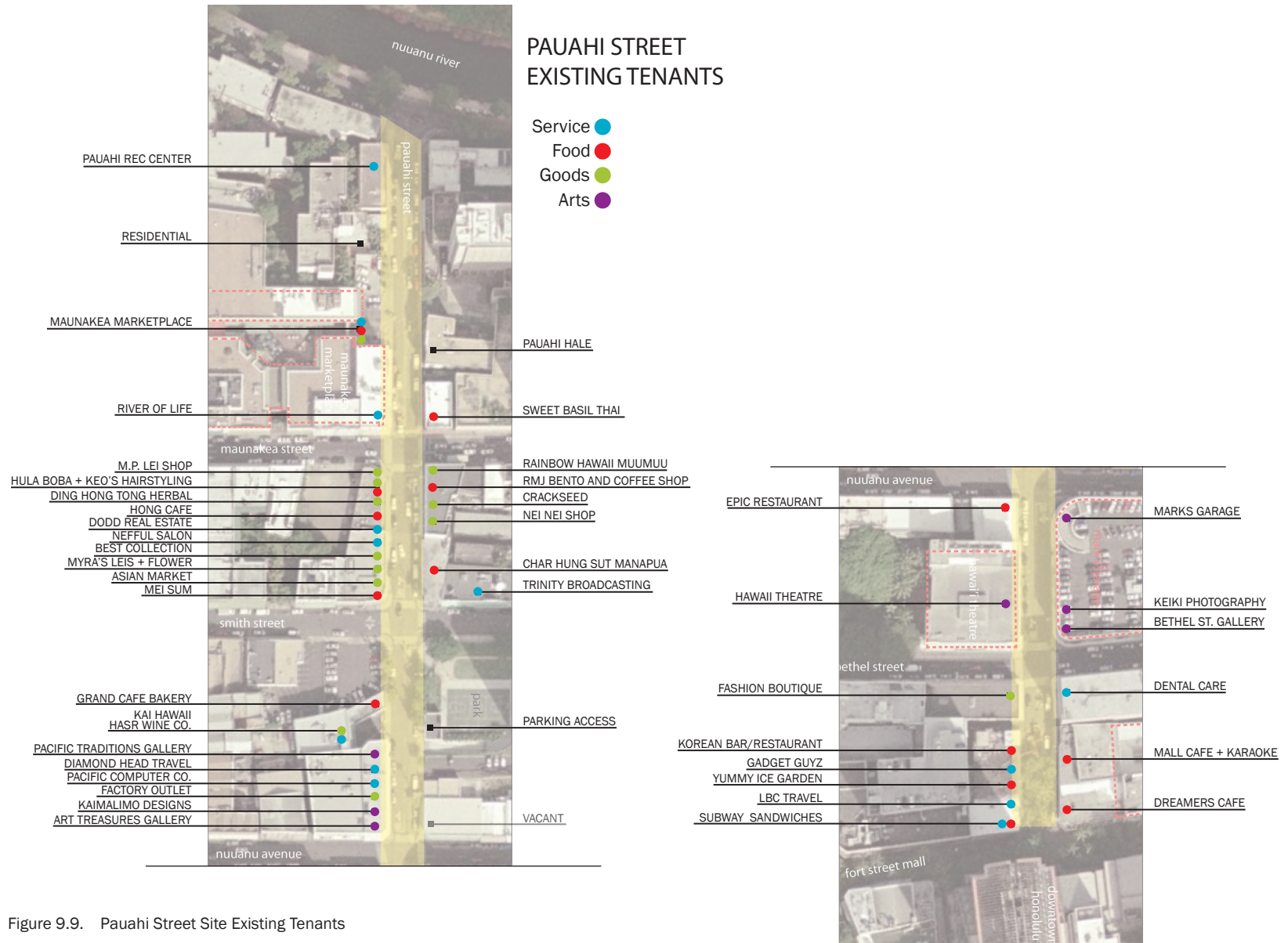


Figure 9.9. Pauahi Street Site Existing Tenants



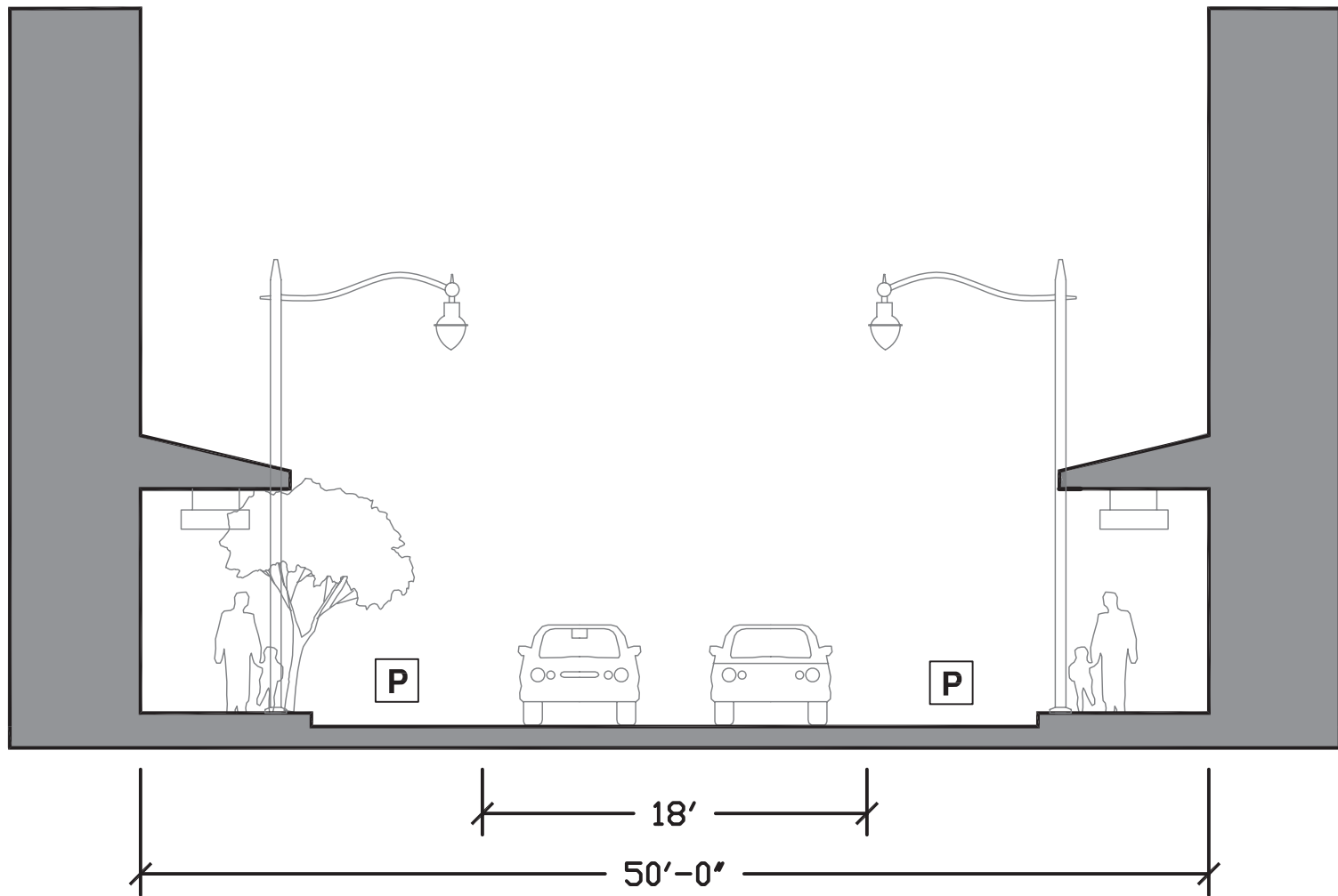


Figure 9.10. Pauhi Street Existing Street Section

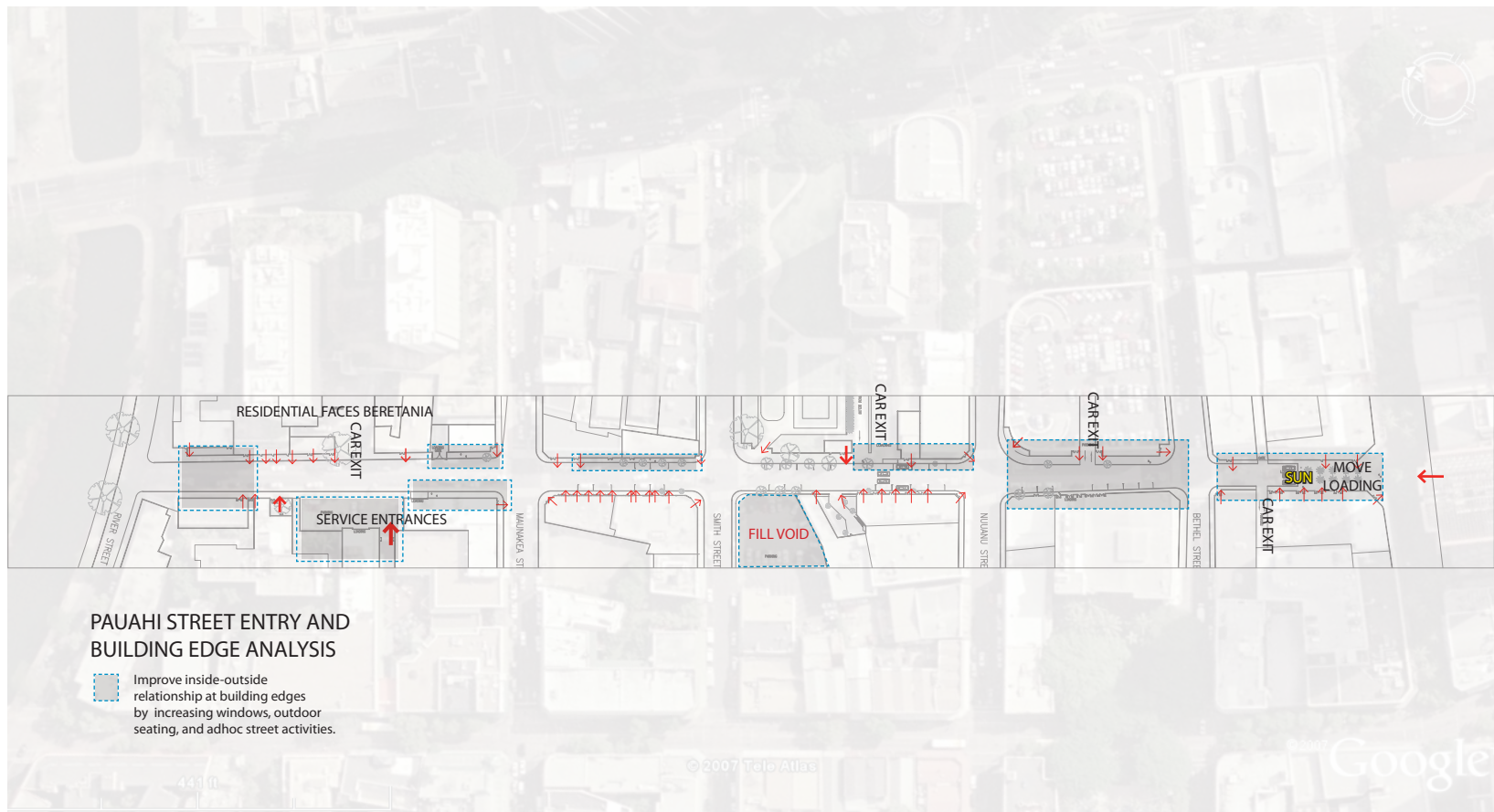


Figure 9.11. Pauahi Street Entry and Building Edge Analysis

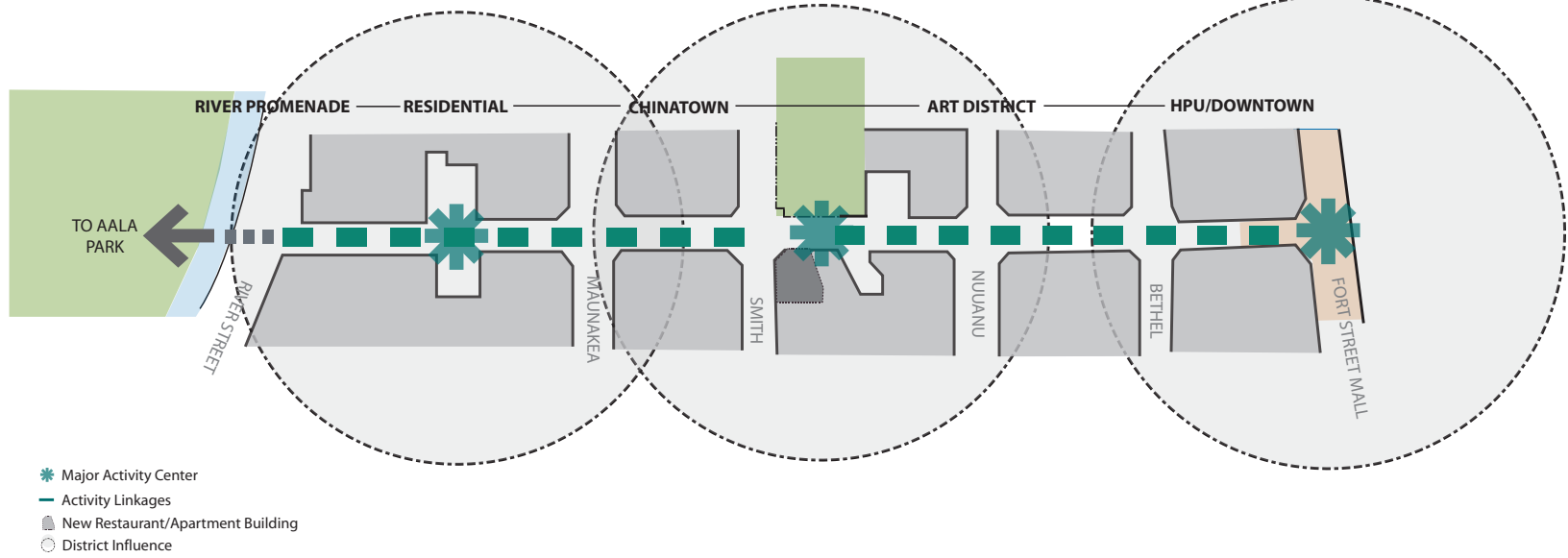
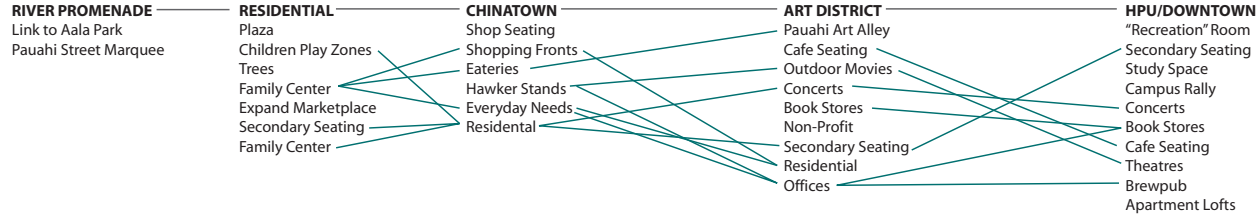
# Urban Design Concept

Pauahi Street traverses five distinct districts, HPU, Art, Chinatown, Residential, and River, each with their own interests, needs, traditions, and demographics. How does one bring such a diverse group together? Should they come together? How do you create an east-west movement when the dominant movement is mauka-makai?

This urban design concept does both (Figure 10.1). As a Shared Space, Pauahi Street serves as a unifying design element that brings them all together but recognizes that being separate is okay. By **increasing activities and uses relevant to each district** Pauahi Street will become a center for the district's everyday and unique activities strengthening community involvement and pride. Through this, Pauahi Street as a whole will become more active and exciting. **District Linkages** will be formed to encourage visitors and people within each district to venture into adjacent districts.

Pauahi Street will be designed into a Shared Space, defining seven different street and intersection typologies that play to the strengths of existing amenities and storefronts while exhibiting the various ways that a Shared Space can be designed to meet public needs. What results is an extraordinary and exciting pedestrian experience that spans five unique districts and a variety of experiences that will set the standard for Hawaii's evolving urban lifestyle.

**DISTRICT ACTIVITY LINKAGES**



**Figure 10.1. Urban Design Concept**

### **HPU and Downtown District (Fig. 10.2)**

HPU and Downtown Honolulu share Fort Street Mall, a pedestrian mall that serves as the main of the HPU campus and a major destination for food. Since Pauahi Street ends at Fort Street Mall, Pauahi will serve as a catalyst to inject more outdoor seating, both primary and secondary, that encourages group studying, school rallies, performances, and addressing the location of problematic loading zones that currently restricts Pauahi Street from naturally flowing into Fort Street Mall.

### **Art District (Fig. 10.3)**

A home for Honolulu's creative types, the Art District is the epicenter of Chinatown's First Fridays and is home to a number of art galleries, coffee shops, fine restaurants, and the historic Hawai'i Theatre. To meet the needs of this newly established district, Pauahi Street will be designed to be a place where First Fridays can continue unhindered by curbs, antsy police officers, and narrow sidewalks. It will also increase the space for outdoor cafes and encourage more art related activities at the Pauahi-Smith Park and encourage impromptu art installations, performances, and other events.

### **Chinatown District (Fig. 10.4)**

The heart of Chinatown is no doubt Maunakea Street, but Pauahi Street is still home to many restaurants, shops and neighborhood services. Adjacent to the residential district towards River Street, Pauahi can serve as an extension for residents and visitors to shop, eat, and sell goods. A Shared Street presents a newfound space to push goods into the street and add small food stands to make this a center all to its own.

### **Residential District (Fig. 10.5)**

Pauahi Street at the Residential District is surrounded by a large number of high-rise apartments and Maunakea Marketplace, and the Pauahi Recreational Center. Jaywalking is a major problem here since it is the longest block on Pauahi Street and the number of amenities that happen daily right across the street. A Shared Space resolves these issues and discovers a new public space to benefit the residential population. Called, Pauahi Plaza, what was once a service loading zone and parking lot is now a public square with checker tables, a tot lot, greenery, and expansion of the Maunakea Marketplace.

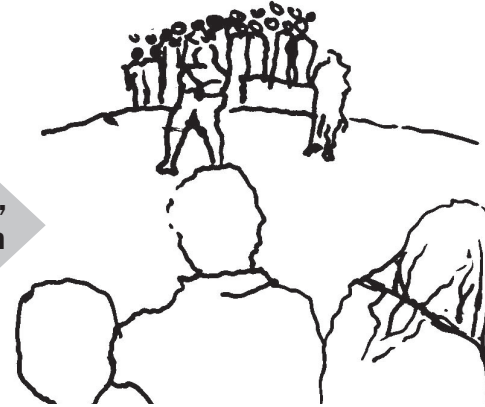


**River Promenade District (Fig. 10.6)**

The River Promenade District flanks Nu‘uanu Stream on both sides and consists of large canopy trees, pedestrian-only walkways, statues, and ‘A‘ala Park. In the summer of 2006, winners of the “Bright Ideas in Chinatown” competition was announced, an event that grew out of the city sponsored Chinatown Summit that took a good look at the great strengths and challenges of a Chinatown in transition. One of the winners was Architect Val Yanagihara who proposed “a new pedestrian bridge across Nu‘uanu Stream as both a real and symbolic link between the green space of ‘A‘ala Park and the heart of Chinatown.”<sup>1</sup> As a winner, the idea had backing and became the inspiration for the intersection of River Street and Pauahi Street. The pedestrian bridge, which links ‘A‘ala Park and Pauahi Street, reminiscent of a Chinese Dragon, extends the pedestrian experience.



**Recreate, Rally,  
Party, Entertain**



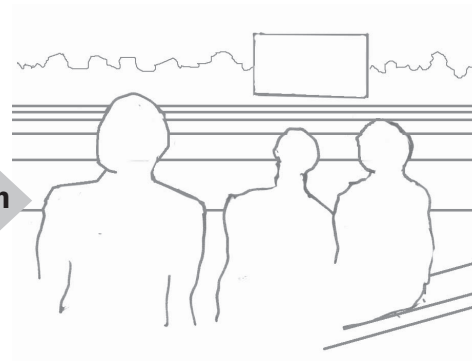
**Socialize, Learn,  
Study, Work**



**Figure 10.2. HPU/Downtown District**  
a place for students, faculty, and professionals.



**Present, Entertain**



**Create, Be Different**



**Socialize**

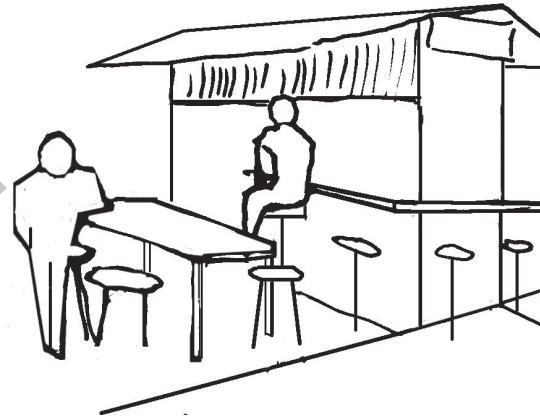


**Figure 10.3 Art District**

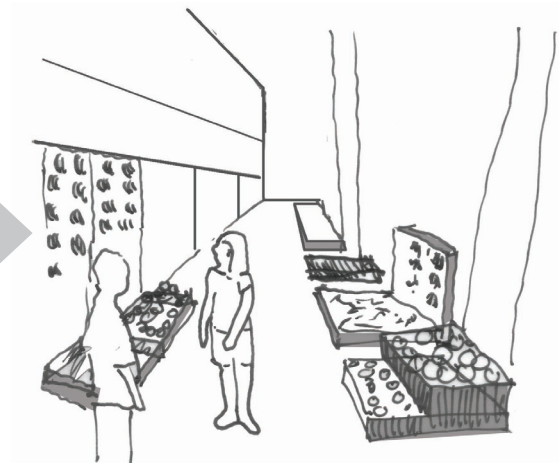
A place for creatives, students, and visitors



Eat



Shop, Sell



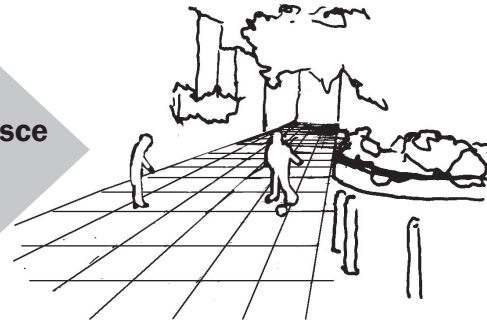
**Figure 10.4 Chinatown District**

A place for residents, locals and visitors

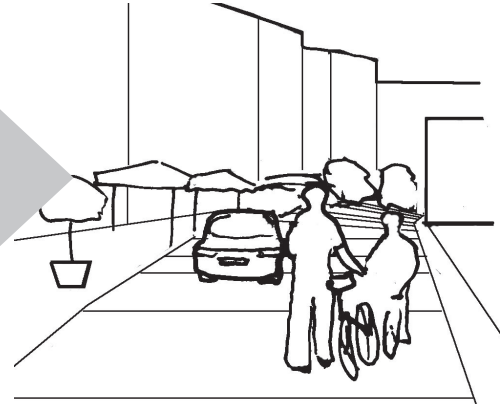




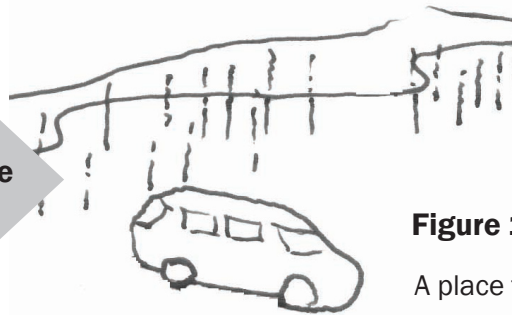
**Play, Live, Reminisce  
Relax**



**Bond, Explore**



**Relax, Play, Excite**



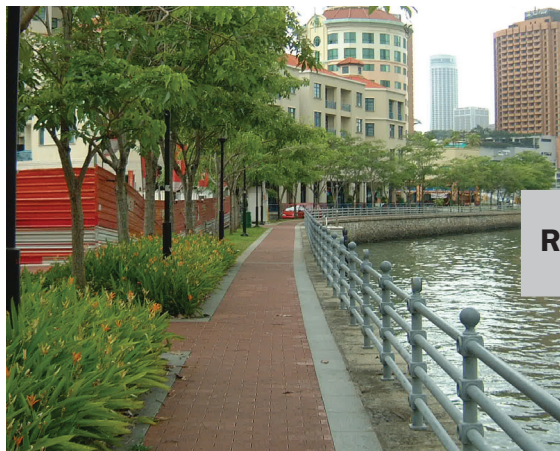
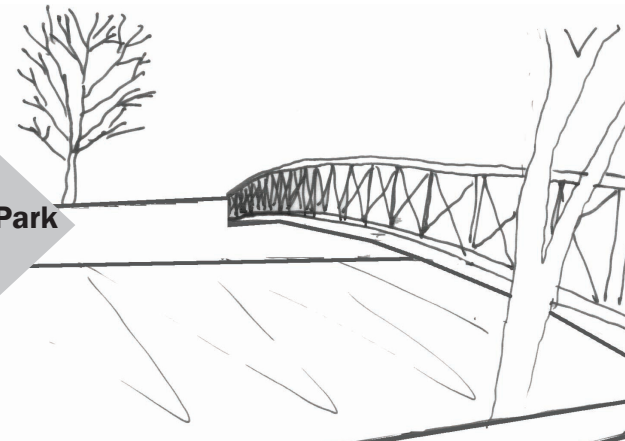
**Figure 10.5. Residential District**

A place for residents, locals and visitors





Connect to Aala Park



Reflect, Exercise



**Figure 10.6. River Promenade District**

A place for residents, locals and visitors

## Access

Pauahi Street serves 60,000 residents within walking distance and 85,000 people during the daytime<sup>2</sup>. To contrast these numbers, First Friday typically attracts 2,500 people<sup>3</sup>. The number can grow higher and with the Shared Space design, would give Pauahi Street the ability to support as many as 13,000 people comfortably in a block party atmosphere. The barrier that prevents many from using Pauahi Street is parking, which totals only 2,425 stalls<sup>4</sup> (including on-street parking) and quality public space. A Shared Space design can give Pauahi Street a larger stake in the number of people visiting Chinatown and perhaps encourage more locals to spend time here.

When the planned high-capacity rail line is complete however an additional 39,000 people<sup>5</sup> will have convenient access to Pauahi Street and Chinatown. This population is not affected by parking shortages therefore a higher percentage of the 39,000 could visit Pauahi Street than by car. The high-capacity rail will not only increase the market size for Pauahi Street but for Chinatown as a whole. This makes flexible transportation solutions such as Shared Space even more appropriate and viable in this location where the sidewalk pedestrian capacity, once 5,300 people, can now accommodate 8,000 people comfortably.

## Flexibility

As public access to Chinatown increases from residential developments and mass transit, Pauahi Street, as a Shared Space can be flexible to the needs of everyday life and the special events such as First Friday or Chinese New Years. Pauahi Street can be designed to handle various modes of traffic and designed with temporary bollards at intersection entrances to become an instant pedestrian mall for neighborhood celebrations and other larger events for any Pauahi Street district.



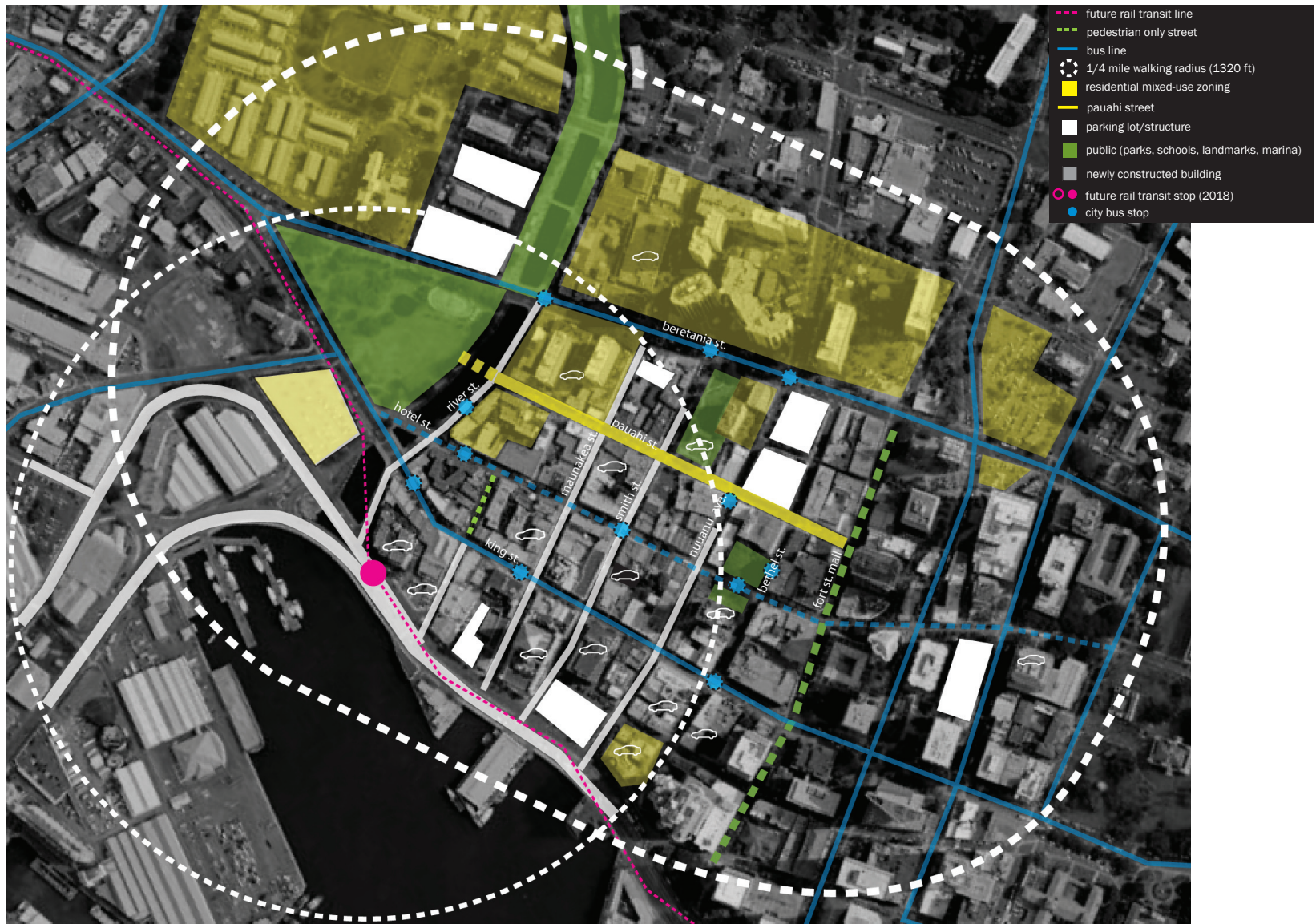


Figure 10.7. Parking and Density Analysis





Figure 10.8. Access Analysis

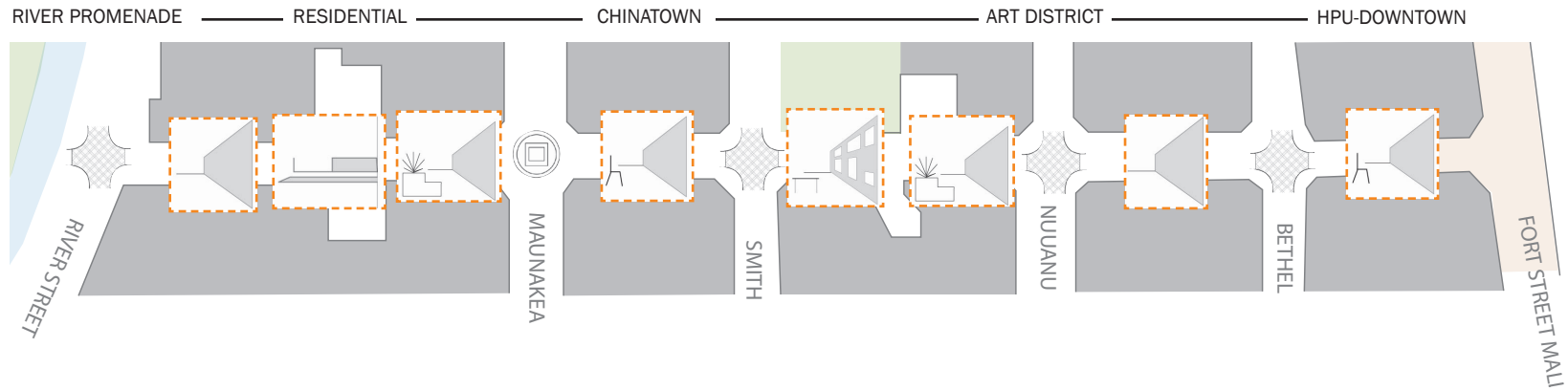
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- 1 Dingeman, Robbie, *And the Top 10 Chinatown winners are . . .*  
Honolulu Advertiser, July 15, 2006.
- 2 <http://www.loopnet.com/xNet/MainSite/Listing/Profile/PrintAllISE.aspx?LID=15335154>>
- 3 Rosa, Jolyn Okimoto. An Artwork in Progress.  
Hawaii Business Magazine, Online, March 2008.  
(accessed April 23, 2008).
- 4 Vorsino, Mary. *Chinatown parking woes worsen*  
The Honolulu Advertiser Online, July 2, 2007. (accessed April 23, 2008).
- 5 Honolulu Transit Website  
<http://www.honolulutransit.org>

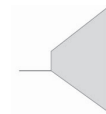


# **Shared Space Typologies**

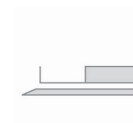
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**Shared Space Typologies - Street**

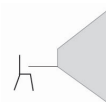


**Standard Shared Street**



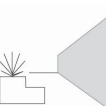
**Pauhi Plaza**

- Public Plaza
- Children Playground
- Maunakea Market Expansion



**Standard Shared Space with Primary Outdoor Seating**

- Restaurants, Cafe
- Transient Retail



**Standard Shared Space with Secondary Seating**



**“Pauhi Art Alley”**  
Performances  
Primary Seating

**Shared Space Typologies - Intersection**



**Roundabout - Statue**



**Shared Space Raised Intersection**

**Figure 11.1 Shared Space Typologies**

## Typology Overview and Rationale

There are seven street and intersection typologies. Each are created as a site specific response to Pauahi Street's existing strengths and future needs as a community.

**Standard Shared Street:** a Shared Space designed for walking, opportunities for other public activities are possible, but are not physically designed into the space. This typology is applied at Bethel-Nu'uaniu to support the various loading and back of house activities that occur for Hawai'i Theatre.

**Standard Shared Space with Primary Outdoor Seating:** a Shared Space designed for café's, studying, and other drinking or eating events. This typology is applied at Fort-Bethel, and Smith-Maunakea to support existing restaurant, shopping, and educational amenities.

**Standard Shared Space with Secondary Seating:** a Shared Space designed with planters that also act as seats for other activities. This typology is applied to Nu'uaniu-Smith and Maunakea to give these areas, which are void of greenery with people who tend to loiter or sit on the sidewalk, new amenities that inject both into the street.

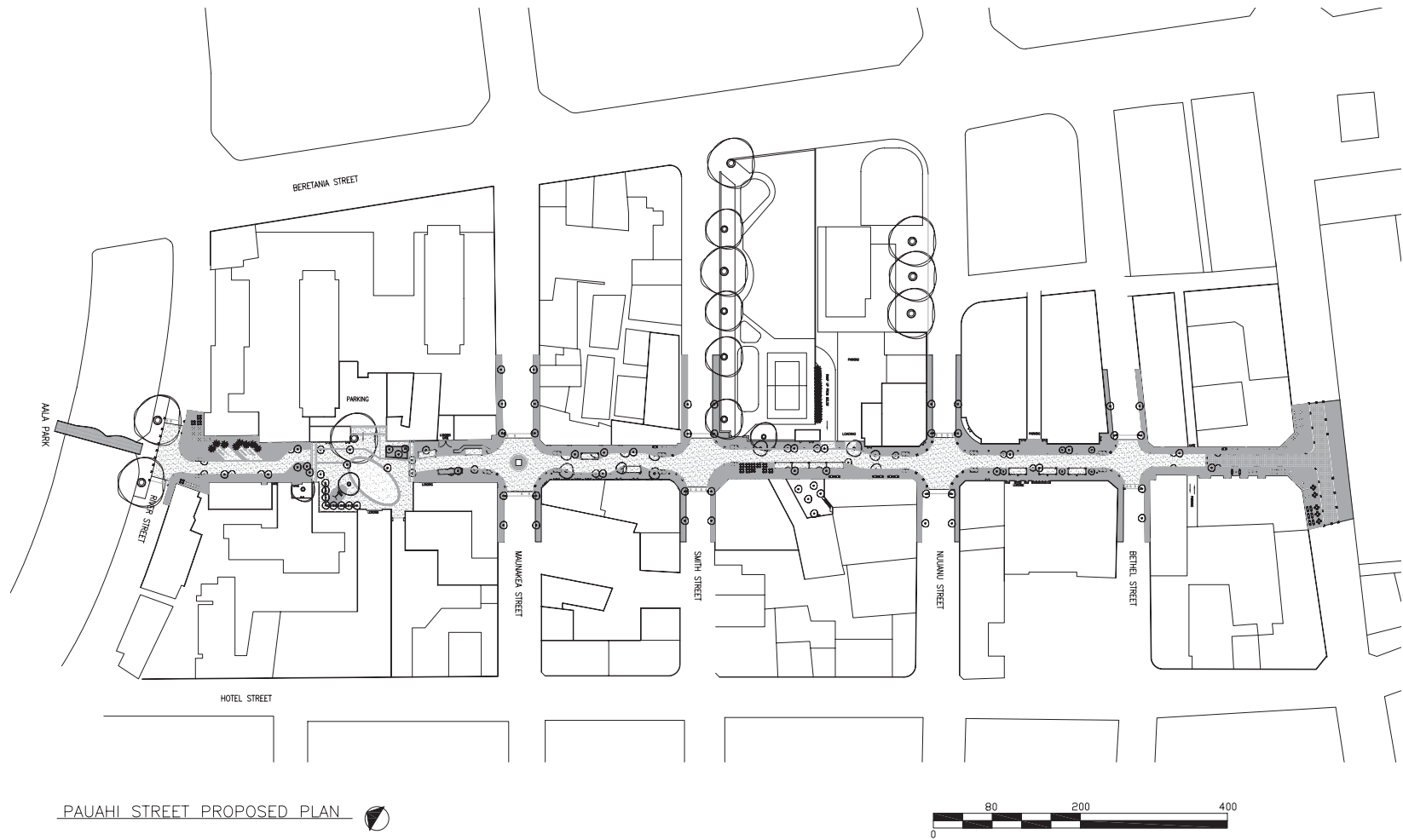
**Pauahi Art Alley:** a Shared Space with a mix of primary and secondary seating that uses its location next to the cast iron fence of Pauahi-Smith Park as an opportunity to show case art,

or other crafts. By injecting a nice view with an assortment of alternative interactive activities, opportunities for people watching and performances can create a community center and a major highlight of the Shared Space experience.

**Pauahi Plaza:** a Shared Space that acts as a living room to the high-rise residential communities of Chinatown. The Plaza is designed to be an example of a true Shared Space mixed in with an outdoor community center that has the flexibility to do host any activity that could not be done otherwise, right at their front door.

**Roundabout Intersection:** a Shared Space that features a small roundabout with a Statue that strengthens the identity of Chinatown. The roundabout is intended to control two-way traffic on Maunakea without a stoplight and turn a regular traffic circle into a place for people to use as a place to meet or socialize.

**Shared Space Raised Intersection:** a Shared Space that acts similar to the existing four-way stop-sign intersections. This intersection, however, is raised to be the same height as the rest of Pauahi Street. Being raised, it gives drivers, who are on any of the regular mauka-makai south roads a warning that they are entering a Shared Space.



**Figure 11.2 Pauahi Street Proposed Plan**

# Shared Space Activity Patterns and Sections

The Street Act Patterns (Table 12-1) is key document in understanding the Shared Street Activity Pattern figures on the following pages. The Street Act Patterns define a unique method to describe a large number of human interactions. The patterns are divided into three steps: Category, Action, Law.

The first step, 'Categories', are divided into the most basic of human interactions, movement, standing, and sitting. The second steps, 'Actions' are divided into the six most basic actions: movement, verbal, visual, interactive, consume, and emotional. The last step, 'Law', dictates the intensity of each action through the thickness or length of the symbol that defines each action. By choosing a category and one or a couple actions implied bound by laws, one could easily represent a wide variety of human interactions through simple patterns. The patterns are simple enough to provide a number of combinations and give the reader an opportunity to creatively interpret the activity patterns occurring in each space.

The Shared Space Activity Patterns are typologies and do not represent a certain time of the day or week. In fact, the type of people and way the street is used will vary depending on the time of day and day in the week. For instance, during the weekday, you will probably find more activity on Fort Street Mall and parked cars on the rest of Pauahi Street. However, during the weekend, Fort Street Mall would be empty, while the Art Alley, Chinatown, and Residential Districts would be used by a larger population of people. During a block party or large event on any of the Shared Space streets will also change the volume and type of how the space is used. A Shared Space's



flexibility offers Pauahi Street and its users a public space that works during the 'quiet' times and during the 'busy' times.

The Shared Street Activity Patterns serve as a design tool to communicate the Shared Space street life versus the existing street life from a 'typical' street design. Although the patterns and interactions are not scientifically verified to be considered fact and are still hypothetical in nature, the differences between a 'typical street' and a 'Shared Space street' through this process are dramatic.
























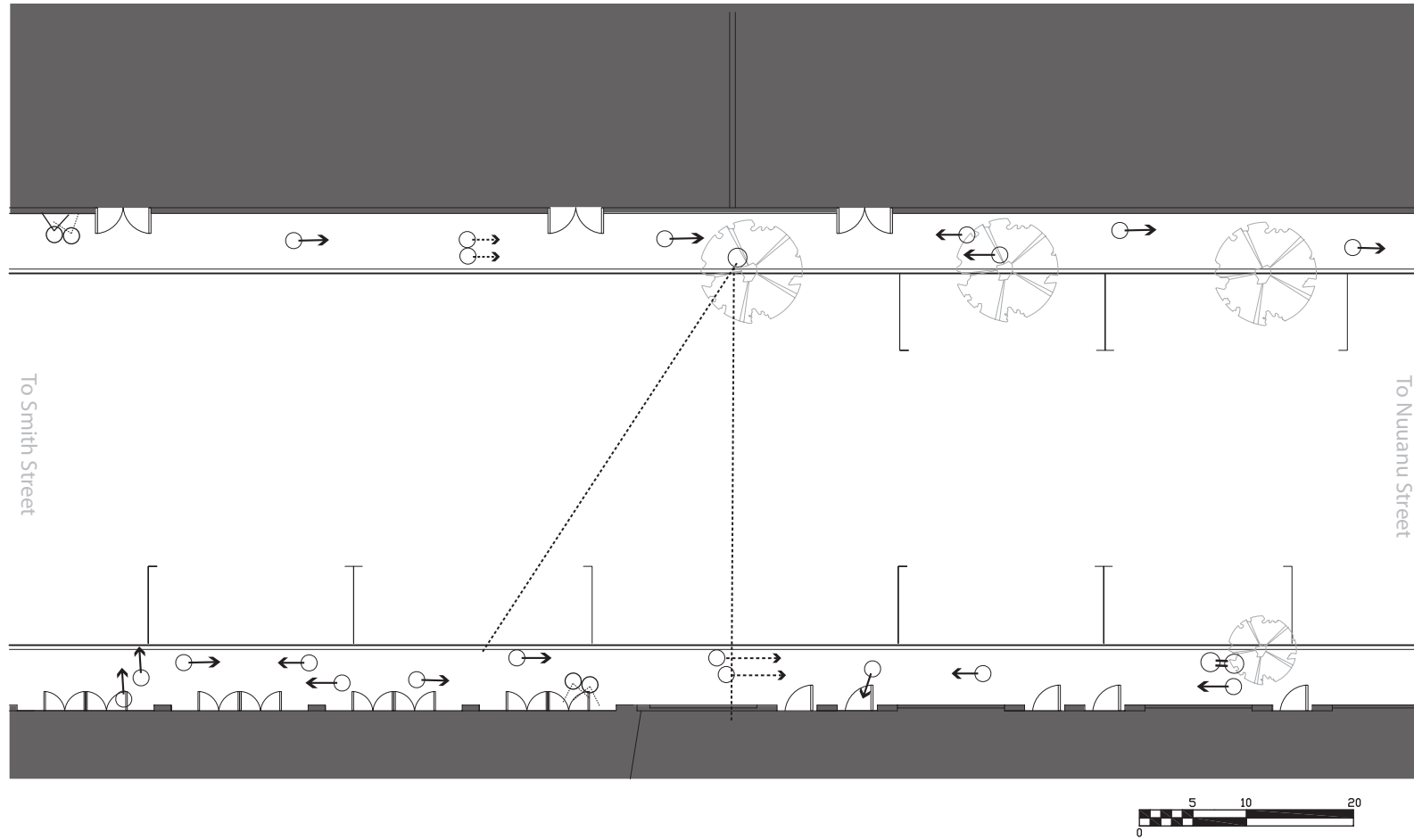
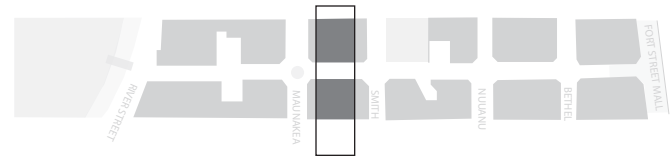
Category	Actions	Law	Examples	Example Definitions
movement 	<b>movement</b> run  walk  stroll  cross 	Movement type is defined by the type of arrows	  	jogger couple taking a stroll cautiously crossing street
	<b>verbal</b>  <b>YELL</b> talk whisper	Intensity of the action is defined by the thickness and length of the pattern	  	parent yelling at child sitting couple in conversation couple whispering
standing 	<b>visual</b>  watch window shop study reading	Focus of the action is defined by the length and thickness of the pattern	  	sitting watching people standing watching performance friends window shopping
	<b>interactive</b> = bargain play hug shake hand	Intensity of the interaction is defined by the length of the pattern		couple bargaining, hugging, or shaking hands
sitting 	<b>consume</b> X drink eat			couple sitting and eating and/or drinking while talking
	<b>emotional</b>  tired bored excited hungry	The visual nature of the action is defined by the circumference of the pattern	 	bored or tired person sitting hungry or excited couple

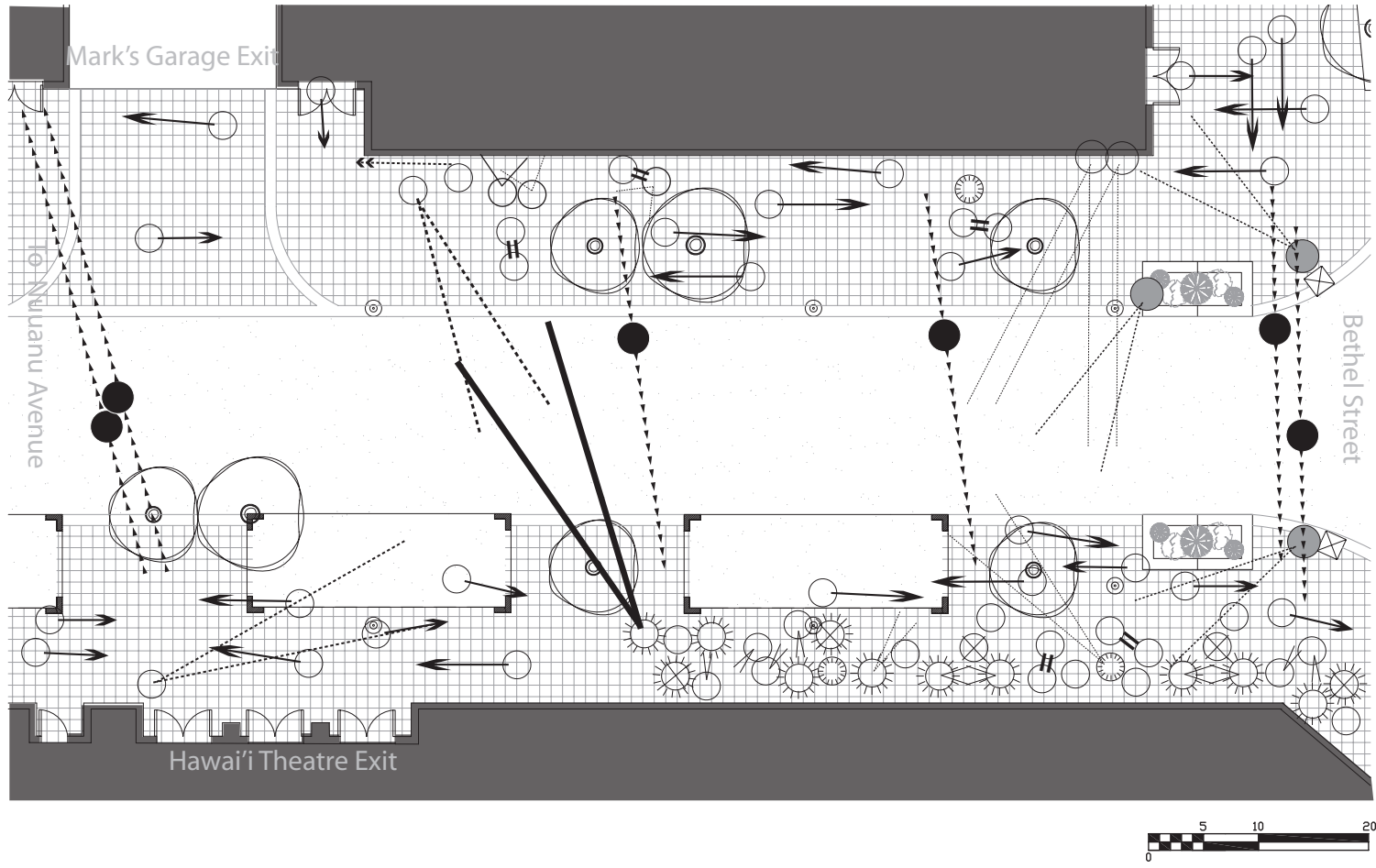
Table 12-1. Street Act Patterns



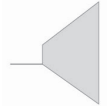
SHARED STREET ACTIVITY PATTERNS

**Figure 12.1**  
**Existing; Typical**



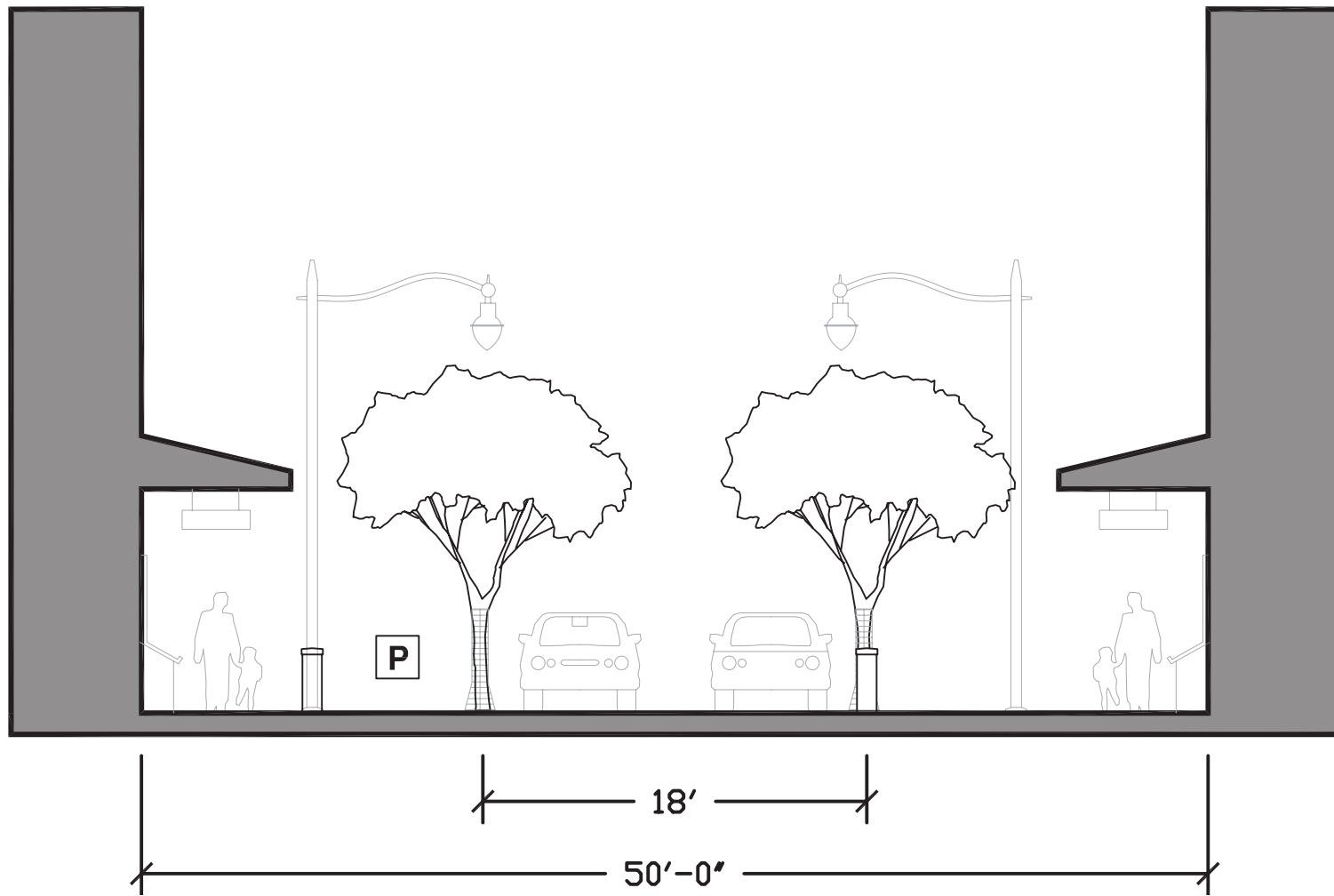


SHARED STREET ACTIVITY  
PATTERNS



**Figure 12.2**  
**Bethel and Nu'uano**

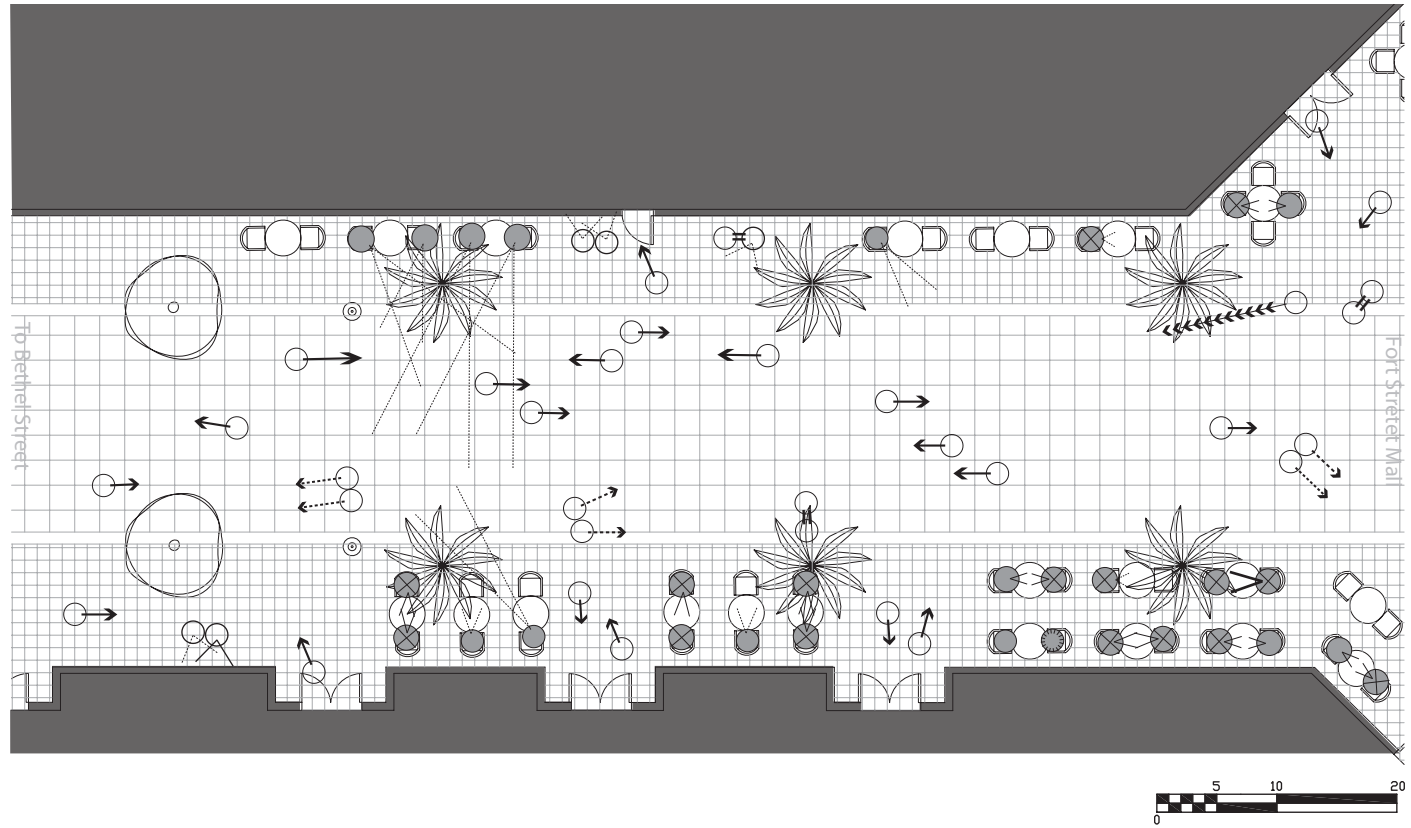




**Figure 12.3. Standard Shared Space Street Section**  
Scale: 1/8"=1'-0"





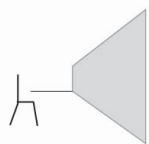
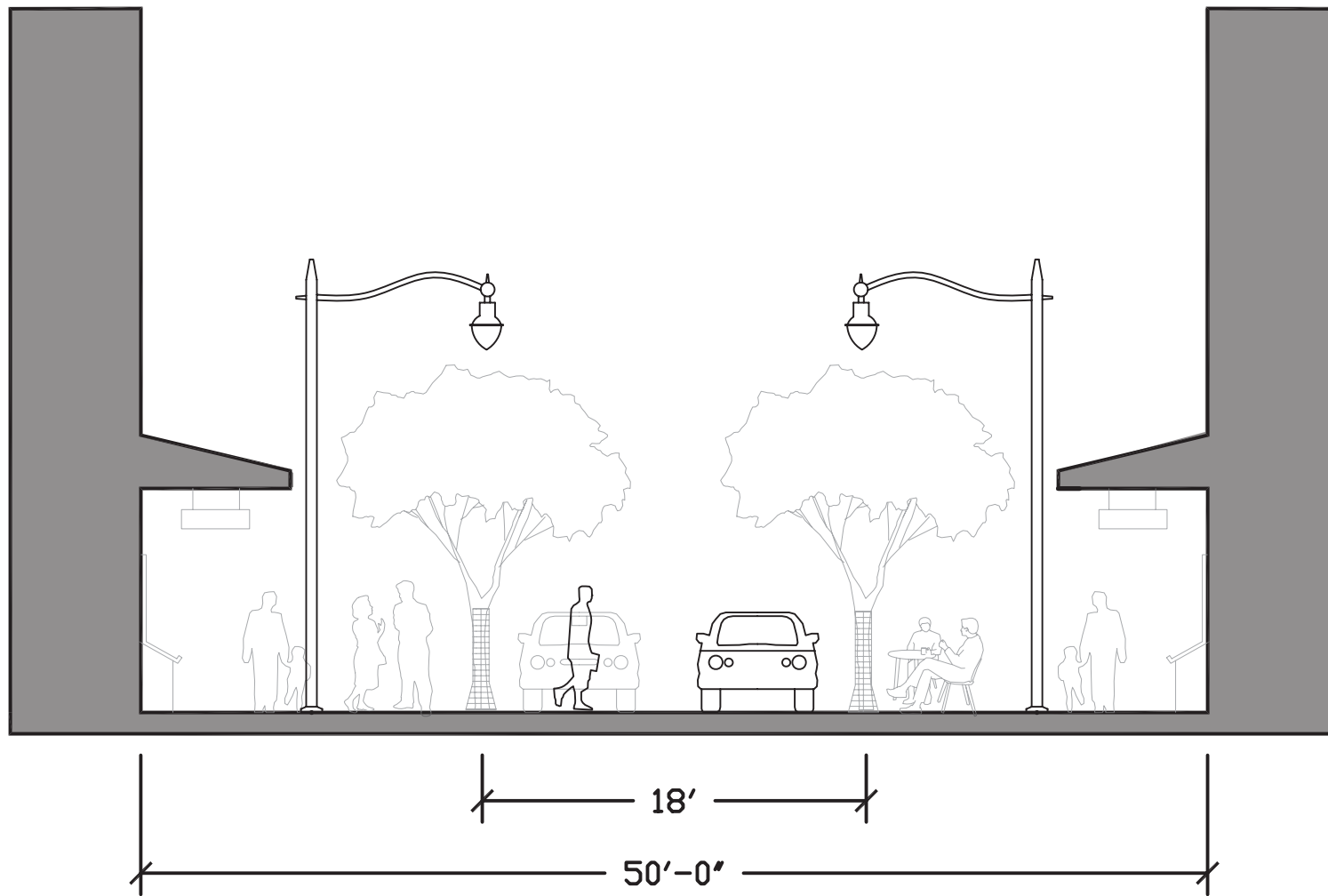


SHARED STREET ACTIVITY  
PATTERNS

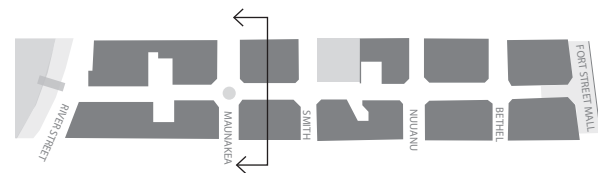


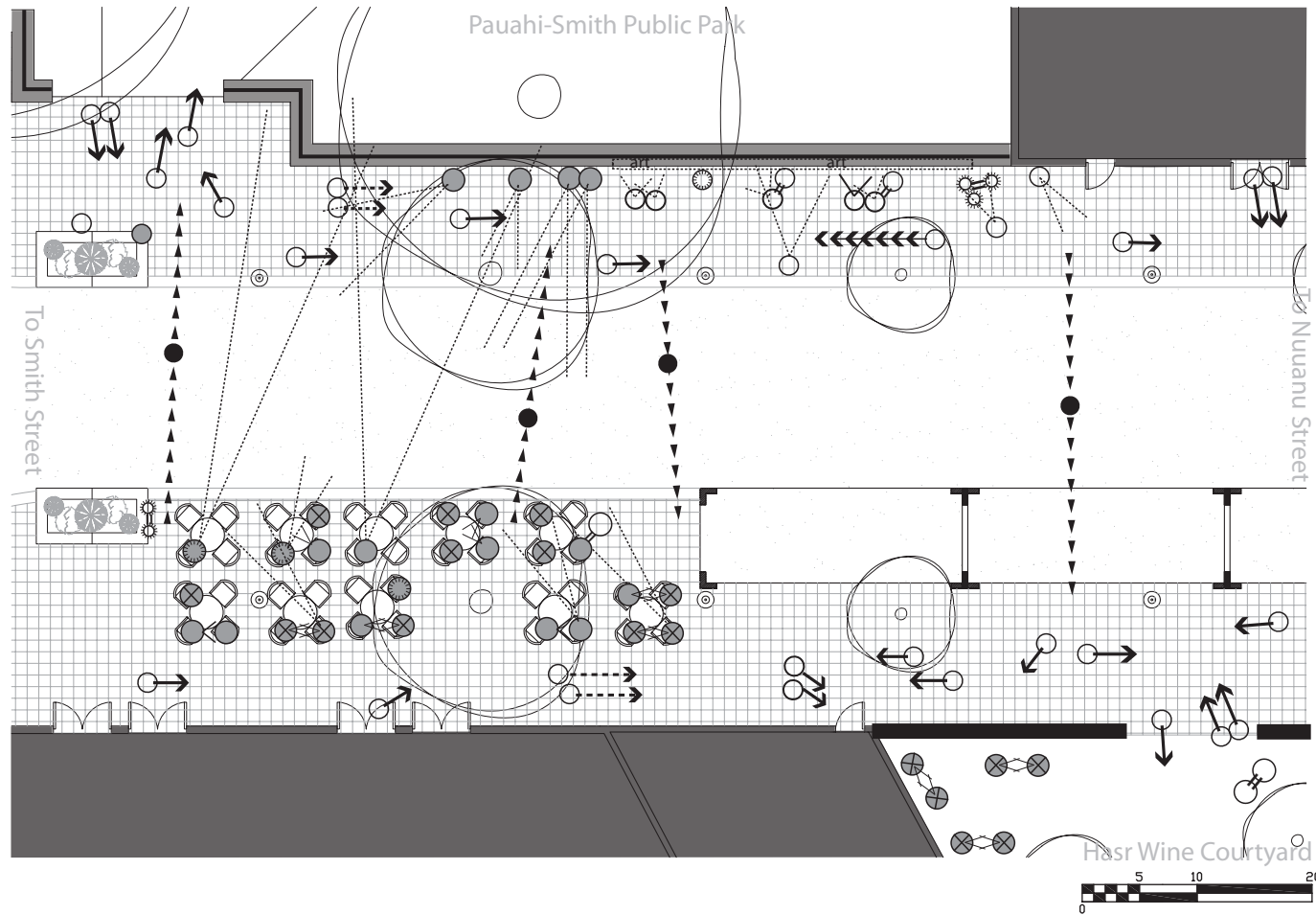
**Figure 12.4.**  
**Fort Street Mall and**  
**Bethel**





**Figure 12.5. Standard Shared Space with Primary Seating Street Section**  
Scale: 1/8"=1'-0"

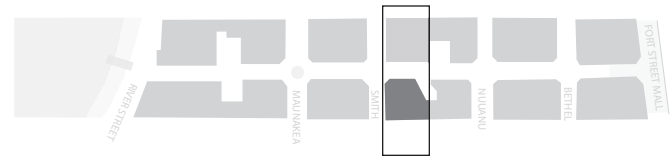


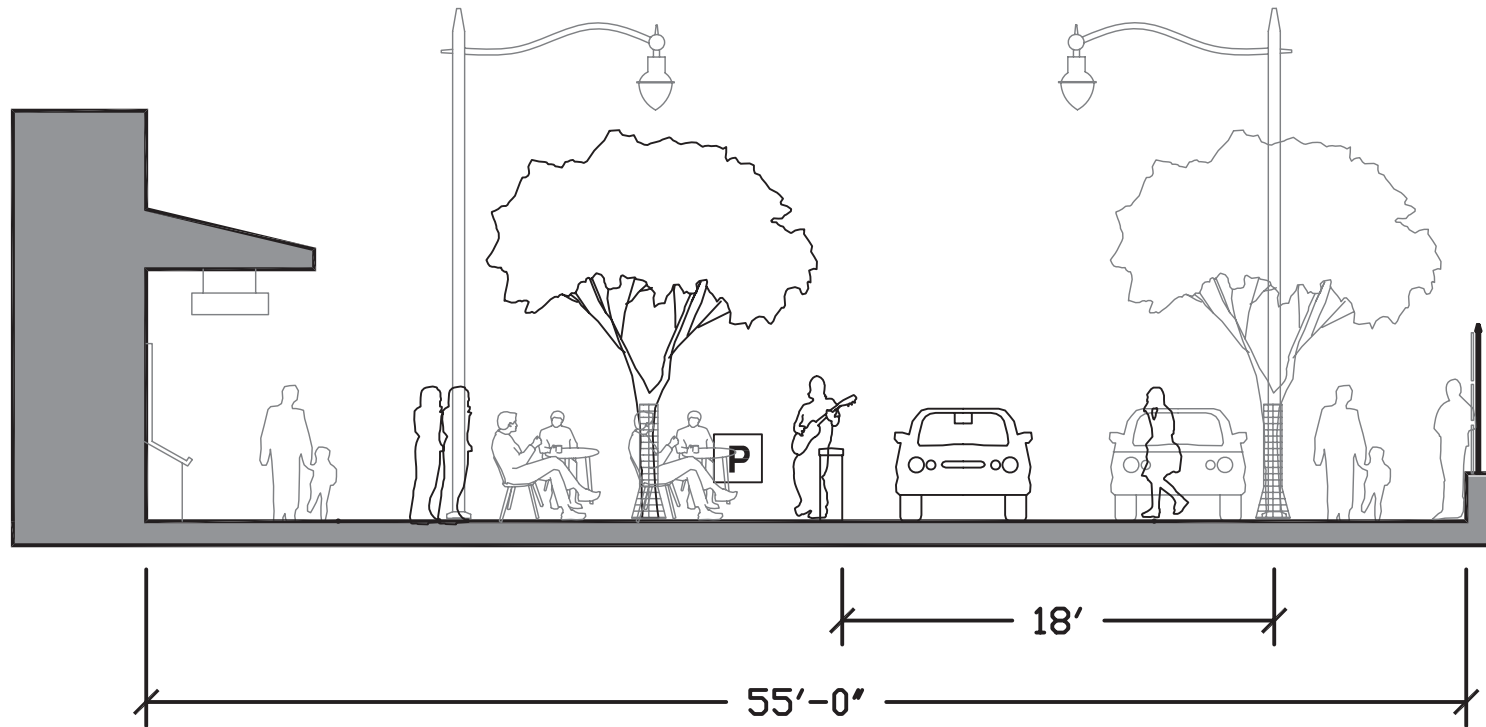


SHARED STREET ACTIVITY PATTERNS

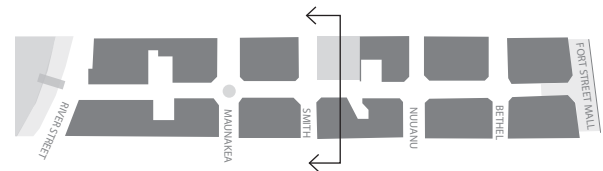


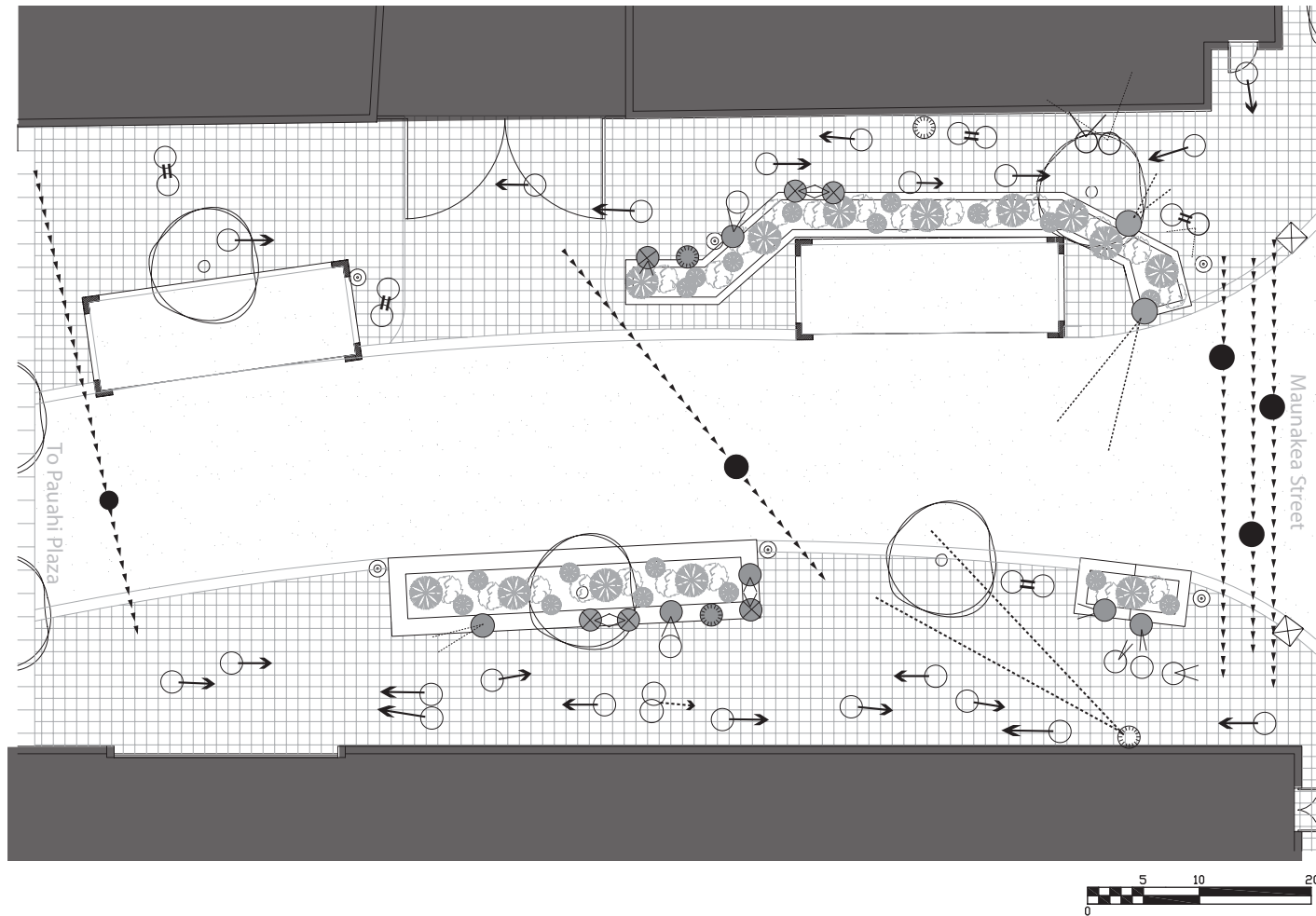
**Figure 12.6.**  
**Nu'uanu and Smith**





**Figure 12.7 Pauhi Art Alley Street Section**  
**Scale: 1/8"=1'-0"**

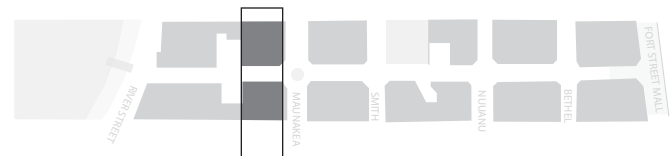




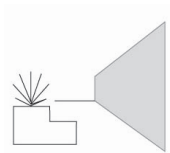
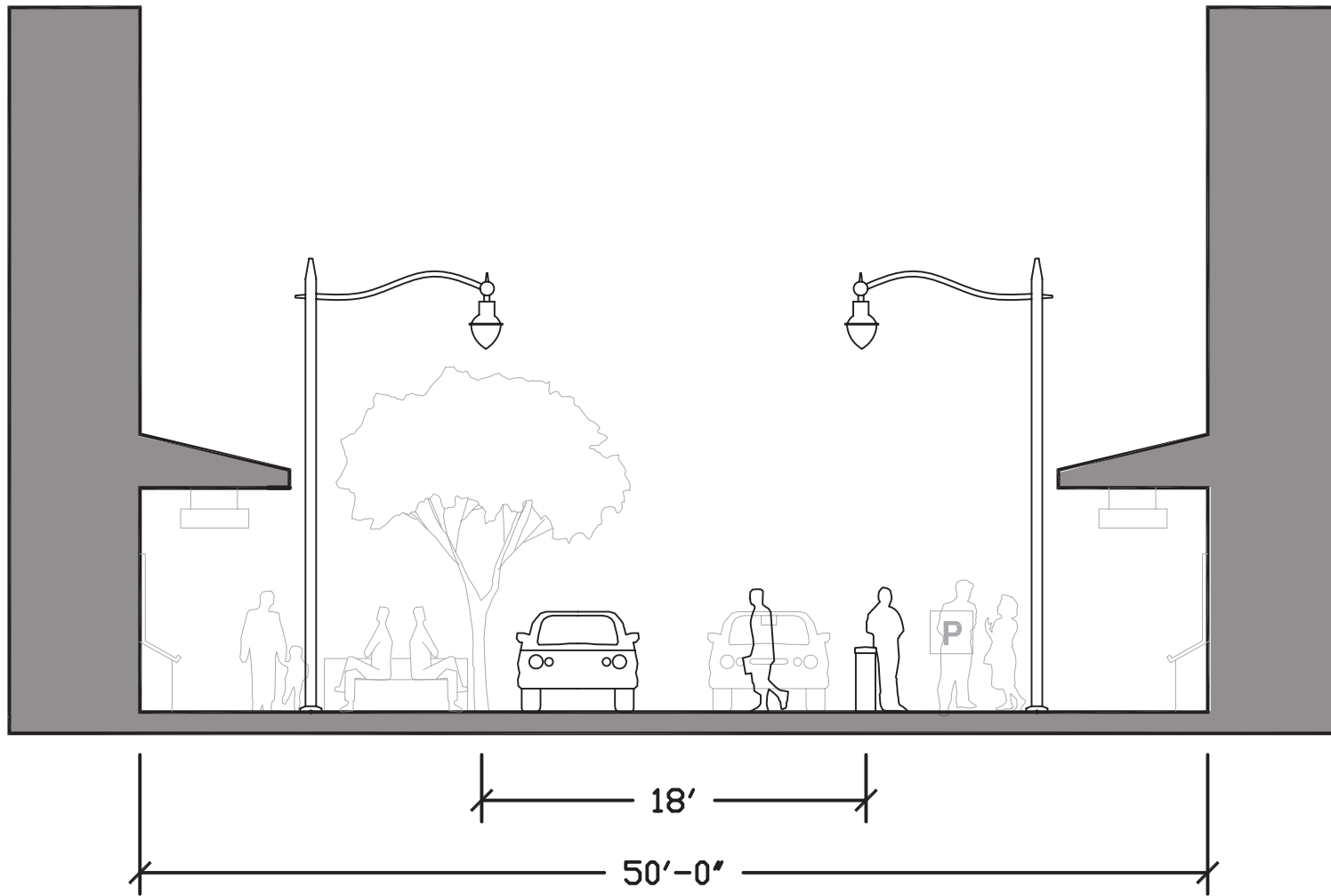
SHARED STREET ACTIVITY  
PATTERNS



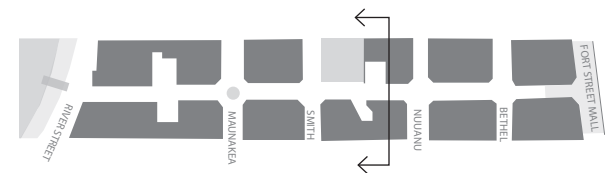
**Figure 12.8**  
**Maunakea and River**

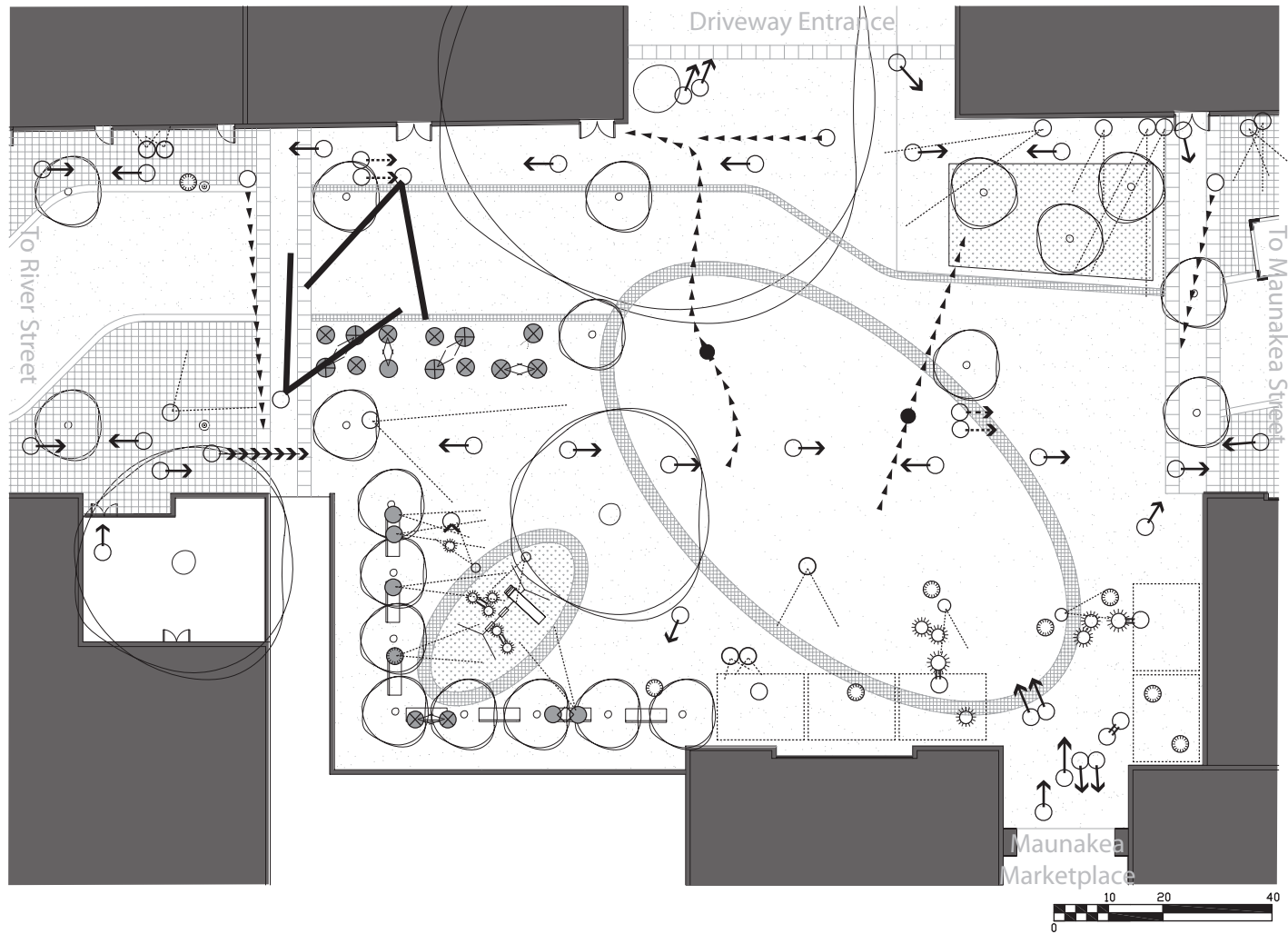






**Figure 12.9 Secondary Seating Street Section**  
Scale: 1/8"=1'-0"

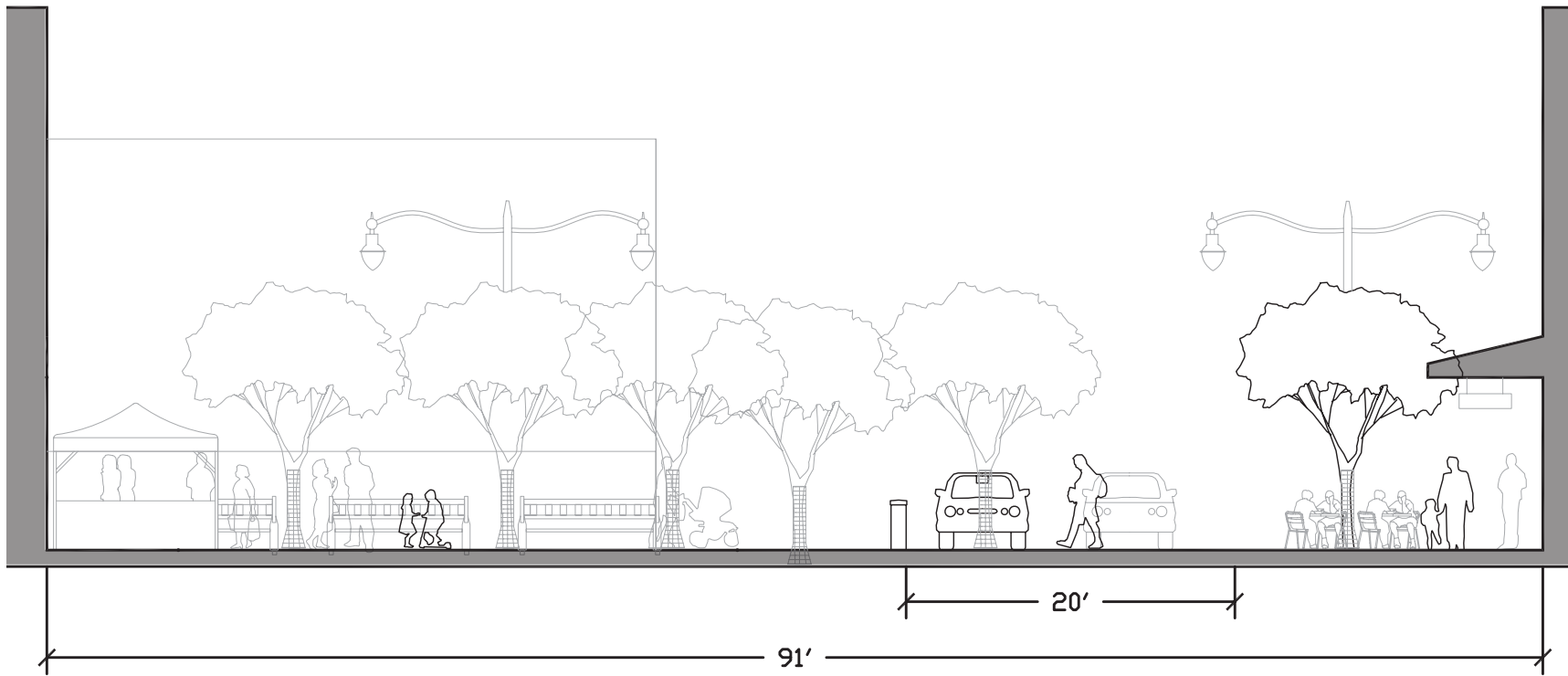




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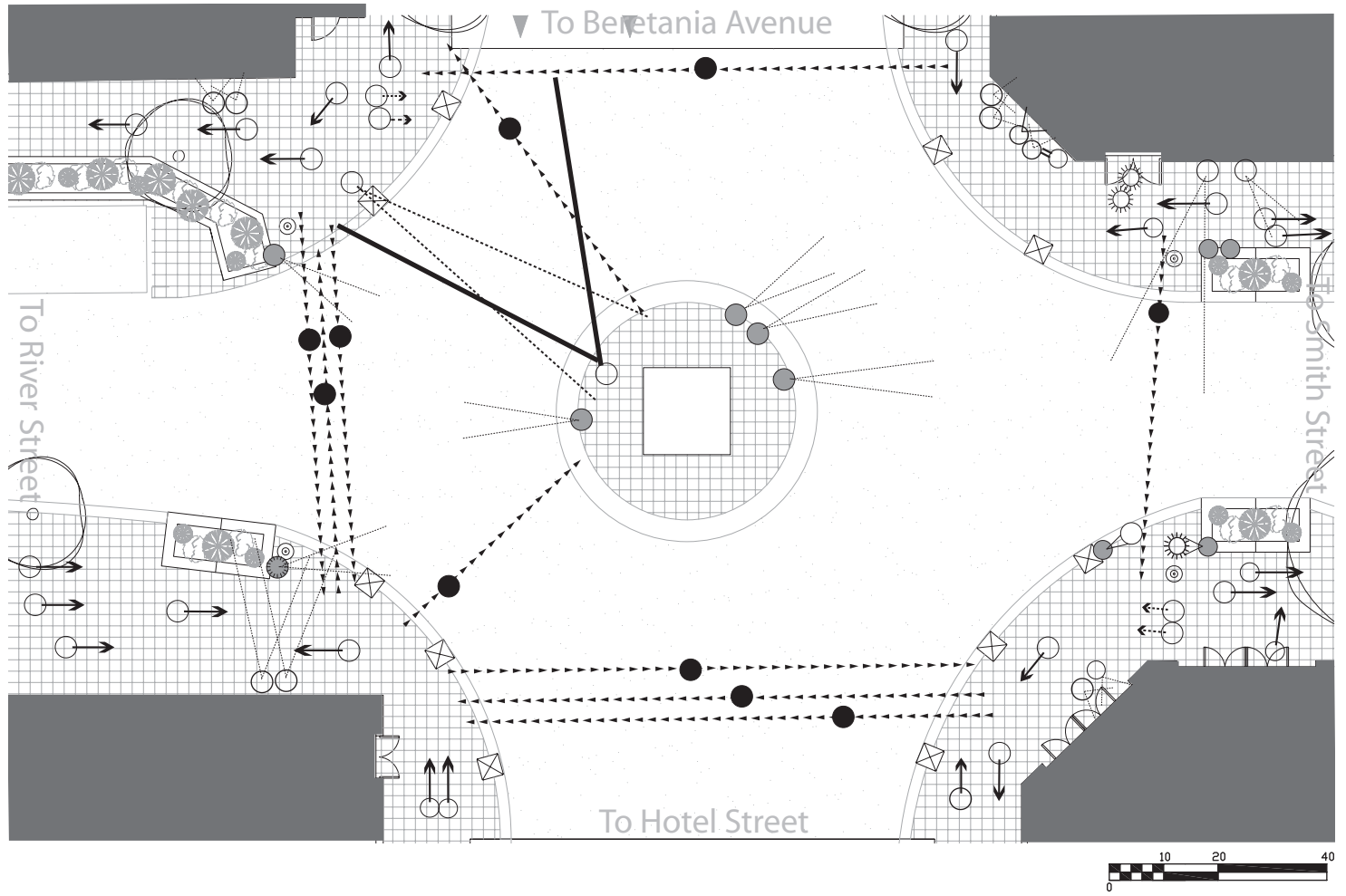
**Figure 12.10**  
**Maunakea and River**





**Figure 12.11 Pauahi Plaza Street Section**  
**Scale: 3/16"=1'-0"**

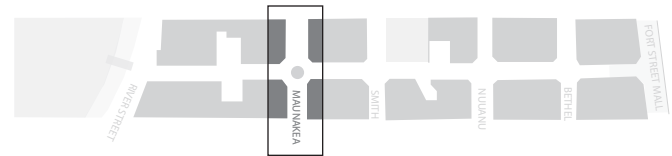


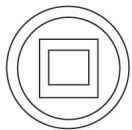
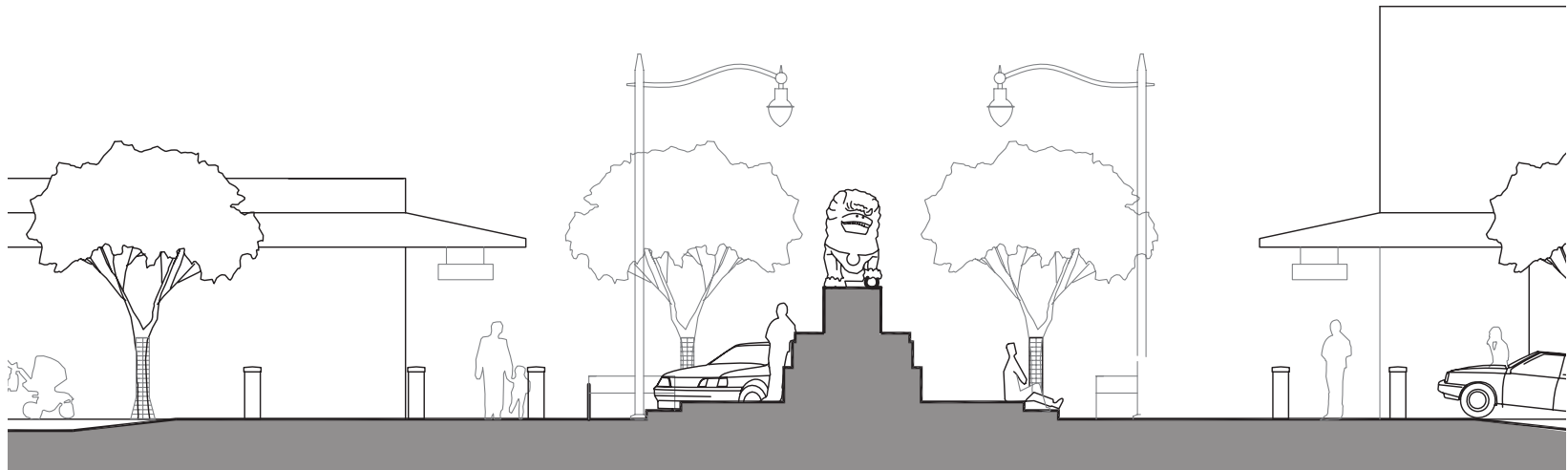


INTERSECTION ACTIVITY PATTERNS

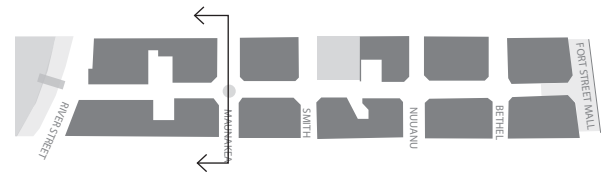


**Figure 12.12**  
**Maunakea and River Roundabout**

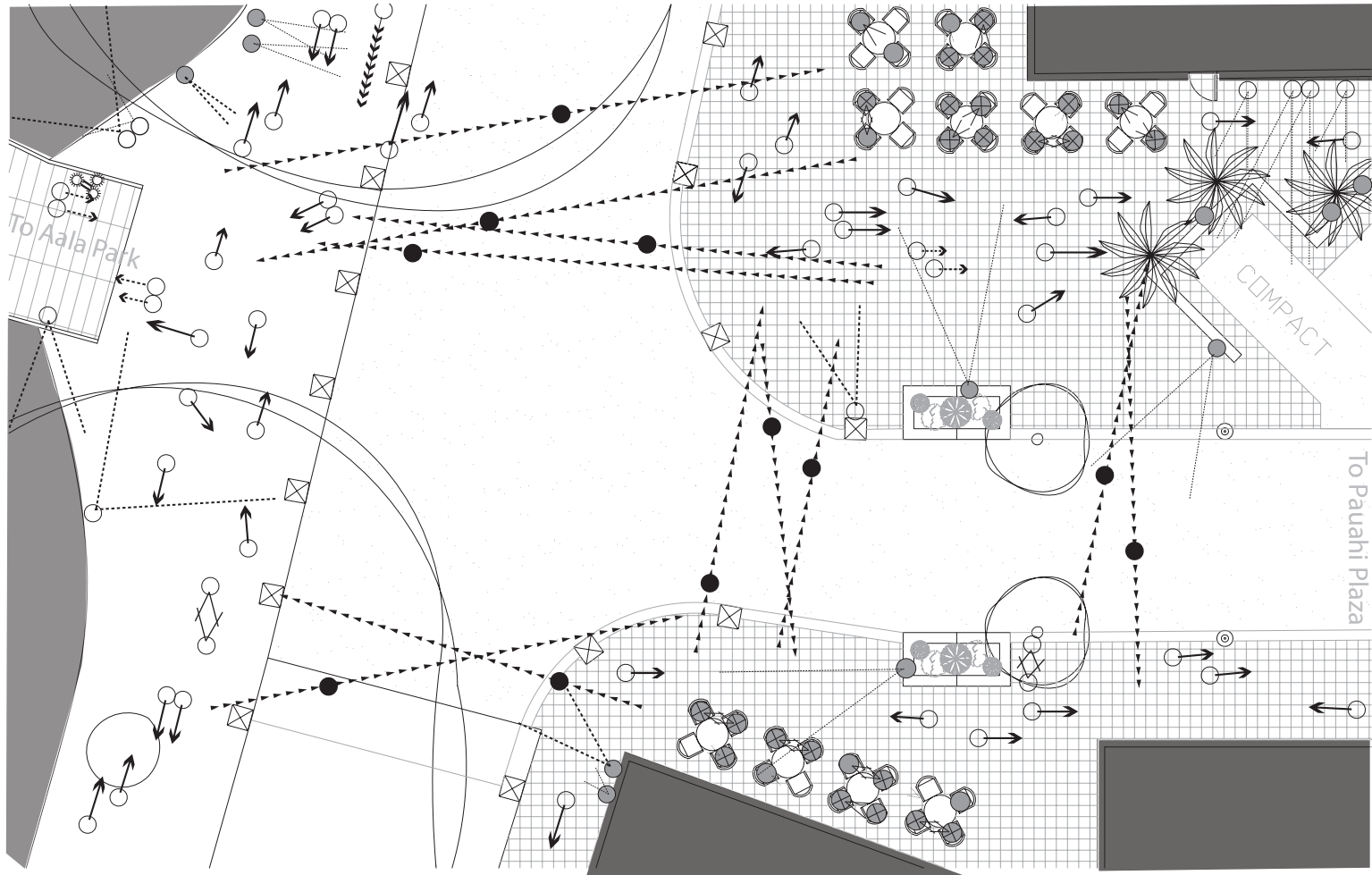




**Figure 12.13**  
**Roundabout Street Section**  
**Scale: 3/16"=1'-0"**





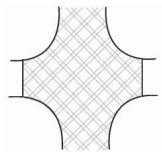
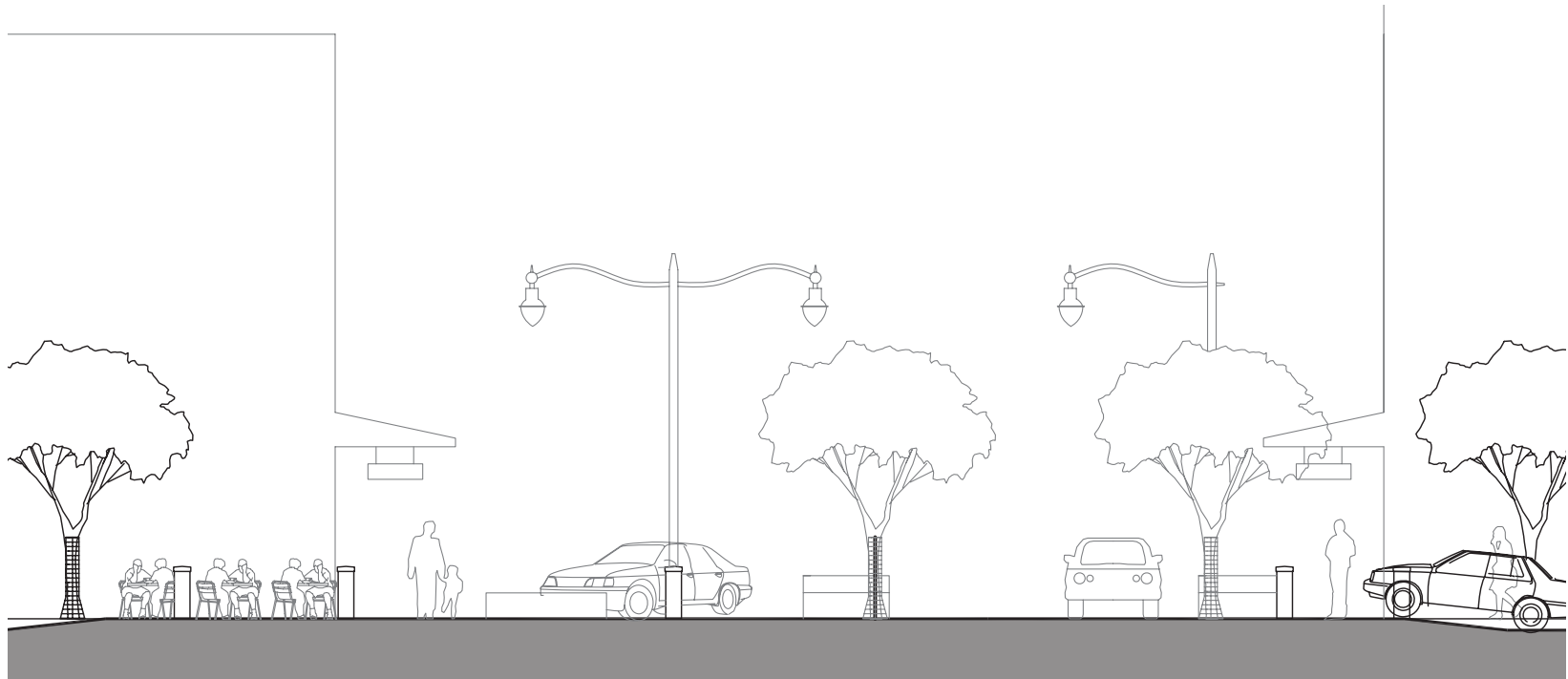


INTERSECTION ACTIVITY PATTERNS



**Figure 12.14**  
**Maunakea and River**  
**Raised Intersection**





**Figure 12.15 Raised Intersection Street Section**  
**Scale: 3/16"=1'-0"**



# Vignettes

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Figure 14.2  
Proposed Standard Shared Space



Figure 14.1  
Existing Pauahi Street View







Figure 14.4  
Proposed Art Alley Shared Space

Figure 14.3  
Existing Pauahi Street View

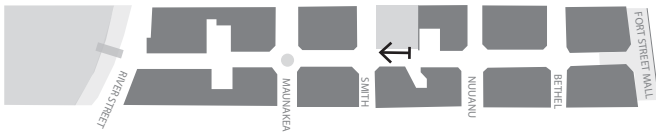






Figure 14.6  
Proposed Pauahi Plaza Shared Space

Figure 14.5  
Existing Pauahi Street View





Figure 14.8  
Proposed River Promenade Shared Space

Figure 14.7  
Existing Pauahi Street View





# Implementation

This document serves as:

- A resource of Shared Space background, benefits and design,
- An Evaluation of Street Environments at ten major neighborhood centers, and
- A Shared Space Design proposal for Pauahi Street.
- A primer on creating quality public spaces for Honolulu
- A call to city and community leaders, and transportation planners that designing quality urban spaces should be a key priority as sprawl slows down and urban in-fill projects become the norm.

As a design proposal for Pauahi Street, each step and major design revision should be reevaluated with the design framework created in this document. Since Pauahi Street is a City-owned street, the funding would be approved by the Honolulu City Council. Implementation would need to be coordinated through multiple departments within the city government. The Department of Transportation would be heavily involved as well as Parks and Recreation who have jurisdiction of Fort Street Mall. According to Anthony Ching, Executive Officer at the Honolulu Department of Planning and Permitting, the other entities need to be involved and perhaps the largest hurdle to convince that a Shared Space design will work is Department of Transportation Services (DTS). DTS are in charge of Parking, Bus Transit, and street usage permitting.

The following are steps within the city process that should take place to continue the effort and work done thus far:

**1. Develop Project Timelines, Phasing, and Financial Plan, and detailed infrastructure plans.**

Proper project management is key to getting funding and support for the project to proceed.

**2. Ongoing Public Participation Process/ Education**

Since the Shared Space concept is counterintuitive to the function of a typical street and asks pedestrians to become integral in slowing down traffic by become a hazard, education is an important step. This research went into a brief Public Participation process that involved stakeholder interviews with willing participants of Pauahi Street. As a major public infrastructure renovation project – more meetings of various sizes and groups should be held with the other community and business groups listed in Appendix II as well as the general public. These meetings should gather the community’s needs and concerns, communicate the benefits and strengths of Shared Spaces’, and create project goals

that focus on neighborhood connectivity and functionality.

The public participation process should continue throughout the whole project and after every major milestone, community meetings with various public groups should be held to assure any concerns the public may have and ensure that the public buy in and support the project.

**3. Complete a Transportation and Urban Zoning Plan**

This step is intended to anticipate possible traffic impacts and provide a zoning analysis to see how the current design meets or doesn’t meet existing Special District zoning laws.

**4. Revise the physical plan based on public comments and other findings.**

This step ensures that changes will not change the initial concepts and intent of Pauahi Street.

**5. Environmental Assessment and Material Testing.**

The project should meet all city and state

regulations and materials for bollards, paving, and other street elements should be tested for durability, safety, and aesthetic qualities.

## 6. Design Development

This phase refers to further refinements to the physical plan.

## 7. Post-Completion Evaluation

A post-occupancy evaluation should be done to evaluate how effective the project is towards meeting project objectives, goals, quality, and effectiveness. This information will be vital to be a precedent for future projects in Honolulu.

Although there is a standard implementation process for all City and State funded projects. Shared Space would benefit from an alternative process as well. The Shared Space Project, a European program which aims to develop new policies and new methods for an integral approach of the planning of public space, has created a planning process which has been used on every Shared Space project in Netherlands. The purpose of this process is to “return the prime responsibility for designing public space from the specialists back to the politicians.”<sup>1</sup>

Specialists refer to groups like traffic experts whose purpose is to solve sect problems based on isolated objectives that do not consider the interests of politicians or the people they serve. They state that this oversight is a main problem in the way public spaces are currently designed and implemented.

The Shared Space program proposes that the government takes on a different role – facilitator. “This management strategy assumes that the problem-solving ability lies with citizens, companies, and social groups. Employing the power and knowledge of society is the principle of this new strategy.”<sup>2</sup> This process is especially important to the Shared Space design concept since it relies heavily on the neighborhood and citizens to be empowered to self-police and maintain the street.

The management strategy process consists of nine cells (Table 14-1.):

*“This model works like a logbook for a project; it records agreements and intentions and it can be consulted by anyone as guidance for the implementation. It divides the process into nine main steps that have given their name to the nine cells. The Shared Space process operates on the diagonal line, with the coloured boxes in figure 3. The process starts with step 1 in the top left corner; administrators expound their social vision and make a choice on that basis – we would like*



to facilitate this area for people and their public realm. The politicians remain involved with the process by giving their support to the associated working method – an holistic process where every user of the space and every spatial discipline can express and deploy its wishes, knowledge, and skills. Feedback moments during the process enable politicians to confirm that their instructions are carried out as they envisaged.

The actual design is handed over to an holistic design team, and this phase is represented by the middle cell – the design phase. Experts from a range of disciplines translate the vision into a holistic functional design. Co-operation and communication, both mutually and with the different users of the public space are key. Finally the design is actually realised at implementation level. This stage is represented by the bottom right corner. This concerns more than laying bricks and planting trees. A careful choice and use of the right materials and furniture is extremely important. The height and location of lighting columns could make or break a design. So the administration sets out the course and therefore guides the thinking and actions at functional and operational level within the organisation. A good design process runs on the diagonal line. There must be an excellent transfer

between the different cells on the diagonal line – from administration to design and from design to implementation. Interim feedback is essential for a good end result.”<sup>3</sup>

	The administration	The design	The implementation
Vision	Gives the instructions People space or traffic space	Sustainable designs Social behaviour versus traffic behaviour	Objective of technology as tool
Working method	Holistic Empowerment and participation Vision provides direction Process rather than product	Creativity Co-operation with other disciplines Communication	Co-operation within the organisation Creativity
Tools	Process skills	Participative design methods Insight into relationship with other disciplines Communication methods	Choice and placement of materials Using new materials

Table 14-1. Implementing a Shared Space Design (Shared Space Org., 2006)

## SECTION ENDNOTES

- 1 Shared Space. Shared Space: Room for Everyone: A new vision for public spaces.  
Interreg III B project 'Shared Space'. 2005. Pg 29
- 2 Ibid 1, pg 29
- 3 Ibid 1 pg 31

# Conclusions

## **Areas of Future Study**

Shared Space is a relatively new topic and contains a wide variety of topics to study in the future. To date, this is one of only a few publications that focus solely on the topic of Shared Spaces and its history, background, themes, and Social Benefits. As more Shared Space projects are completed and evaluated conclusions and accuracies of intended use and function can be understood on a regional, local, and national scale. How does Shared Street affect the American Disabilities Act and are there ways to meet these needs without losing the important environment that a Shared Space creates? As a new street typology, traffic engineers would have to study and create new practices of dimensioning proper turning radii, grades, bollards specifically for a Shared Space. Shared Spaces describes a concept and not a place, therefore important research can be done in looking at Shared Spaces effectiveness at intersections and residential neighborhoods.

Future research specific to this literature would include thorough investigations on specifying functional street elements such as materials, lighting, street furniture, Drainage, and Landscape. A study of how Shared Space is affected by the Chinatown Historical Special District Zoning is another vital topic that needs to be understood before the project can proceed. A study regarding the impact of traffic spillover to neighboring streets should also be investigated as well as an Environmental Assessment of runoff and other ecological concerns. There is also a question of how regulations and rights

change when one is in a Shared Space. Similar to a disclaimer, research should be done in understanding current traffic laws, regulations, and protocols to see how these are and should be changed to maintain a true Shared Space concept. This would be important especially to law enforcement who, in past cases, wrongfully assumed traditional traffic laws in Shared Spaces.

Beyond the physical aspects of the research, the Street Act Pattern language (Table 12-1) presents a novel concept in describing actual or intended human activity within a space. Future research can be done on its applicability and inform social scientists and architects the human response to a build environment.

## Conclusion

### **1. There is an inherent design flaw in the typical street design.**

The United States placed an emphasis on broad stroke transportation efficiency without considering the other important function of streets as the social center which supports and builds community identity, ownership, and pride as it once was in the pre-automobile era.

### **2. Develop stronger collaboration by city designers and government leaders to improve the quality of public spaces.**

This is encouraging news as people are beginning to move and grow into landscapes that were much more urban than they were twenty years ago. The urban environment impacts our daily lives and Shared Space can provide the opportunities that planners, architects, and communities realize have been lost. By including traffic engineers, planners, and architects realize the street's quantitative and qualitative responsibilities can greatly improve the quality of the pedestrian realm.

### **3. We should spend just as much time designing for people as we do designing for traffic.**

There is nothing wrong with reducing risk in the public realm, but it is a dangerous cycle and one must consider its effect on creativity.

### **4. Shared Space is designed for people first and is not a standard.**

The precedent studies and Urban Design concepts show how flexible a Shared Space can be in serving a variety of

community activities, events, and lifestyles.

**5. Shared space is not a product of European culture.** The vital relationship between pedestrian and vehicle exist in Honolulu. Analysis shows that removing the curbs in the right situations and locations can naturally reduce the speed of the automobile without the use of repetitive signs, lines, or other traffic control elements. The relationship is natural and doesn't require an extensive training program.

**6. Pauahi Street's existing physical, social, and cultural amenities serve as an optimal location to create a Shared Space.** Designing and implementing a Shared Space on Pauahi Street, however, does come with a number of issues and hurdles, as presented in the stakeholder meeting, and understanding those hurdles are important to realizing a Shared Space for Pauahi Street.

**7. Shared Space design provides a solution to the issues, themes, and theories of quality life standards** with the growth and strength of the "green", context-sensitive solutions, and creative class movements supporting new concepts in urban development, Shared Space typologies provide synergetic values to those of New Urbanism, Pedestrianization, and Smart Growth.

**8. Implementing a Shared Space for Pauahi Street faces two major hurdles, the undesirable population in Chinatown and traditional transportation thinking.** Based on following

discussions with stakeholder participants, the undesirables in Chinatown contributed to the removal of pedestrian amenities that a Shared Space is trying to bring back in. Engineers and planners are fully engrained into the training of traditional transportation design. It will be a tall order to convince these leaders that thinking must devolve to evolve.

In conclusion, Shared Space is a new street typology that stands between the extremes of separation and pedestrian-only cities. It accepts the automobile and the street's responsibility as the community's first and most important public space as a vital part of our daily lives. Despite its utopian conception, projects in the United States and abroad have brought this idea to reality and should be used to counter broad stroke transportation planning policy. Used as a tool in renovating old or creating new urban plans, Shared Space can give the community and the city the type of street diversity and quality street life that every pedestrian deserves.

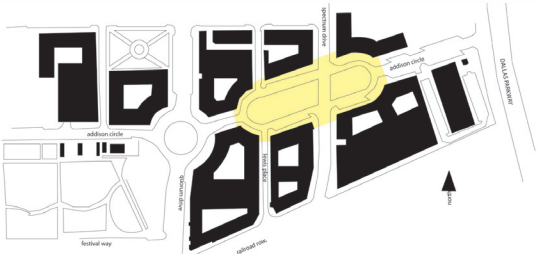
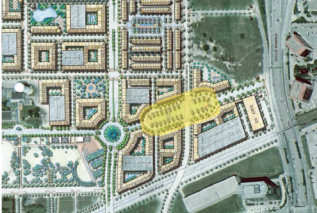



**Appendix A: Shared  
Space Precedent  
Graphic Tables**

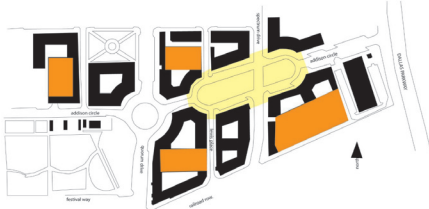
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**Addison Circle**




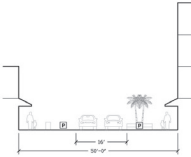
Addison Circle, Texas, USA



Key Dates	First phase completed in 1997. Currently 3 of 4 phases have been completed.
Background	Addison Circle began in 1992 with the idea of bringing an urban city into a suburban area 12 miles north of Dallas. Addison Circle is a 4-1/2 square mile commercial mixed-use center with 6 million sq.ft of commercial space, 170 restaurants, and 1,330 apartments and condominiums. As a part of their Street Hierarchy they created Mew Streets, which in England has been defined as a street lined with homes. The mews were a part of a general ideal that "eyes on the street were a good thing" and therefore made the urban spaces full of trees, landscaping, and other activities to encourage people to get out of their homes.
Site Plan	
Length	630 feet
Aerial Image	
Site	
Goals	Provide a distinctive focus for community life and varied special events. Expand and balance the existing choices of housing Promote a rich mixture of synergistic uses Retail may be included, but should be support-service rather than being a regional destination.



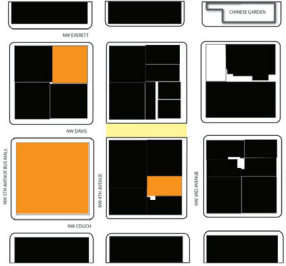
Street Width	
Pedestrian Activities Types	"Sidewalks are generous, measuring 12 feet deep on residential streets and 14 feet on boulevards. Streets are narrow, lined by shade trees at 25-foot intervals. A pedestrian "mews," located between buildings, provides fire access, secondary vehicular access, and pedestrian circulation." ( <a href="http://www.lgc.org/freesub/land_use/models/addison_circle.html">http://www.lgc.org/freesub/land_use/models/addison_circle.html</a> )
Zoning	Density: 1.78 gross FAR 75 dwelling units per acre (ULI)
Building Types	
Multi-modal Linkages	 <p>Future DART Station South of Quorum Drive. Bus Route on Quorum Drive</p>
Service Amenities	The Esplanade is surrounded by offices, restaurants, and business services on the East end. The rest of the area consists of residential, everyday retail, smaller tenant offices, restaurants, and public events.

Public to Private Relationship	Ground floor tenants are encouraged to use the sidewalk and the facades have windows both which encourage a spatial relationship for the pedestrian.
Economic Impacts	Addison Circle was meant to compete with the regional attractions in North Dallas.
Behavioral Changes	<p>The mews typically have no front yard, curbs, and are built to the property line. They initially put bollards to define the pedestrian space and the motorist space, but it was found that people never used it that way and just walked on the street. The streets are shared with people moving in, deliveries.</p> <p>When the development first started, the local police were giving out parking tickets to all of the cars in the mews. The police were treating the rules of the road as if they were in a typical suburban environment where deliveries were done away from the public realm. So Addison Circle management had to remind the police that this place is different and such parking habits are allowed. In the mews and other residential areas some residents began eating dinner out to the street, showcasing how, if given the space, and environment, people do naturally open to the street.</p>
Traffic	
Types	N/A
Counts	N/A
Fatalities	N/A
Materials (Aesthetics) Type, Color Size	
Parking	





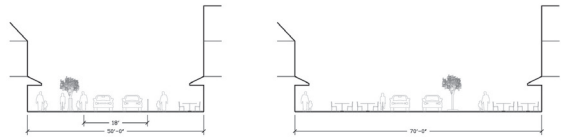
**Festival Street @ NW Davis**  
Portland, Oregon, USA

Key Dates	1999 - Chinatown Development Plan Approved 2005 - Construction Begins 2007 - Project Completed
Background	The Festival Street @ NW Davis is a key feature in a larger revitalization of Chinatown/Old Town Portland. The area is underutilized and is home to people of lower income, homeless, and foreign residents.
Site Plan	
Area	1 block - 250 feet
Aerial Image	
Site Before After	
Goals	The improvements are designed to strengthen and identify the character of this historic district, foster cultural and economic diversity, and promote a vibrant pedestrian environment for commercial, retail and residential uses. This public investment into the neighborhood will foster new private investment and redevelopment in a historically depressed neighborhood. (factsheet)
Street Width	

<p><b>Pedestrian Activities Types</b></p>	<p>The area was designed to encourage more commercial and residential private development. Portland is known for its walkability, recognition of disabled, and high use of alternative transportation. Therefore, this street is designed with the pedestrian, bicyclist, and handicap in mind. The festival street will be host for outdoor markets, concerts, parades, and other festivals in the historic district.</p>
<p><b>Zoning</b></p>	<p>Density: 4,199.17/sq mi (Portland Online) Zoning= CXd (Central Commercial Design Zone) and New Chinatown/Japantown Historical District.</p> <p>"The Central Commercial (CX) zone is intended to provide for commercial development within Portland's most urban and intense areas. Development is intended to be very intense with high building coverage, large buildings, and buildings placed close together. Development is intended to be pedestrian-oriented with a strong emphasis on a safe and attractive streetscape."</p> <p><i>Design (d) overlay zone</i> "The Design Overlay Zone promotes the conservation, enhancement, and continued vitality of areas of the City with special scenic, architectural, or cultural value."</p>
<p><b>Building Types</b></p>	<p>3 to 5 stories The buildings were built in the early 1890-1920's and are made of brick. In all areas, the buildings are built with a zero lot line. Some of these buildings have office space and low-rent apartments. The Flanders Festival Street (two streets away from Davis) borders new mixed-use residential developments as a part of the Hoyt Street Development project.</p> 
<p><b>Multi-modal Generators</b></p>	<p>5th and 6th Avenue to the West of Davis is Portland's bus mall. The bus mall is a spine and spoke system that serves greater Portland.</p> <p>Two blocks to the East is the Portland Light Rail Old Town Station. The line goes perpendicular to the Davis Festival Street.</p>  <p>Courtesy of Tri-met</p>
<p><b>Anchors Services Amenities</b></p>	<p>3rd and 4th avenue bookend the festival street. As the center of Chinatown, the street is only a block away from an award winning traditional chinese garden that takes up a Portland Block. Nearby is the police station and auxillary city services buildings.</p> <p>Surrounding the site are a few Chinese restaurants, hostess bars, and a small convenience store. There are some residential properties but the place has a "no man's land" identity.</p>
<p><b>Public to Private Relationship</b></p>	<p>Portland encourages restaurants and other shop owners to use sidewalks for seating and dining. As infrastructure and commercial redevelopment continues in this area, expect the area to have an increased relationship between public and private.</p>

<p><b>Crime</b></p>	<p>Old Town/Chinatown at Davis Street has a higher crime rate than areas surrounding it and are common of a typical urban area. It is too early to say if crime has changed since the installation but since the area is still low in residential space, the density needed to make this a 24-hour community with "eyes on the street" is still far from realization.</p>
<p><b>Economic Impacts</b></p>	<p>The city hopes that these festival streets provide the perfect urban gathering venue for more city events and investment to take place in this area. The city services and chinese garden, easy access to multiple modes of transit, and the explosion of the Pearl district are all major factors increasing the investment opportunities of Chinatown.</p>
<p><b>Traffic Types</b></p> <p><b>Counts</b></p> <p><b>Fatalities</b></p>	<p><b>Speed:</b> Two ways traffic with one through lane and one parking lane..</p> <p>3,000 vehicles per day based on Traffic Counts of NW Davis/4th Avenue</p> <p>No evidence to suggest it has increased or decreased</p>
<p><b>Materials (Aesthetics) Type, Color Size</b></p>	
<p><b>Landscape Spacing Size Water Art Furniture Lighting</b></p>	 <p>Typical street lights painted red to signify Chinatown's presence.</p>
<p><b>Parking</b></p>	

**Rijkstraatweg**  
Haren, Groningen, Netherlands

Key Dates	2002 - Project Complete
Background	25,000 people Through time the main street in Haren developed into the city's main shopping center. But as traffic increased, its shopping vitality decreased as did the pedestrians' perception of using it. Therefore in 2002, with the help of Hans Monderman, the city redesigned the street to have no curbs, signs, or traffic signs and instead rely on the Shared Space philosophy to reduce the speed of traffic, pedestrian injuries, and increase public space without decreasing the flow.
Site Plan	
Area/Length Aerial	980 feet; Square is 240'x190' 
Site	before  after 
Goals	Reduce traffic congestion Increase pedestrian safety Improve economic vitality of street Increase overall quality of city center for all users
Street Width	


Pedestrian Activities Types	As the main street in the city, it serves many functions, both private and civic. The main street connects to the main square that becomes a festival space for concerts, markets, and other gatherings. 
Zoning Density	Population: 25,000 people Density: 1,069.7/sq m (statline.cbs.nl)
Building Types	 2-3 stories Zero side lots and built to the front property edge. Styles vary from traditional to modern, to old converted homes.
Multi-modal Linkages	There is frequent bus service along the street. 
Anchors Services Amenities	Local shops and restaurants that support the city needs.
Public to Private Relationship	"Local cafes have been encouraged to occupy the store front with tables and chairs." (Philip Parker) 
Economic Impacts	The shop keepers have been content with the change. (Hans Monderman)






<p>Traffic</p> <p>Types</p> <p>Counts</p> <p>Fatalities</p>	<p>Speeds are roughly 10 mph going through the area and is shared with buses, bicycles, and pedestrians. "Slower speeds equate to higher capacity" Philip Parker Bus companies report significant journey time decrease. (shared-space.org)</p> <p>12,000 cars per day with freight traffic, a decrease of 10% from before.</p> <p>no evidence to report whether it has increased or decreased.</p>
<p>Materials</p> <p>(Aesthetics)</p> <p>Type,</p> <p>Color</p> <p>Size</p>	<p>brick pavers, with white granite pavers, metal bollards and strategically placed tree planters with protective bars.</p> <p>The scale responds to the pedestrian while the placement acts to slow traffic.</p> 
<p>Landscape</p> <p>Spacing</p> <p>Size</p> <p>Water</p> <p>Art</p> <p>Lighting</p> <p>Furniture</p>	<p>Benches, Trees and Public art will be included as budget permits throughout the area and within the round-about.</p> 
<p>Parking</p>	

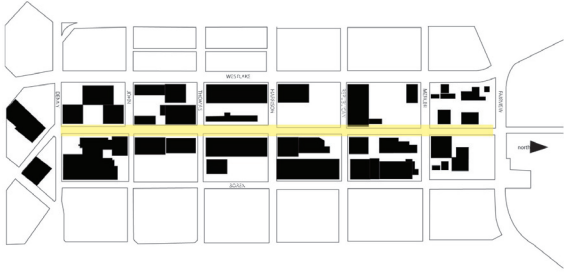


**Kalamazoo Downtown Mall**  
Kalamazoo, Michigan, USA

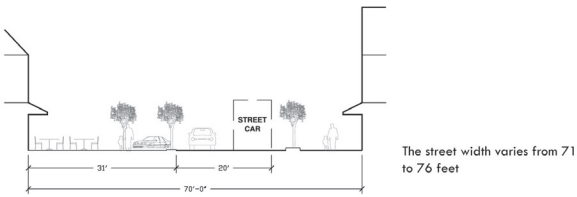



<p>Key Dates</p>	<p>1959 - Closed to Vehicular Traffic 1998 - Two south blocks reopened to one-way vehicular traffic</p>
<p>Background</p>	<p>Kalamazoo was the first pedestrian mall to be designed by Victor Gruen in 1959. A Cavellier move at the time, history has shown that the concept was short lived and despite initial improvement, has struggled to invigorate the needed people and economic activity of the suburbs. Fourty years later after much debate the city decided to bring limited vehicle traffic onto the Kalamazoo Mall. The first phase was completed in 1998 and the rest of the South Mall was converted in 2007</p>
<p>Site Plan</p>	
<p>Area/Length</p>	<p>2 blocks ~1000 ft</p>
<p>Aerial</p>	
<p>Site</p>	 <p>1950 - before pedestrian mall    1959-1998 pedestrian mall    1998-present "shared street" mall</p>
<p>Goals</p>	<p>To Reintroduce vehicle traffic into the former pedestrian mall to boost retail activity and make the place more inviting to pedestrians. By maintaining the pedestrian scale and design of the mall while including vehicle traffic in one direction, speed should be slow therefore reducing the possibility of accidents compared to a typical road.</p>
<p>Street Width</p>	


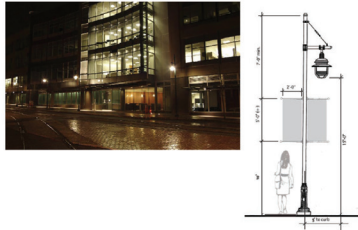
<p><b>Pedestrian Activities Types</b></p>	<p>Pedestrian activities include car shows, cafes, dining, shopping, performing arts, museums. The area is in downtown so during the day it has a lot of people but most leave during the night and the mall is often empty. Bicycles are allowed through.</p>
<p><b>Zoning Density</b></p>	<p>Density: 3,125.8/sq mi (City of Kalamazoo)                  CBTR: Central Business, Technology, and Research District                  No Max Building Height; Minimum of two Stories; 50 ft street setbacks.</p>
<p><b>Building Types</b></p>	 <p>Brick Buildings, some of the newer buildings maintain brick and concrete as a main material in the building facade and range to be 2-5 stories</p>
<p><b>Multi-modal Linkages</b></p>	 <p>7 bus lines stop around Kalamazoo Mall and extend out into the greater Kalamazoo area using a typical hub and spoke pattern.</p>
<p><b>Anchors Service Amenities</b></p>	<p>Kalamazoo Valley Museum anchors the north                  Epic Center - Mixed-use Performing Arts Center                  Convention Center                  Multiplex Cinema Complex</p>
<p><b>Public to Private Relationship</b></p>	<p>The street maintains a "rhythm of storefronts" but there is little activity that goes beyond the glass storefronts. Some have alcoves and some have awnings. Generally, there are some tables along the street but it looks like they are owned by the city and some restaurants that have outdoor seating. With the installation of concrete heating the seating and activities can stay open year-round encouraging more blur between the private, and public spaces and pedestrian vitality.</p>
<p><b>Economic Impacts</b></p>	<p>There is no hard evidenceshowing the economic situation of Kalamazoo has improved. But changing it from a pedestrian mall with a mall with traffic was deemed as a needed adjustment to improve the economy of the general area. They see having vehicular access as a way for people to come into the mall to do errands, pick up people, see what is going on and hopefully improve access for people to use the area that would otherwise not think of going here when it was closed to traffic.</p>

<p><b>Traffic Types</b></p>	<p><b>Speed:</b>                  "A consistent paving treatment, and shallow rollover curbs, help to blur the distinction between pedestrian and vehicle spaces. With its narrow "cartway" and head-on collision of one-way streets, the reintroduction of vehicle traffic is more a matter of perception than of function, and clearly this was the intent."(viewpoints)</p> <p><b>Counts</b>                  Not Applicable/No Evidence</p> <p><b>Fatalities</b>                  Not Applicable/No Evidence</p>
<p><b>Materials (Aesthetics) Type, Color Size</b></p>	 <p>Twin pairs of 12-foot-tall monuments, designed in an Art Deco motif, mark each end of the Mall, and serve as symbolic traffic bollards to ward off most through traffic.</p> <p>"Both road and walkways are constructed of brick pavers with fairly intricate patterns that give you a sense of a special place."(Chitchat)</p>
<p><b>Landscape Spacing Size Water Art Lighting Furniture</b></p>	 <p>Since the Mall was designed for pedestrians only, it is full of grassy areas, gardens, water features and stone obelisks. Despite the reversion back to one-way vehicular traffic, they are basically using the firelane and open areas for stall parking. Therefore, much of the landscaping exists to this day.                  2 acres total                  Picnic Tables and Water fountains and is rated grade 1 for 80%-100% accessible by all types of users. (Kalamazoo Parks and Recreation Plan)</p>
<p><b>Parking</b></p>	

**North Terry Avenue**  
Seattle, Washington, USA

Key Dates	2007 - Streetcar Operations Begin 2008 - Anticipated Completion
Background	"The intent of these design guidelines is to take advantage of Terry Avenue North's low vehicle use, location, width and history and to create a one-way pedestrian and retail-oriented corridor, in Seattle's underdeveloped South Lake Union neighborhood." The area is a part of Mayor Greg Nickels action agenda to attract biotechnology jobs, fix the "Mercer Mess", build a streetcar, create a new waterfront park, build infrastructure and, improve neighborhood amenities.
Site Plan	
Area	Six-Blocks - 2,600 ft
Aerial Image	
Site Before After	
Goals	<ul style="list-style-type: none"> <li>• Allows all of the existing and potential land uses, including their associated access, loading and parking</li> <li>• Accommodates all modes of transportation including the proposed streetcar</li> <li>• Promotes low vehicle speeds and discourages through traffic</li> <li>• Is safe and accessible for all people, bicycles and vehicles</li> <li>• Provides a balance between right-of-way functions with environmental priorities</li> <li>• Retains a unique character based on its history, industrial uses, topography and views</li> <li>• Emphasizes pedestrians, and amenities for pedestrians</li> <li>• Uses sustainability in materials and systems</li> </ul>

Street Width	
Pedestrian Activities Types	Pedestrian Oriented Neighborhood Street with shopping, socializing, commuting, living.
Zoning	Density: 6,901/sq mi (City of Seattle) IC - Industrial Commercial C2 - Commercial NC3 - Neighborhood Commercial Retail is allowed but not required.
Building Types	 2-3 stories, but will increase to 6 as more development occurs. Historical brick and stone buildings with adaptive reuse.
Multi-modal Linkages	 New 1.3 Streetcar along Terry Avenue North using existing rail lines originates at the Westlake Transit Center that connects to the Hutchinson Cancer Center and citywide bus, street car, and monorail lines.
Service Amenities	 South Lake Union Park - 12 acre public space that includes Parks for large gatherings, Marina/Warf, Gymnasium, Maritime Heritage Historical Center, Seattle Biomedical Institute. <ul style="list-style-type: none"> <li>• Current land uses include warehousing, retail, wholesale, food production, light manufacturing, rehearsal space, office and biotechnology labs.</li> <li>• Interurban Exchange - Four buildings comprise over 500,000 SF of class A office and biotech space.</li> <li>• UW Research Center</li> <li>• Children's Regional Hospital</li> <li>• Rosetta Inpharmatics</li> </ul>

Public to Private Relationship	The area is an industrial zone lacking "true private space". But some buildings along the street have loading docks that trucks back into. Experiences in Pearl District have shown that these areas can be renovated to be art lofts or other retail spaces, but since there is a 3-4 foot separation from ground, it may not provide the presence that a shared street needs to slow down traffic.
Crime	The neighborhood is known as a place that people go through to get to another place. It is often considered a red light district of Seattle. Since the project isn't complete it is hard to say if crime or nefarious activity will decrease, although it is common for these activities to leave when land prices and community increase.
Economic Impacts	As a part of a larger redevelopment, Terry Avenue will be the neighborhood heart of a mixed-use technology based neighborhood. After infrastructure improvements (street car, street improvements, Terry Ave.) and initial developments are completed, (Interurban Exchange, 2200 Westlake), more developments will take place around the line. Much of the initial development is being fronted by Paul Allen, Microsoft co-founder. Terry Avenue will be in increasing the pedestrian presence, therefore increasing access to amenities, such as retail, office, and residential, improving land values and community identity.
Behavioral Changes	Not Applicable, project incomplete.
Traffic	
Types	"Terry Avenue is a two-way minor north-south local street that lies east of Westlake Avenue and serves local/commercial loading trips within the South Lake Union area. The typical cross-section within the study area consists of a single travel lane in each direction and parking on both sides. Sidewalks are provided only for short segments and grades are minor. Speed limits are generally not posted." (SLU Streetcar Technical Report)
Counts	1,000 vehicles per day
Fatalities	No Evidence - project not complete.
Materials (Aesthetics) Type, Color Size	
Landscape Vegetation Lighting Water Art Furniture	



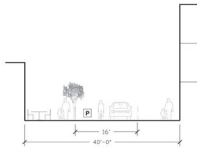
Parking








**Wall Street**

Downtown Asheville, North Carolina, USA

Key Dates	Project Completed: 1988
Background	"Wall Street, located between Otis Street and Battery Park Avenue, was an alley that serviced buildings facing the major thoroughfare of Patton Avenue. During the second half of the 20th Century, Wall Street became home to several businesses and developed a reputation as an entertainment enclave. The narrow street and human scale supported one-way motor vehicle traffic traveling at slow speeds and Wall Street gained a pedestrian-friendly reputation." (pedsafe)
Site Plan	
Area/Length	1 block - 770 ft long
Aerial	
Site	
Goals	"Revitalize its aging downtown and take advantage of an alley behind a major commercial street that was already evolving into a pedestrian-friendly space with both retail and commercial orientations." (pedsafe)
Street Width	

Pedestrian Activities Types	Shopping, People watching, street performances, art, dining, socializing, farmer markets, craft shows.
Zoning Density	Density: 1,704.6/sq mi (US Census Bureau) CBD - Mixed Use Development encouraged
Building Types	 1-5 stories. Buildings are very old, concrete or brick. Some are decorated to show the independent character and spirit of the business owners.
Multi-modal Linkages	11 buses use Patton Avenue (South of Wall Street) as a major route to the nearby Asheville Transit Station. 
Anchors Services Amenities	Retail/Offices/Restaurants/Outdoor Climbing Wall/Dedicated Parking Structure Church
Public to Private Relationship	Windows and doors open into the public space. There are some benches and during good weather conditions, cafe's open up along the street creating the feeling of an intimate passage. 
Crime	
Economic Impacts	69,000 sf of retail/restaurants/office above. "The physical characteristics of the street that are conducive to slow automobile speeds combined with the pedestrian friendly streetscape elements enable Wall Street to prosper." (pedsafe)



Behavioral Changes	
Traffic	<p>Types Speed: Below 15 mph One-way traffic w/ parking on one side. Vehicular, Bicycle, Pedestrian</p> <p>Counts 402 average vehicles per day</p> <p>Fatalities no evidence to support such incidents have increased nor decreased.</p>
Materials (Aesthetics) Type, Color Size	<p>cobblestone brick pavers</p> 
Landscape Spacing Size Water Art Lighting Furniture	<p>underground electric service new storm drainage system historic era streetlights benches landscaping</p> 
Parking	 <p>Parking was added on one side of the street in 1993 to slow down traffic.</p>

# Appendix B: Stakeholder Interview Documents

A Shared Space for Pauahi Street  
Meeting One  
Wednesday, February 6, 2008

AGENDA Introductions (15 minutes)

The Possibilities of a Shared Street (10 minutes)

Outline Goals of Design (20 minutes)

Present Existing Conditions (20 minutes) (SWOT)

Discuss Issues (20 minutes)

Break (5 minutes)

Design discussion (45 minutes)

GOALS Summarize overarching issues

Develop goals of project

Establish 2-3 rough schemes for development

### **Goal of Participatory Process:**

Engage stakeholders within the Pauahi Street and Arts District to:

- Communicate the opportunities and benefits that a Shared Street can bring to Pauahi Street and the larger neighborhood.
- Explain the process of choosing Pauahi Street as an ideal location for a Shared Street.
- Learn more about the group's street needs, vision for everyday life, and vision for special occasions.
- Create an appropriate street program to address current and future needs.
- Develop a conceptual design for Pauahi Street.
- Create evaluation criteria that would be used to compare and analyze programmatic and conceptual design schemes.

### **Questions to ask Group**

1. What are the places or events on Pauahi Street that you feel are unique?
2. What are the general issues you have towards the street life on Pauahi Street?
3. What are the strengths and weaknesses of Pauahi Street as an owner and user?
4. What type of traffic, vehicular, pedestrian, cyclist, issues

do you see on Pauahi Street, or its cross streets, that you would like to see more of? Less of?

5. What age group or demographic is the street missing or underserved?
6. What are your visions for everyday life on Pauahi?

### **Potential Issues or Concerns**

- I do not see Shared Streets happening here, people will drive too fast and fatalities will increase.
- Wouldn't traffic get worse if there are no lights?
- Would this increase property values and remove the mom and pop stores?
- Why do we need a Shared Street, Pauahi Street is fine as it is.
- Where will the parking go?
- How will we address the street transients and other illegal activity?

## List of Stakeholders

Amy Blagriff, Executive Vice-President, AIA Honolulu\*

Tony Ching – Department of Planning and Permitting

Christina Kemmer – Communications Pacific

Mike Terry - Mark's Garage

Wiwik Bunjamin-Mau - Marks Garage

Rich Richardson – Creative Director, Marks Garage

Chinatown Merchants Association

Chinese Chamber of Commerce

Hawaii Chinese Association

Hasr Wine Co\*

Hawaii Pacific University

Bethel Street Gallery\*

Sarah Richards– Vice President, Hawaii Theater\*

Robert Gerell – Gerell Management

Allen Stack Jr

Fort Street Mall Business Improvement District Association

Grand Café and Bakery\*

Kai Hawaii Structural and Forensic Engineers

Marsha Rose - Pacific Traditions Gallery

Epic Restaurant

Art Treasures Gallery\*

Keiki Photography

Honolulu Culture and Arts District\*

Grey denotes no return inquiry

\* Denotes contact but unavailable for interview.

**DArch Project**  
**Pauahi Street Workshop Charrette**  
**January 18, 2008**

**Meeting Preparation Checklist**

**Providing Information to the Public**

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- Define what information the public will need to participate
- Write text of information products
- Design the layout of the publication
- Print the publication
- Distribute publication to stakeholders in advance

**Identify date, time, and place for meetings**

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- Find Meeting Location
- Agree on best time for convenience of target audience
- Agree on the dates for the meetings
- Confirm Seating requirements and table arrangements for proposed meeting format
- Secure meeting rooms
- Communicate seating arrangements and arrive early and set up the room
- Review arrangements regarding keys, access, and emergency numbers

**Meeting Design**

---

- Prepare any instructions needed for meeting activities
- Identify resources, such as recorders

**Develop Presentations**

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- Identify what topics need to be covered and key points
- Identify what graphics are needed
- Develop any meeting handouts
- Conduct dry runs of all presentations

**Meeting Sign-in**

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- Develop Sign-in sheets
- Identify meeting handouts
- Identify name tags needed
- Bring or arrange for sign-in table, chairs, table for meeting handouts

**Signing**

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- Determine the number and kinds of signs needed to lead people to meeting rooms
- Prepare Signs
- Put up signs prior to meeting

**Refreshments**

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- Determine whether refreshments will be needed
- Determine whether to bring or buy refreshments
- Determine any equipment needed, such as coffeemaker, trays
- Coordinate enough lead time to get refreshments and equipment to meeting room

**Equipment**

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- Determine equipment needed: microphones, overhead projector, digital projector, screen, power cords, easels, and flip chart paper, pens, tape
- Identify lead time to bring equipment to meeting

**Leaving Meeting Rooms**

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- Clarify what cleanup of meeting room is required
- Identify person responsible for final lockup

Source: Creighton, James L. *The Public Participation Handbook*

John Wiley & Sons, Inc. San Francisco, CA. 2005





# A SHARED SPACE FOR PAUHI STREET

## Public Charrette Workshop Information

Doctor of Architecture Thesis Project  
 February 2008  
 University of Hawai'i at Manoa School of Architecture



Haren, Netherlands Before + After

### A.K.A SHARED SPACE

- Woonerf
- Living Streets
- Naked Street
- Homezones
- Integrated Street
- Community Street
- Mews

## BACKGROUND

### WHAT IS A SHARED SPACE?

A street where people, bicycles, and automobiles share a common right-of-way. Curbs, traffic signs, and asphalt pavement are removed and features such as landscape and paving are introduced to calm the speed of vehicular traffic. The result is a significant reduction of pedestrian injuries and fatalities therefore encouraging a sustained civic, social, and economic presence on the public street. Shared Spaces may include residential streets, through streets, intersections, and promenades.



Wall Street, Asheville, NC

### HOW DOES A SHARED SPACE "WORK"?

A Shared Space is a second generation traffic calming methodology that uses behavioral psychology to control vehicular speeds instead of physical barriers such as speed bumps and roundabouts. Since it uses psychological means, the need for retraining or regulation is unnecessary because human reactions and interactions are intuitive and involuntary.



DeBrink, Netherlands

### SEVEN PRINCIPLES OF A SUCCESSFUL SHARED SPACE

1. Design for the Pedestrian First
2. Build up to the right-of-way
3. Create Mixed-use buildings with "active edges"
4. Maintain a 40-60 foot Street Width
5. Support movement perpendicular to the street
6. Maintain multimodal links
7. Create "gateways" that define the "Shared Space zone."



Portland, Oregon



Pauahi Street, First Friday

**WHERE ELSE ARE SHARED STREETS BEING USED?**

- Haren, Netherlands
- Terry Avenue, Seattle, Washington
- Festival Street, Portland, Oregon
- Wall Street, Asheville, North Carolina
- Addison Circle, Addison, Texas
- Kalamazoo Mall, Michigan
- Kensington High Street, England
- Delft, Netherlands
- DeBrink, Netherlands
- Drachten, Netherlands

**WHY PAUHI STREET?**

Since Pauahi Street is strategically located less than a 1/4 mile walking distance of the Hotel Street Bus Mall, the future Mass Transit station, and the high-density apartment district to the north, it has the most potential to serve the most people. Pauahi is a minor East-West Street that begins at River Street and ends at Fort Street Mall and could act as a neighborhood spine for community activities since it also crosses through the heart of the Chinatown Art District, Hawai'i Theater and Chinatown's Maunakea Street. Prior visits have revealed that when special activities occur at any of these areas, people are squeezed within a narrow sidewalk. Redesigning Pauahi into a Shared Street could enhance the activities and functions that are now being squeezed into very narrow public spaces.



**CHARRETTE WORKSHOP**

**MEETINGS**

All meetings will be located at Pacific Traditions Gallery from 5:30pm-7:30pm. Snacks and light refreshments will be provided.

Address: 19 North Pauahi Street  
Chinatown, Hawaii 96817

Kickoff Meeting | 5:30pm-7:30pm  
Wednesday, February 6, 2008

Preliminary Design Review | 5:30pm-7:30pm  
TBD

Pre-final Design Review | 5:30pm-7:30pm  
TBD

\*All times and dates are tentative and are subject to change.

**WILL THIS PROJECT ACTUALLY BE CONSTRUCTED?**

No. This is purely an educational exercise supported by the University of Hawaii at Manoa School of Architecture. However, the final product could serve as a jumping point for further investigation and development by the city if it is deemed to be in the best interest of the stakeholders on Pauahi Street, and the community at large.

**WHAT IS EXPECTED OF ME?**

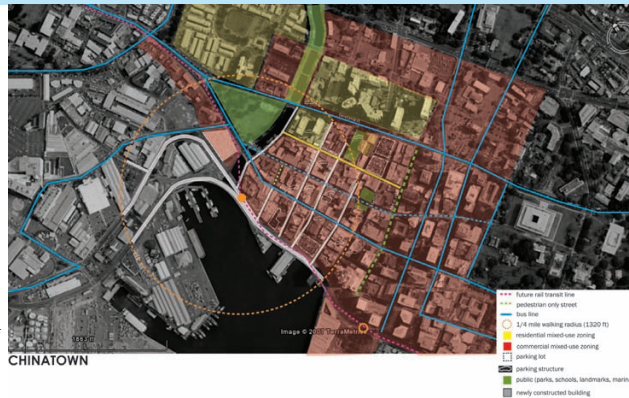
Come with an open mind and your experiences on Pauahi. Your feedback, and visions for your community will help steer a Shared Space design that will suit the needs of the users on Pauahi Street.

*If you have any further questions or would like to participate in this in some capacity, please contact Christopher Parker at:*

[parkerch@hawaii.edu](mailto:parkerch@hawaii.edu)

**PROCESS**

A transportation and land-use spatial analysis of Chinatown



CHINATOWN

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PAUAHI STREET PROPOSED PLAN

