Parking & Traffic Study

Prepared for:

Town of South Padre Island

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INTRODUCTION

Carl Walker, Inc. was engaged by the Town of South Padre Island in July, 2006 to conduct an analysis of parking conditions, parking needs and related traffic issues. This process generally involved the collection of extensive field data related to current parking utilization and roadway conditions. It also involved open discussions with the community about personal experiences, community priorities and the future vision for South Padre Island. Discussions were also held with Kendig-Keast Collaborative, the firm currently assisting the Town in developing an updated Master Plan.

The core purpose of this study was to evaluate current parking conditions, future parking needs, and appropriate strategies for addressing those needs. An area of particular concern was the use of right-of-ways and current practices along Padre Boulevard related to direct street access to parking spaces. Other significant issues that developed during the course of the study were pedestrian safety along Padre Boulevard and appropriate parking requirements for commercial developments, particularly those related to condominium projects.

The formal study area included the full "Bay to Gulf" width of the island from the north edge of Isla Blanca Park at the south end of the island to Andy Bowie Parking just beyond the South Padre Island Convention Center. However, the study team did examine conditions in both Isla Blanca Park and Edwin King Atwood Park located approximately 1.5 miles north of the Convention Center.

OVERVIEW OF SOUTH PADRE ISLAND

South Padre Island is experiencing significant growth in the number of permanent residents and the increasing development of high rise condominium projects that serve as both permanent residences and as part-time rental units for regional, national and international visitors to the island. Despite the growth in permanent residents, overall population on the island is very seasonal, corresponding with normal beach community patterns that bring both part-time residents and visitors during spring, summer and early fall months to enjoy the beach and other island offerings. South Padre Island is also a traditional destination for college students during college Spring Break, a period when unusual traffic volumes have a significant impact on mobility – particularly along Padre Boulevard, the main retail corridor. Visitors to the island include a strong contingent of vacationers from Mexico who lend to the distinct "family" atmosphere of the island. The beaches also draw a large number of area mainland residents who live within a convenient driving distance. Although many of these "locals" use the core area beaches, the majority congregate in the large parks to the north and south of the residential/commercial area. There is an additional identifiable group referred to as the "Winter Texans" who come to South Padre Island during the off-season months.

Vehicle access to the island is limited to the Queen Isabella Memorial Bridge, which extends across Laguna Madre Bay to the west and connects the island to Port Isabel on the mainland. The 4-lane bridge is relatively new, having been replaced after its predecessor was severely damaged in a barge accident in 2001. There are three principal north-south roadways running the length of the Town: Laguna Boulevard on the Bay side (west), Padre Boulevard just to the east, and Gulf Boulevard nearest the Gulf beach area to the east. Padre Boulevard is clearly the primary commercial corridor although a portion of Laguna Boulevard passes through a 9-block entertainment district located between Amberjack Street and Marisol

Drive west of Padre Boulevard. The roadway system consists of a fairly uniform grid of east-west streets, most of which extend from Laguna Boulevard on the west to Gulf Boulevard on the east. The longest segments of these streets are the "long blocks" between Padre Boulevard and Gulf Boulevard.

There are a limited number of high-rise condominium developments on the west side of the island, but most are concentrated on the east side facing the Gulf of Mexico and adjoining the Gulf beach. The length of the beach face is a mix of low, mid and high rise condominium properties interspersed with a limited number of single family units in the north half of the developed area and several large hotels in the south end below the terminus of Gulf Boulevard at Haas Street. There is a very limited amount of retail business along Gulf Boulevard. At the south end of the island is the Schlitterbahn water park and Isla Blanca County Park, which includes parking facilities for beach visitors and a large area designed and equipped for recreational vehicles (mobile campers).

Figure 1

The long blocks between Padre Boulevard and Gulf Boulevard in the north half of the Town are comprised primarily of single family and low-rise multi-family residential units. Moving south, the mix of commercial businesses increases and the number of private residences decreases in this center row of blocks. Small private residences are not found south of Haas Street.

The blocks between Padre Boulevard and Laguna Boulevard to the west are primarily retail blocks with the highest retail density located south of Whiting Street.

Anchoring the north end of the Town is the South Padre Island Convention Center and nature attractions. South of the Convention Center is the highest concentration of single-family residences including an established development that incorporates man-made inlets for boat access. The number and size of multi-family units and condominiums increases progressively moving south, primarily on the bay side of Laguna Boulevard.

Between Amberjack Street and the southern end of Laguna Boulevard is a distinct entertainment district with large, family oriented restaurants and entertainment facilities, including a waterslide area and large-scale catapult ride. This area is heavily occupied on weekend nights during the beach season due, in part, to a fireworks display over the bay every Friday night through the season - between Memorial Day and Labor Day.

Figure 2

Beyond the Town limits to the north is Atwood Park where beachgoers are allowed to park on the beach. On weekends during the season, vehicles of all descriptions are lined up along the beach with umbrellas and cookers. The area north of the Town is also the location of "The Shores", a major new high-end residential development already under construction that will include a mix of luxury single-family residences, high-rise residential towers and supporting retail on 240 acres that span the island.

Figure 3

Land values on the island have increased dramatically over the past 10 years. The cost for a typical ¼ acre interior residential lot is typically in the range of $250,000. As an indication of the escalating land values, the advertised price range for residential lots in The Shore is presently $250,000 to more than $500,000.

PROCESS OVERVIEW

The following is an outline of the process used to collect information to support the analysis for this study and its recommendations:

- Review of existing documentation related to the Town, including current work related to the update of the Town's Master Plan and previous traffic study information
- Meetings with Town staff
- Three (3) public meetings open to the community
- Meetings with Comprehensive Plan Advisory Committee (CPAC)
- Inventory of current parking supplies
- Parking occupancy survey during the weekend of 7/30/06 and an aerial photo supplement on the weekend of 8/5/06.
- Turnover (length of stay) surveys of the beach access parking areas and on-street parking along Gulf Boulevard
- Survey of beach visitors to determine origin and mode of travel to the beach
- Review of aerial photos of conditions on July 4th weekend
- Evening field observations of activities and parking conditions during the Friday night fireworks display
- Photographic documentation of overall conditions, including aerial sets on 3 separate weekends
- Spot interviews with individual business owners encountered during the course of the field work

Figure 4
Meeting with Comprehensive Plan Advisory Committee

CURRENT PARKING CONDITIONS

GENERAL CONDITIONS

Parking on the island consists almost exclusively of on-street parking and off-street surface lot parking. Structured parking is very limited and generally consists of first level parking situated under elevated structures. Current zoning ordinances include minimum parking requirements for all residential and commercial development.

Figure 5

Paid parking is not a significant factor in the market at this point. No commercial parking firms have established paid parking facilities and the likely reason is a combination of high land cost and a seasonal demand that does not provide sufficient annual revenue to make the venture financially feasible. One paid parking lot was in found operating in the entertainment district on a Friday evening during the on-site fieldwork. The parking fee was $5.00 and business appeared to be sparse. There are certainly paid parking arrangements in place on the island where businesses or individuals need additional parking or boat storage, but there is little visible evidence, in the form of notices or signage, that the need is widespread.

Outside of the beach season, parking is plentiful across the island. Parking is most heavily occupied on the weekend during the beach season due to a combination of summertime residents, condominium renters, hotel guests, and families coming from the mainland for a day at the beach. The perception of scarce parking seems to be focused on Gulf Boulevard where the limited public parking provided in the beach accesses fill to capacity and parkers overflow onto Gulf Boulevard including the grass covered right-of-way on Gulf and on the adjoining side streets. Private property owners post signs to restrict parking to residents or guests.

PARKING CAPACITY AND UTILIZATION

The study team conducted a general survey of parking capacity and a survey of parking utilization on high activity weekends in late July and early August (2006).

Inventory of Parking Capacity

The inventory of parking capacity included most of the study area. It did not include areas that are exclusively residential with single-family homes and small multi-family units. However, larger multi-family properties located in those areas were included in most cases. The validity of car counts in residential areas is limited by the inability to determine whether vehicles are present inside closed garages.

Figure 6

Nearly all of the inventory was obtained through physical counts in the field. In some instances, particularly where the study team was not able to access properties to conduct a count, the field counts were supplemented by aerial photos taken for that purpose. The photos were taken from two perspectives, east and west, in order to provide as much visibility into inaccessible surface lots as possible. Where access was possible, or counts could be determined from viewpoints outside of a secured parking area, covered parking areas were counted from the ground. Visible individual garage enclosures serving large residential developments (condominiums) were counted in the inventory of parking capacity, but vehicles that may have been in those enclosed individual garages were not included in the car counts. The result of this limited access to parking enclosures in some of the larger residential properties is an understatement of occupancy in this category. Actual occupancy in residential developments with enclosed garages could not be determined.

Parking Occupancy

On Saturday, July 30th, a series of aerial photographs were taken along the length of the Town from both the Gulf side and Bay side. These photographs were used as the primary means of determining parking occupancy during that typical summer weekend. An inventory team performed occupancy counts on the ground of vehicles parked in accessible covered parking areas, including hotels and most condominiums. However, there were a large number of closed individual garage units for condominium parking that were not accessible and access was restricted to some condominium properties. Surface parking at most of these closed (gate controlled) properties was visible in the aerial photos. Field observations during the first weekend indicated that activity on the beaches peaked later in the day and a second set of aerial photographs were arranged for late afternoon on the following weekend.

The occupancy survey and survey results focus on blocks that were commercial or that included a mix of commercial and multi-family condominium properties. It did not include some blocks, primarily in the north areas of the Town that were predominantly residential, with single-family dwellings and small multi-family units. In blocks with a mix of commercial and residential land uses, only the parking areas serving commercial land uses or larger multi-family properties were included in both the inventory and occupancy. In each case the specific parking areas were identified individually and included in both the inventory and in the occupancy survey. Because each parking location was identified as either commercial or residential, occupancy for commercial land uses could be determined apart from the influence of residential properties. The result is that the occupancy information related to Non-Residential properties in Figure 7 reflects actual conditions.

Figure 7

SUMMARY of Off-Street Occupancy: All Categories

Blocks	Capacity	Occupied	Empty	% Occupied
1-40	3,351	1,266	2,085	38%
41-80	2,022	684	1,338	34%
81-100	1,292	341	951	26%
101-140	2,818	929	1,889	33%
141-161	6,827	3,345	3,482	49%
Total:	16,310	6,565	9,745	40%

SUMMARY of Off-Street Occupancy: Non-Residential

Blocks	Capacity	Occupied	Empty	% Occupied
1-40	2,697	1,131	1,566	42%
41-80	1,805	615	1,190	34%
81-100	883	236	647	27%
101-140	2,135	730	1,405	34%
141-161	6,692	3,270	3,422	49%
Total:	14,212	5,982	8,230	42%

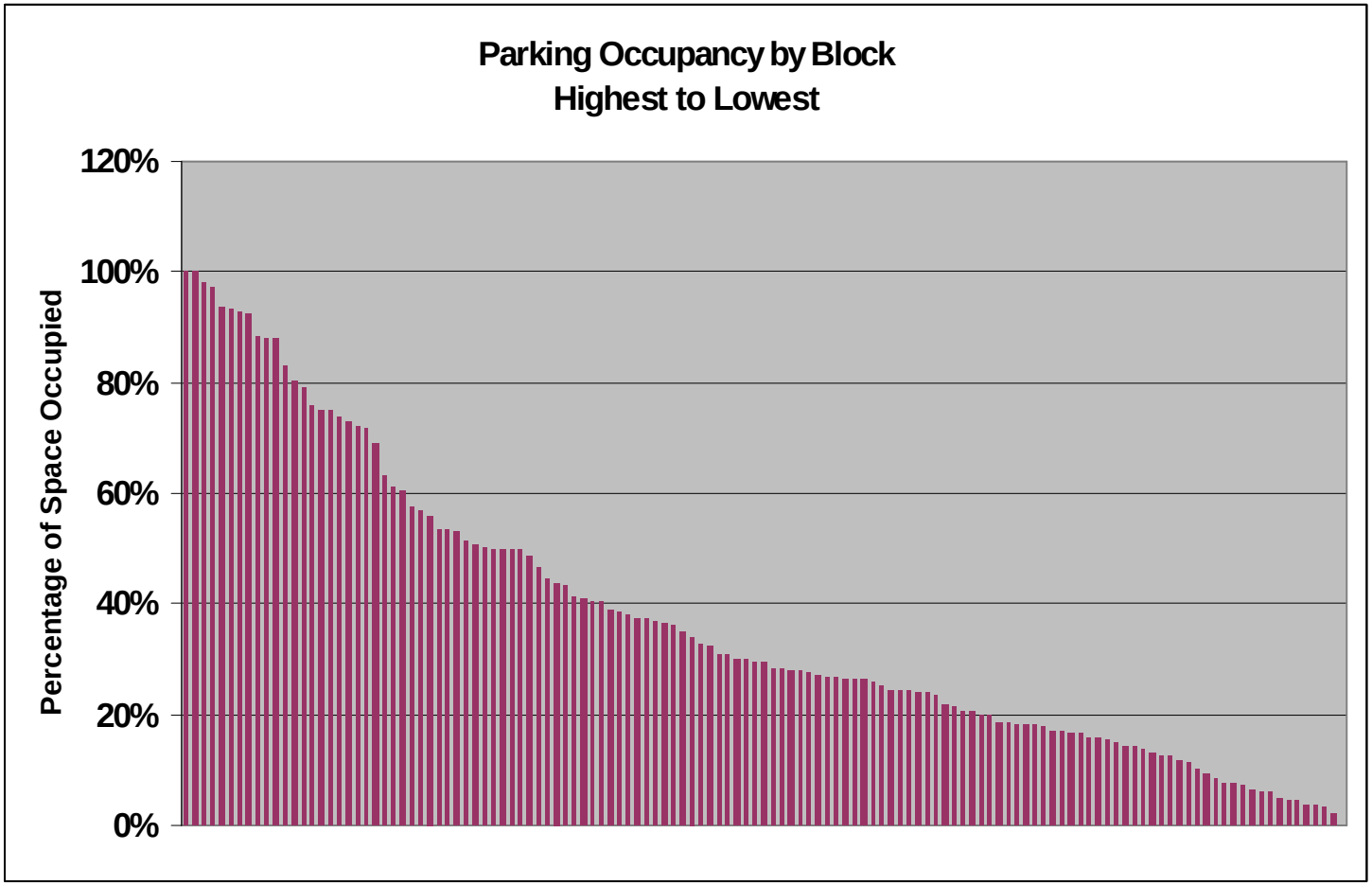
Occupancy in the residential category is not as reliable because the inventory (capacity counts) includes closed garage units. Since the survey team did not have access to these closed garage units, any vehicles in those units were not included in the occupancy survey. The result is that the occupancy level for residential properties is understated. The block-by-block inventory and survey results are included in the APPENDIX of this report.

The survey results indicate a relatively low occupancy rate for parking across the island, although occupancy was heavier along Gulf Boulevard than other locations. The Summary in Figure 7 is organized by groups of 40 blocks starting at the Convention Center at the north and extending down to Isla Blanca park in the south. The summary shows that the highest daytime occupancy occurred to the north and to the south, with lower occupancy levels mid-way along the island. The lower occupancy figures in the mid-island areas is due, in part, to the hundreds of vacant parking spaces found in the Entertainment District as show in Figure 8. In examining aerial photos taken on July 4th weekend, prior to the on-site surveys, it was obvious that the perception of an overall parking shortage on the island during weekends of heavy beach activity did not reflect actual conditions. The issue is not one of parking capacity but the location of that parking capacity. Communities typically target 85% as a healthy overall downtown parking occupancy rate, if that parking is well-distributed in relation to the parking demand generators. At 42% overall occupancy in commercial parking areas, South Padre Island is well below that level, with a sizeable surplus. Taking advantage of that surplus to ease more localized parking shortages is the challenge.

Figure 8 - View of vacant space in core retail area

The graph below shows the range of occupancy percentages by block, arranged in order from the highest to the lowest.

Figure 9



The study team toured the County parks at the north and south ends of the island. Edwin King Atwood Park to the north was heavily occupied. No actual count was taken (outside of study scope), but cars were stretched along the beach for a considerable distance. The study team toured Isla Blanca park later in the afternoon and found the parking facilities located near the gulf side beaches to be heavily occupied, with most areas filled to capacity. Occupancy was slightly higher near dusk than shown in the aerial photographs, with little or no parking left in any of the lots.

Parking along Gulf Boulevard, including the beach access parking areas, was fairly consistent from mid-afternoon into the early evening, although the actual peak seemed to occur in the late afternoon at 4 P.M. Occupancy levels for both Beach Access lots and on-street parking along Gulf Boulevard is addressed more specifically in the next section.

Figure 11

The Shlitterbahn parking lot was filled to capacity, with cars overflowing into the grass areas near the street.

Figure 12

GULF BOULEVARD - Occupancy & Turnover Analysis

A survey of vehicles parked in beach access lots and in marked on-street spaces was conducted by staff provided by the Town on Sunday, 7/30/06 from 10:30 A.M. until 6:00 P.M. The personnel conducting the survey were thoroughly familiar with the area being surveyed and were assigned to make continuous rounds between Haas (south) and Verna Jean (north). The length of the route was determined by the area that could be covered in 1-hour circuits but, because of the efficiency of the survey team, it included nearly all of the core beach area.

The license plate of each parked vehicle was recorded to create a record of arrival and departure times, based on the hourly survey cycles. Length of stay information was computed from these arrival and departure times and the results are summarized in Figure 13.

Occupancy

Occupancy in both the beach access lots and the on-street spaces grew through the day. Occupancy in the beach access lots reached a peak of 94% at 4 P.M. and occupancy in the on-street spaces reached a peak of 71% in the same hour. Overall occupancy within the surveyed area reached 81% at 4 P.M.

Based on examination of aerial photos, it can be assumed that there was a similar occupancy pattern between Verna Jean and Sunset.

OCCUPANCY OF GULF BOULEVARD PARKING - BY HOUR
Coverage area: **HAAS to VERNA JEAN**

Beach Access Capacity:	225	(in surveyed area)
On-Street Capacity:	320	(in surveyed area)
TOTAL:	545	

Time of Day:	11:00	12:00	13:00	14:00	16:00	17:00
Beach Access						
Occupied Spaces	58	159	185	203	212	211
% Beach Occupied	26%	71%	82%	90%	94%	94%
On-Street Spaces						
Occupied Spaces	102	169	185	211	231	228
% On-Street Occupied	32%	53%	58%	66%	72%	71%
TOTAL Area Surveyed on Gulf Boulevard						
Occcupied Spaces	**160**	**328**	**370**	**414**	**443**	**439**
Total % Occupied	29%	60%	68%	76%	81%	81%

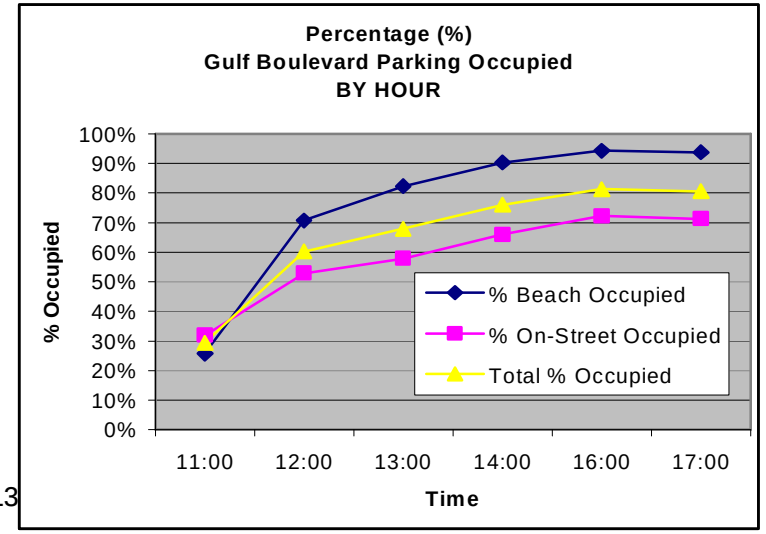


Figure 13

Length of Stay

The Turnover Survey showed that 70% of the people using public parking along Gulf stayed for 2 hours or less and 82% stayed for 3 hours or less. There was little difference between the average stay in the beach access lots and the on-street spaces.

Beach Access Lots	71%	- 2 hours or less
	84%	- 3 hours or less
On-Street Spaces	69%	- 2 hours or less
	79%	- 3 hours or less

Figure 14

Summary of Length of Stay Analysis - COMPLETED STAYS ONLY

	Total 1 Hour Stays	Total 2 Hour Stays	Total 3 Hour Stays	Total 4 Hour Stays	Total 5 Hour Stays	Total 6 Hour Stays	Total 7 Hour Stays	TOTALS
Beach Access	165	113	48	34	19	11	0	390
%	42%	29%	12%	9%	5%	3%	0%	
Cumulative %	42%	71%	84%	92%	97%	100%		
On-Street	134	98	34	33	15	22	0	336
%	40%	29%	10%	10%	4%	7%	0%	
Cumulative %	40%	69%	79%	89%	93%	100%		
Total	299	211	82	67	34	33	0	726
%	41%	29%	11%	9%	5%	5%	0%	
Cumulative %	41%	70%	82%	91%	95%	100%		

Although the high number of vehicles that stayed for only one hour (41%) may be higher than expected, the actual stays for those vehicles that appeared on only one round of the survey may have been longer than one hour. There is no way to determine how far into the next hour they stayed or how early in the previous hour they arrived. The stay is less than 2 hours, but the actual average may have been closer to 1.5 hours.

The survey includes only vehicles that arrived and departed during the 8 hour survey period. Cars already parked at the beginning of the survey and those still parked on the last round of the survey were not included because their length of stay could not be determined. As a result, the totals do not reflect the number of cars surveyed, just those with established arrival and departure times. This is consistent with the purpose of a "length of stay" analysis. The OCCUPANCY analysis, however, does include all cars found during the surveys – which is consistent with the purpose of that analysis.

BEACH SURVEYS

Surveys of transportation modes were conducted on Sunday 7/30 using employees of the Town of South Padre Island. The survey teams conducted face-to-face interviews with groups on the beach. The survey was designed to gather basic information about the point of origin (staying on the island vs. driving from the mainland), method of travel, size of the group and number of cars. Questions were also asked about use of the WAVE and whether those interviewed were aware of the WAVE service. A copy of the survey form is included in the APPENDIX.

Although the survey teams were distributed to collect samples from most sections of the beach area, a heavier concentration of people in the area near hotels did skew some of the results.

Interviews were conducted with 480 groups representing 3,111 people on the beach. Of those, 767 were drivers, which represents 767 vehicles driven to the beach area. The resulting parking demand ratio is just over 4.0 people per vehicle if those arriving by other means, such as walking from a nearby condominium, are included. The full survey results are provided in the APPENDIX of this report. Figure 15 provides a summary of key statistics.

Figure 15 - Key Beach Survey Results

GROUP	Number of Groups	Number of People	Number of Cars	People per Vehicle	Walked to Beach (groups)	Walked to Beach *(people)*	Beach Lot (groups)	On-Street Parking (groups)	Ever Ridden WAVE	Aware of WAVE
Residents	29	190	49	3.88	5	31	5	2	0%	21%
% of Total	6%	6%				1%				
Non-Residents Staying on the Island	346	2,410	595	4.05	104	746	50	15	9%	38%
% of Total	72%	76%				24%				
Mainland Day Visitors	91	446	108	4.13	5		41	29	11%	30%
% of Total	19%	14%								

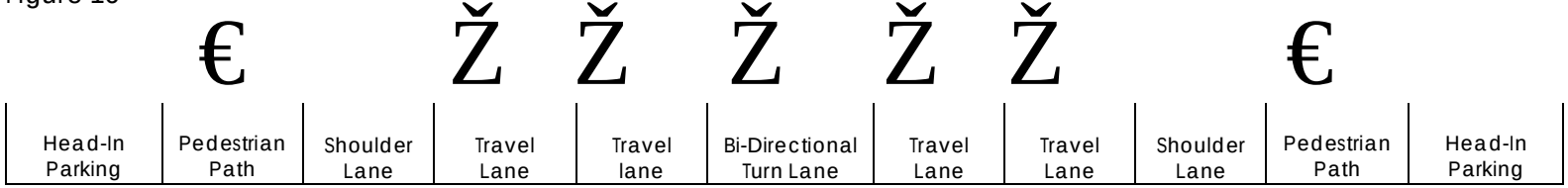
It is interesting to note that although Non-Residents staying on the island and Day Visitors were aware of the WAVE service (38% and 30%), only 9%-11% had ridden the WAVE. Equally interesting is the apparent lower level of awareness among island residents – at only 21%, with none having actually ridden the WAVE.

Current Parking Practices and Challenges

Parking Along Padre Boulevard

Padre Boulevard is the primary retail corridor for the island. With the exception of the "Entertainment District", there is very little non-residential commercial activity north of Haas Street that is not located along Padre Boulevard. Prior to the current reconfiguration project that is adding a center median, Padre Boulevard consisted of two travel lanes in each direction, a single, bi-directional turn lane in the center and an outboard lane on either side that was intended to facilitate safer turning movements into and out of head –in spaces.

Figure 16



Padre Boulevard is currently undergoing modifications to improve traffic safety and, more importantly, pedestrian safety. Under the original configuration shown above, Padre Boulevard presented a significant obstacle for pedestrians attempting to cross. There are very few signals along Padre Boulevard and traffic movement is continuous along most segments. The original configuration provided no refuge for pedestrians attempting to cross what is effectively 7 lanes. Making matters worse, pedestrians unable to make it across in one movement were stranded in the center bi-directional turn lane - a very dangerous place to be at any time and a particularly dangerous place to be at night. During the on-site fieldwork, the study team observed very dangerous pedestrian situations routinely along Padre Boulevard. When driving during the active early evening hours, pedestrians crossing that wide roadway, including many unaccompanied children, were nearly invisible. The current program for installing a physical median and providing clearly identified, formal crosswalks is an urgently needed improvement. This issue will be discussed in greater detail later in this report.

Head-In Parking (Padre Boulevard)

One of the most significant characteristics related to parking along Padre Boulevard is the extensive "head-in" parking that is accessed directly from the roadway and across what would normally be a sidewalk. There are no formal curbs and sidewalks along much of Padre Boulevard. Many, if not most, block faces along Padre Boulevard consist of a continuous driving surface wherever parking areas abut the roadway. Customers and visitors pull directly from the roadway into perpendicular parking spaces. In most cases those spaces are hard against buildings or landscaping. In others, however, direct access from the street is simply used to increase the parking capacity of parking lots. Where sidewalks are in place, the walking surfaces are asphalt, which makes them less distinguishable from the roadway and adjacent pavement than a concrete sidewalk.

Figure 17

Figure 18

The outside shoulder lanes along Padre Boulevard have been provided as an aid to parkers using the head-in spaces. The additional space provides more opportunity to back out of a space without the vehicle encroaching on the travel lane. Apart from its impact on the overall appearance of Padre Boulevard, this head-in parking arrangement creates a real hazard for pedestrians walking along whatever sidewalk there may be as vehicles enter head-in parking spaces by crossing the sidewalk or pedestrian pathway. Some businesses have located pedestrian walkways next to their buildings but there is no consistency from block to block.

Figure 19

Another issue related to the head-in spaces is the use of the outboard maneuvering lane by bicycles and a range of non-standard motorized or people-powered vehicles that are available for rent on the island. Movement of these vehicles along the shoulder lane poses an even greater risk of collision with someone maneuvering into or out of a head-in space.

Figure 20

Modifications to Padre Boulevard to eliminate direct head-in parking access from the street have been considered by the Town and are still under consideration as a way to improve pedestrian safety along this primary retail corridor and to improve its overall appearance. The primary objective of those potential modifications is to move the pedestrian walking path away from the edge of the roadway and outside of parking maneuvers. Unless there is an interior parking area on the property, the sidewalk or pedestrian path would be outboard of all travel lanes and parking, allowing pedestrians to move along each block with minimal risk of encountering a moving vehicle. This arrangement would not, however, provide a safe haven for bicycles, peddle-powered trams, and other non-standard vehicles. The detailed right-of-way analysis that is provided later in this report will address some additional limitations of this approach and provide a recommended improvement strategy that is consistent with improvements already in progress.

Parking Along Gulf Boulevard

Gulf Boulevard has one lane of travel in each direction. In some areas along the east side of the northbound travel lane is a row of striped parallel parking spaces. An additional strip of pavement on the east side of those parking spaces is reserved and marked as a pedestrian pathway. The parallel spaces marked on the street are available to the general public, including beachgoers and visitors to the condominiums along Gulf.

Figure 21

The grass-covered right-of-way on the west side of Gulf provides additional parking for beachgoers and visitors to nearby condominiums. It is also used as supplemental parking for a limited number of food and beverage establishments located along Gulf. In some instances, parking overflows into the side streets, with vehicles parked on the sand or grass right-of-way. This is an ongoing issue for the permanent residents along those streets who consider the grass right-of-way as part of their front yard. Signs are posted on the side streets, warning parkers to make sure that all wheels are off of the pavement. That requirement is strictly

enforced and violators are ticketed.

Similar to Padre Boulevard, there are segments along Gulf Boulevard, primarily along the east side, where the roadway is used for direct access into head-in spaces located on private property.

Specific recommendations related to parking capacity, pedestrian safety and traffic movement are provided later in this report.

Figure 22 - Right-of-Way Parking on Gulf Boulevard

Figure 23 - Head-in Parking along Gulf Boulevard

FUTURE PARKING SUFFICIENCY

Although there is sufficient parking capacity across the island, in general, the future is likely to bring a steady increase in overall density. Part of the increase in density will be driven by the rise in land costs that will put property for single-family residences out of reach for more and more people. Higher density properties, even though they may still offer a range of price options, will represent an increasing portion of the market as it has in so many other beachfront communities across the country. New residential developments will still be required to provide sufficient on-site parking. But, since the residential component (whether permanent residents or renters) represents the bulk of retail customers for island businesses, the increased density will increase retail business and the demand for retail parking. Existing surpluses of parking enjoyed by some businesses will steadily shrink.

Figure 24

An assessment of future parking needs in a linear community such as South Padre Island is quite different from that in a typical downtown that is focused around a central core. The concentration of taller buildings, people and cars at the typical downtown core dictates the location of large parking facilities in locations where they can serve that core. On South Padre Island, the "core" extends nearly the length of the incorporated portion of the island. There is some concentration of retail businesses in the south third, but that concentration can be expected to spread northward over time. Likewise, the demand for beach parking is distributed along the full length of the Town's beach area. This presents an unusual challenge in determining how best to position any additional public parking capacity in a way to serve the community efficiently.

PARKING STRATEGIES

PHYSICAL AND BEHAVIORAL FACTORS

Parking strategies and management of the parking system as a whole are designed to support larger community goals that are related to the character, quality and growth objectives of that community. Parking strategies and the policies that come out of those strategies cannot drive larger policy decisions related to the overall land use plan and plans for the development or preservation of various residential and business sectors and general qualities that are desired in the community. Accordingly, the following is a discussion of observations made about the nature of South Padre Island and dynamics at work that would affect strategies and policy decisions related to parking and transportation. A clear understanding of these factors is essential in understanding the rationale for proposed parking strategies.

Figure 25

The Nature of South Padre Island's Beachfront Corridor - Gulf Boulevard

One feature that distinguishes South Padre Island from most other beachfront communities is the fact that the roadway closest to the beach, Gulf Boulevard, is not the primary retail corridor. In Virginia Beach, for example, most beach and tourist related retail is located along Atlantic Avenue, which is the street located closest to the beach. The same is true of Ocean Boulevard in Myrtle Beach and Atlantic Avenue in Daytona Beach. That is not the case on South Padre Island and that fact dramatically affects the rationale for assessing parking need and identifying the appropriate parking strategies.

Figure 26 - Myrtle Beach

Why is this difference important? It is important in the way it affects the behavior patterns of people going to the beach. In Virginia Beach and Myrtle Beach, beachgoers driving in from outside the community or from another part of the city tend to park near the retail corridor because the retail corridor is closest to the beach. They may park in public parking areas located along the beachfront, but they either walk by retail business as they come and go to the beach on foot, or they are within a close walking distance to food establishments and retail shops. The close proximity of those businesses to the beach and the principal parking areas not only provides a convenient opportunity to eat and shop, it also encourages people to count on those businesses for convenience items, beach related items and access to food while they are visiting the beach. Because they are so convenient, they can become a normal "part of the trip." Beachgoers are more likely to leave lunch at home and walk to a hot dog stand or pizza shop when it is within close walking distance to the beach. This is particularly true when parking is difficult to find or there is a general perception that parking is scarce. Beachgoers are far less likely to move their cars in order to drive to a tee shirt shop or fast food restaurant when it may be difficult to find parking when they return to the beach area.

In South Padre Island the pattern is quite different. People going to the beach tend to bring all of their food and other supplies in their cars, park as close as possible to the beach (somewhere along Gulf Boulevard) and go directly to the beach. Once they are done at the beach, they return to their cars and, unless they are staying somewhere on the island, cross back over to the mainland without stopping. The consensus of opinion from residents and business owners on South Padre Island is that the daytime beachgoer from the mainland tends to bypass retail opportunities on the island and are more likely to do all of their shopping before leaving home or do it at discount retailers enroute.

Figure 27

From the standpoint of parking strategies, this removes one of the core reasons for investing in beachfront parking – support for local businesses. It can even be argued that creating additional parking along Gulf Boulevard for daytime beachgoers originating from the mainland could be counterproductive, allowing them to park even further away from Padre Boulevard than they do now. If significant retail development along Gulf Boulevard is not part of the future plan for the island, there is no "retail support" incentive for investing in additional public parking on that roadway except to the extent that an increased availability of convenient beach parking encourages beachgoers to leave for lunch or to shop, knowing that convenient parking will be available when they return to the beach.

What other purposes can be served by increasing parking capacity along Gulf Boulevard? The first is to serve island residents who live on the Bay side of the island and visitors staying in condominiums or hotels located on the west side of Padre Boulevard. That is a legitimate objective, serving two groups that represent a financial contribution to the island through purchases and tax contributions. The other possible user group would be renters and guests of condominiums and hotels along Gulf Boulevard. If that is the case, the properties benefiting from the additional parking capacity should contribute financially to its creation. This will be addressed in more detail later in this section.

GULF BOULEVARD – Capacity Regiurements

1) How Much Parking is "Enough"?

First, it is recognized that the Island is under an obligation, by state statute, to provide public access to the beach and that this access is logically supported by some level of convenient, beach access parking. Beach parking is presently provided at several beach access points along Gulf Boulevard although some of the designated parking areas are quite small. At present, that parking is provided without charge.

Figure 28

Beach Capacity

Based on observed density of people on the beaches, beach access lots and right-of-way parking along both Gulf Boulevard and the adjoining side streets would be exhausted well before the beaches themselves neared capacity. Capacity on the beaches themselves is not a limiting factor under present circumstances and is not likely to be in the foreseeable future.

Occupancy of Beach Parking

Tours of the beach access parking areas during the July 30th weekend and aerial surveys during the weekends of July 4th and August 5th showed a high level of utilization. In the more active areas, vehicles were constantly entering and leaving. Frequently, there were one or more vehicles waiting for spaces as people returned to their cars to leave. Most of the parallel spaces near the south end of Gulf Boulevard were heavily occupied and a number of cars were parked in the grass right-of-way on the west side of the street.

Side-Street Right-of-Way Parking

One pattern noted during the field-work is that people parking in grass-covered right-of-ways along Gulf Boulevard and on the side streets seem to avoid parking in front of residences whenever possible. Even where there is a popular eating establishment to draw heavier traffic, customers seem to use the right-of-way parking along the edges of undeveloped parcels rather than park in front of homes (See Figure 29). It is apparent that parking demand along Gulf Boulevard does not exceed the available capacity to the extent that parkers routinely resort to parking in front of residences on the cross streets. The conclusion drawn from the field observations is that, outside exception periods such as Spring Break, the perception of large scale parking in front of residences on the side streets is greater than the reality – at present.

Figure 29 - Right-of-Way Parking – Avoiding Private Residences

Overflow from County Parks

Visits to the park areas at the north and south ends of the island raise a broader question. Can enough additional parking be provided along Gulf Boulevard to satisfy potential demand? In Atwood Park to the north, where cars are allowed on the beach itself, those cars were lined up on the beach as far as the eye could see. The access fee to the park is $4 per vehicle. In Isla Blanca County Park at the south end of the island, the nearly 1,000 spaces in parking areas on the gulf side were full to overflowing in the late afternoon. This indicates that the parks have a strong attraction for a number of possible reasons, including the close proximity of parking areas to the beach. Despite a $4 daytime fee per vehicle ($2 after 5 PM), the park periodically has to close because of overcrowding and the lack of parking space. As overall beach demand grows in the future, any increase in overflow from the park will put additional pressure on parking along Gulf Boulevard.

Relocation from County Parks

Another issue is how many people presently using the County park beaches would move to the core beaches if parking was more plentiful or attractive amenities were added along Gulf Boulevard. Beachgoers parking on the beach in Atwood Park may not be strong candidates to relocate to the core beach area, even if more parking was provided. The ability to park on the beach is an unusual opportunity that many people enjoy and they come to the park for that specific reason. Those parked in the Isla Blanca County Park are more likely candidates to move to the core beach area if better parking availability or other changes made it more convenient. However, the limited amount of right-of-way parking taking place on the side streets would indicate that preference for the less crowded core area beaches is limited by:

1. a general reluctance to park in the grass front of private residences,
2. a preference for parking that is a shorter walking distance to the beach.

Figure 30

Walking distance to the beach can certainly be a factor, particularly when it involves carrying coolers, chairs, umbrellas or children.

Impact of Retail Amenities on Parking Demand

Another obvious factor affecting parking along Gulf Boulevard is the significant impact that a popular food and beverage establishment can have on parking. The Wanna Wanna Beach Bar & Grill at the Island Inn on Gulf Boulevard is a current example as show in Figure 31. The demand for right-of-way parking is higher in that location than at any other point along Gulf. Some direct demand is generated by the restaurant itself, but it is likely that additional indirect demand is generated by beachgoers that like to use that portion of the beach because Wanna Wanna is a convenient amenity. If additional food and beverage establishments are added along Gulf in the future, they have the potential for generating similar parking demand. Fortunately, the right-of-way parking near Wanna Wanna is reasonably accommodated along the edges of undeveloped property, but that will not be the case once that property is developed and may not be the case if other establishments are developed along Gulf.

Figure 31

Conclusions About Capacity Needs:

1. The existing demand for parking along Gulf is being reasonably met by the available beach access lots and available right-of-way parking.

2. If parking is improved in a qualitative way, such as more formal identification of right-of-way parking along the block faces on Gulf, it would attract additional beachgoers to the core beaches because of the close proximity of that parking to the beach and the higher level of comfort in parking in more formally identified parking spaces.

3. As more open parcels are taken for development, the need for more formalized parking will increase in order to maintain even the existing comfort level for beachgoers.

4. If additional food and beverage establishments, available to beachgoers, are added along Gulf Boulevard, it is likely that they will generate more parking demand than is accounted for by their actual customer volume. Part of the additional area demand will be due to the effect of those establishments as "beach amenities" in attracting additional beach visitors.

5. With paid beach access fees already established in the county parks, paid parking may be easily accepted in public parking areas along Gulf Boulevard. (Discussed in more detail in the System Management section of this report.)

6. The Town of South Padre should develop a phased plan for creating additional, formalized on-street parking along Gulf Boulevard, starting with the blocks closest to the existing beach access points where demand is highest. Specific recommendations are included in a later section of this report.

2) Management of Gulf Boulevard Parking Resources

Better management of parking resources along Gulf Boulevard would help meet the overall objectives for activity along the beach area. One of the concerns expressed by Town staff and by residents in open discussions is the use of beach access parking by condominium renters and visitors. By policy, beach access parking is intended for beach visitors. Condominiums are expected to provide sufficient parking capacity on-site to meet their own needs. When condominium traffic overflows into beach access parking areas, support for beach visitor access is affected.

Time Limits vs. Paid Parking

Time limits and effective enforcement of parking in the beach access parking areas helps to ensure that long stays are discouraged, but the most effective management tool is paid parking. Relying only on enforced time limits reduces flexibility for beach visitors who may want to stay longer than the allowed time limit. With a time limit, that beach visitor would have to move to another parking space or another parking area to avoid being in violation. If no other parking is available nearby, this could be a source of legitimate frustration. With paid parking, beach visitors have the option of simply leaving their vehicles in place and paying for more time. Paid parking also provides the ability to adjust the management of the parking areas through changes in the rate structure.

Figure 32 - Examples of Fee Structures and Management Strategy:

	Structure:	Example:	Purpose:
A	Flat fee for the full day	$6 per day/stay – no time limit	Basic beach access similar to entrance fee at County parks. Could provide the highest revenue if the length of beach stays remain constant, but lower level of control on condominium parkers.
B	Flat fee for a limited period of time	$4 for 4 hours	Provide some incentive for turnover.
C	Hourly fee with a daily maximum	$1 per hour, $6 all day	Provide lower fee option for shorter stays.
D	Hourly fee with no daily maximum	$1 per hour – no limit	"Pay for what you use" approach and strongest tool for discouraging long-term condominium parking.
E	Hourly fee that escalates for longer stays	$1 per hour for the first 2 hours, $2 per hour each additional hour	Provide low rate for typical stays and discourage longer stays.

Management Methods

There is a range of alternatives available to the Town in managing parking in the beach access parking areas as well as on Gulf Boulevard itself. Options range from the type of honor systems used at many state parks, to manual coin boxes, to standard parking meters or more advanced multi-space meters, and on to "pay by cell phone" systems. Any kind of system that involves manual collection by attendants is not feasible because of the small size of the parking areas. The number of attendants that would be needed and the associated labor costs could not be justified.

Multi-Space Meters

Although standard parking meters have been used for years in controlling beach parking areas, more and more beachfront communities have introduced electronic multi-space meters. A single multi-space meter can take the place of 30 or more standard meters. This is a distinct advantage in terms of coverage, flexibility and service requirements. Spaces can be added or removed from a coverage area with little or no change to the multi-space meter programming. A multi-space meter can be used to control not only a beach access lot, but nearby on-street parking as well. The only real limitation is maintaining a reasonable walking distance between the parking space and the meter.

Figure

Multi-space meters provide a considerable level of flexibility that is not available with standard meters or manual coin boxes. The most important advantage is the customer's ability to pay by credit card. Credit card acceptance reduces the number of cash transactions and the amount of cash that is stored in the machines. That reduces risk and the amount of labor required to collect from the machines. If for example, the machines limited payment to dollar bills or credit card, no bill dispenser would be needed because no change would be given. Replenishing bill dispensers and failures of bill dispensers is one of the biggest service factors with automated payment machines. Another advantage of multi-space meters is that they can be better protected from rain and sand intrusion. The machines can be protected by hoods or placed in protective "booths" as shown in Figures 33-35.

Figure 33

Figure 34

Figure 35

Multi-Space Meter Options

Although there is a wide variety of configurations and features available in multi-space meters, they fall into two principal categories: "Pay-by-Space" systems and "Pay-and-Display" systems.

- With a Pay-by-Space system, each space controlled by the meter is physically numbered with a pavement marking or sign. The parker enters the space number and pays for the time. An advantage of this option is the ability of some systems to notify enforcement officers when time has expired or is about to expire on spaces. This is done via radio or web connection to a hand-held device used by the enforcement officer. Another advantage is the level of management information that the system can provide about the utilization of specific spaces and overall lengths of stay – because it can track when a new parker enters a space. This duration of stay information is not completely accurate because it still cannot determine when the space was actually vacated by the previous parker, but the information is more accurate than information available with the alternative Pay-and-Display system described next. The primary disadvantage of the Pay-by-Space system is that all spaces must be marked and it does not provide the flexibility of coming and going from a lot while paid time is still valid – an advantage provided in a Pay-and-Display system.

- In a Pay-and-Display system, the machine issues a receipt for the amount of paid time. The parker places the receipt on the dash of the vehicle to show the amount of time paid. Enforcement officers check the expiration times on the displayed receipts during enforcement rounds. This system involves more enforcement time because each receipt must be visually checked by the enforcement officer on foot. It is less efficient than standard meters that display an "Expired" flag that can be seen from a moving enforcement vehicle. The Pay-and-Display system does, however, offer some significant advantages. One of the most important from the standpoint of serving the beach visitors and supporting area businesses is the fact that the unexpired time remaining on a paid receipt can be honored anywhere in the system. This frees the beach visitor to leave a parking space, go to a restaurant or a shop, and return to another controlled parking space without losing time that has already been paid. This system also does not rely on numbered spaces. It can control parking on an unmarked sand lot as easily as it can marked on-street spaces.

Both systems offer "Solar-Powered" models that eliminate the need for electrical power connections. They can be installed and operate anywhere that has the physical space. Manufacturers producing both type of systems also provide the capability of accepting smart cards

or local "debit" cards sold to regular users of the beach system. This also reduces the need for cash and provides another convenience for locals.

After considering the operating conditions, the conclusion of the study team is that a Pay-and-Display version would be the most appropriate multi-space meter option for this application.

Advantages:

- The ability to move to another parking area or to leave and return to the same parking area without losing paid time is a significant benefit to parkers and opens more pricing options. Charging a flat fee, for example, is more feasible when parkers can come and go without losing what they have already paid for.
- The fee can be paid at any of the meters in the system, not just the meter to which spaces may be assigned. There is no assignment of spaces, just the issue of a valid receipt for time.
- The system can be used to charge for parking on unimproved right-of-way areas as long as appropriate signage is in place to identify that area as paid parking. This allows nearly unlimited expansion and contraction of designated parking areas as needed – because no clear identification or numbering of spaces is required.

Disadvantages:

- Each parker has to return to the car to display the receipt.
  - This takes time and is less convenient than a Pay-by-Space system. However, with a Pay-by-Space system parkers often have to walk back to their cars to determine the space number because they do not realize that is part of the process until they reach the pay station. Additionally, the time required to place the receipt in the vehicle may be less of an issue in a beach environment than it is in a downtown environment where workday time is more of an issue.
  - Returning to the car means additional foot traffic across Gulf Boulevard if the system includes on-street parking on the west side of the street.

- Pay-and-Display systems do not allow for remote payments and remote extensions of time that are possible with a Pay-by-Space system. It will not allow, for example, extension of time using a cell phone - an option that is available with some Pay-by-Space systems.

Cost:

The cost of Pay-and-Display machines ranges from $4,000 to $15,000 depending on the features included. Most can be purchased for under $10,000, with change-making features being the most significant feature affecting cost. At $10,000, a single multi-space meter that controls 33 parking spaces costs roughly the same per space as using standard parking meters.

Padre Boulevard – the "Business Core"

With the parking requirements of the current zoning ordinance in place, sufficient parking will be provided with future developments along Padre Boulevard to serve the needs of those developments as it does currently. There is a significant surplus of parking in the current system and the surplus along the Padre Boulevard retail corridor is actually higher than in other areas. However, as growing density on the island continues to generate additional retail business, the current surpluses can be expected to shrink unless growth in the number of retailers outpaces population growth.

The principal issues are related to whether the current parking requirements are appropriate and what role the Town should play in developing future parking capacity. The issue of parking requirements will be addressed later in this report. The issue of head-in parking along Padre Boulevard will also be addressed later.

Participation in Parking Development for Business Support

There are three major challenges facing the Town in providing future parking capacity for public use, particularly off-street capacity:

1. Lack of concentrated parking demand

   When municipalities become involved in providing off-street parking, it typically is in response to a need to accommodate a significant concentration of parking demand. Ideally, that demand is met by providing a parking facility that is located in the center of demand generators and within a reasonable walking distance. In the case of South Padre Island, non-residential parking demand is spread along an elongated business corridor. The challenge is identifying a location where a large parking facility would be able to serve a sufficient number of demand generators to be worthwhile and provide the necessary parking revenues.

2. Land Cost

   The high cost of land reduces the financial feasibility of surface parking and adds substantially to the cost of structured parking. At a land cost of $44 per square foot (as seen on a sign for a residential parcel), a cost of $3,000 per space for construction, and 100% occupancy every day, surface parking would require an average of $8 in revenue per day per space for the 180 day beach season. At $60 per square

foot, that daily revenue requirement climbs to over $10 per space. A parking structure would require between $9 and $13 in revenue per day for a 180 day period each year to cover debt service and nominal operating costs.

3. Seasonality of Parking Demand – Revenue Impact

   The dramatic seasonality of activity on the island, and the associated parking demand, reduces the number of months during which the Town might expect a parking facility to be well utilized and to generate parking revenues. Although the permanent residential population may increase over time, the presence of visitors and shoppers will continue to be highly seasonal and it is the visitor/shopper group that represents potential parking revenue for a new parking facility.

Parking as an Economic Development Tool

Parking can be used by municipalities as an economic development tool. In some cases, the provision of ample parking in an area where parking appears to be scarce can attract businesses and make investment more attractive to the funding sources that those businesses rely on for capital. In other cases the primary reason for municipal involvement is to serve as a point of consolidation for both land and capital to fund parking development in a way that may not be possible for multiple small businesses. This is often the case in older downtowns that are undergoing revitalization. Vacant buildings are converted to new uses that often generate more parking demand than the original building use and there is no place for parking. In order to encourage the revitalization effort, the municipality takes on the role of developing the necessary parking, with businesses that benefit from the parking sharing in the cost. Financial commitments by those businesses can take a number of forms, from direct assessments to In Lieu fees, to certificates of participation or parking space rental commitments.

Potential Locations for a New Parking Structure

Causeway Location

There have been previous discussions among business and Town leaders about locating a parking structure near the causeway to intercept beachgoers coming from the mainland. The facility could include retail and food amenities as well as rental facilities for bicycles and other alternative transportation vehicles. It would also be an ideal location for a visitor information center. This concept would rely on shuttle buses to transport parkers from the parking facility to their destinations on the island.

This concept has obvious advantages, particularly from the standpoint of intercepting and reducing vehicle traffic on the island. However, an examination of how the program might operate raises some questions that whether this is the best location.

1) The shuttle vehicles would have to be specially equipped to provide adequate storage room for the normal array of things that people will be expecting to take with them to the beach. The vehicles would likely need to be substantially larger than the vehicles current used for the "Wave."

2) The program would have the effect of further removing beachgoers from retail opportunities along Padre Boulevard and elsewhere north of the causeway. People parking in the facility and taking a shuttle to the beach would have no way of storing their beach equipment if they wanted to walk to Padre Boulevard to shop or eat. Once back to the parking facility, it is more likely that they would leave the island than stay to shop or eat, unless they were planning to take advantage of some of the attractions in the Entertainment District. New retail business near the new parking facility could benefit from being close by, but it would be a shift of potential customers away from established businesses on Padre Boulevard.

3) Although an efficient shuttle system could make it convenient for beach visitors to later go to the Entertainment District, staying there would not be as convenient if those visitors did not have close access to their cars. For the beach visitor, the car serves not only as transportation, but as a place to store those things needed from time to time through the day and evening. If, for example, the temperature drops more than

expected during the evening, a family without direct access to their car and warmer/dryer clothing might choose to simply leave – because of the time needed to ride a shuttle back to the parking facility and retrieve what they need.

4) One advantage of this location is that it could conveniently serve as supplemental parking when the lots at Isla Blanca Park are full. In this case, the County may have an interest in participating financially in the development of the facility and the cost of any shuttle service to the Park. But, those parkers would not represent any real revenue opportunity for Padre Boulevard businesses and the Town would stand to lose financially unless the revenue from the users, combined with any subsidy from the County, fully covered the cost of providing those spaces.

Entertainment District Location

A parking facility located in the heart of the Entertainment District offers distinct advantages over a site near the causeway:

1) It could be used as daytime beach parking, with a shuttle providing transport to the beach access points.

   a) Although this arrangement is similar to the concept for a facility near the causeway, it has the advantage of introducing beach visitors directly to the heaviest concentration of beach-oriented retail and to the location of entertainment that could extend their stay into the evening. After they arrive at the parking facility, visitors could chose to leave their belongings in their car while visiting some of the nearby shops for supplies, beachwear or food before boarding a shuttle for the beach. The same would be true when they return from the beach. They would be delivered to the center of the beach retail and entertainment area.

   b) The new facility could provide needed parking for the growing nighttime attractions in the Entertainment District. This would not only serve to support that activity with parking, but it would provide for an additional income stream (nighttime parking fees) from people coming for or staying for the evening attractions. This is less likely with a causeway location which would rely primarily on daytime beach visitor revenues.

   c) The new facility could stimulate new business development in the Entertainment District by providing needed parking.

(1) With the high cost of land on South Padre Island, the cost of providing surface parking nearly matches the cost of providing structured parking because more cars are "stacked" on the same land area. Prospective new businesses may be able to set up on smaller parcels when they have the option of purchasing necessary parking in a consolidated facility.

(2) Because less land area would be required for surface parking, more businesses can locate within the same area. This can create a "Shared Parking" benefit that is not possible when businesses are spread out over a larger area.

(3) Because of the new shared parking effect, the Town could lower parking requirements for businesses located near the new parking facility and participating in the cost of the facility.

(4) The result could be a lower net cost for businesses in that area to provide for their parking needs.

With a land cost of $44 per square foot and a construction cost of $3,000 per space, the cost of surface parking is approximately $18,400 per space. This approximates the cost of building structured parking. At a land cost of $60 per square foot, the cost per space increases to $24,000, which is roughly equivalent to the cost of building structured parking today.

Assuming a land cost of $44 per square foot and a cost for structured parking of $20,000 per space, the cost per space for a 4-level parking structure would be approximately $24,600. A 33% reduction in the required minimum parking for a business participating in the parking structure would bring the cost of parking down to the cost of providing the normal minimum requirement with surface parking.

(5) Assuming that a fee will be charged to users of a parking structure, this revenue can be used to offset the financial burden that would otherwise rest on participating businesses and the broader community through financial subsidies from the Town. This might not be possible when applied to multiple small parking areas owned by private businesses because of the lack of a method of collecting fees and the reluctance to "be the first" to charge for parking in a competitive environment.

(6) A normal result of increasing the density of retail businesses, with the proper mix, is an overall increase in business volume for all of those businesses. This is an established retail principle behind many of many successful retail development strategies across the country. A group of restaurants located in close proximity of each other and providing a variety of options tend to attract more business than

when those same restaurants are spread over a wider area. The same principle applies when a collection of businesses target the same general customer group, such as beach visitors. The collection of business becomes "the place to go" because of the choices it provides, all in the same general location. This principle could easily apply to the Entertainment District in South Padre Island because of the collection of like businesses that have already begun to develop.

(7) Within limits that might be imposed for tax exempt funding, retail space could be provided as part of a parking structure to immediately add new retail opportunities at the site of the new facility. The structure could also serve, as proposed for the "causeway location", as the Visitor Information Center to provide information about access to the beach, about area attractions, and about area businesses.

d) The facility could be designed specifically to accommodate shuttle buses for efficient and safe transport of people between the facility and other areas of the island, including the beaches.

e) The dimensions of the Entertainment District, at one of the wider points on the island, provides the opportunity for a central parking facility to serve more businesses within a reasonable walking distance that other locations on the island.

f) Because the Entertainment District is located near the south end of the island, it would not contribute significantly to traffic volume along the full length of Padre Boulevard. It would not reduce travel volume and potential congestion between that point and the causeway. But, it would give visitors a convenient opportunity to see and stop at one of the shops on Padre Boulevard on their way to the garage.

Figure 36 shows two potential parking deck sites in the northern half of the Entertainment District. Additional sites options are included in the APPENDIX. The specific site would be determined in conjunction with the Master Plan vision for this area, with attention of the potential site(s) to the prospective new development it would be designed to support. The use of these sites for parking must be weighed against the value of those sites in an overall development plan. Selection of a specific site would be supported by a detailed site feasibility study that considers area development plans, street access, visibility, expandability, bus routing, pedestrian flow, queuing and traffic control.

Figure 36 - Potential Parking Structure Locations in the Entertainment District

Funding Options

In addition to the Town's ability to issue general obligation bonds for capital improvement projects, the State of Texas authorizes "Improvement Districts" ("ID"s) to issue tax-exempt special assessment bonds for the acquisition or construction of public improvements, including off-street parking structures. With the seasonal nature of activity and potential parking revenues for a prospective parking structure, it may be difficult to secure funding that relies solely on parking revenues (revenue bonds) for debt service.

Funding of a new parking structure could include a combination of the following revenue sources:

- Parking Revenues from Facility Users - Hourly parking fees can be charged for users of the parking facility, whether customers of nearby businesses or visitors taking the shuttle to the beach.
- Parking revenues from beach access parking - In the section of this report that addresses management of beach access parking, collection of parking fees for beach access parking is recommended as a management tool. At the same time, it is a source of revenue that can be applied toward transportation system operation, improvements along Gulf Boulevard and other capital projects that could include support for a parking structure.
- Special assessment fees from established area businesses that will benefit from the additional parking and pedestrian activity.
- In-Lieu fees from new businesses entering the market area covered by the new structure. In-Lieu fees are normally paid in advance by the owners of new business properties or owners of existing properties being converted to a new use that generates a higher level of parking demand – as part of the permitting process. In some localities, the fee is paid out over a specified period. It would even be possible to charge a monthly fee to active businesses occupying properties in the overlay district, based on the specific parking demand ratio set for that category of business and the capacity not already provided by the business on-site. These three options respectively represent an increasing level of risk to the Town. As the length of time for payment is extended, the certainty of payment is reduced.

- Certificates of Participation from businesses that want to secure parking in the new facility for their employees on a permanent basis or with a specified expiration.

- Bond issues funded by a local sales or hotel tax.

GENERAL PRO FORMA COSTS

Parking Structure

700	Spaces - Capacity
$24,600	Per Space Construction & Land Cost
$17,220,000	TOTAL Project Cost
6%	Interest Rate
30	Amortization Period
$1,251,014.26	Annual Debt Service
$300	Operating cost per space
$210,000	Annual operating cost (12 mos.)
$1,461,014.26	Total Annual Cost (30 Years)
$2,087.16	Annual Income Required per Space
$173.93	Monthly Revenue per Space (12 months)
$11.60	Daily revenue required per space (180 day seasonal basis)

Additional information about funding strategies for the development of parking by public entities is included in the APPENDIX of this report.

TRAFFIC ISSUES AND RIGHT-OF-WAY USE

The purpose of this element of the parking and traffic study was to examine the existing traffic issues and provide recommendations for smooth and efficient operations on major roads. The study examined the reconfiguration of Padre Boulevard currently underway, considering its impacts on vehicle maneuvers, parking access, parking capacity, and the safe movement of pedestrians and bicycles. Additionally, the study included a review of the right-of-way as related to travel lanes, parking access, roadway cross-section configurations, vehicular and pedestrian movements, adjoining properties, and support of alternate transportation modes.

EXISTING THOUROUGHFARE SYSTEM

The Town of South Padre Island is located on Padre Island, east of Port Isabel. The Town of South Padre Island roadway network comprised of three north-south roadways connected by a series of east-west side streets. The center roadway, Padre Boulevard is the principal business corridor.

Padre Boulevard (SH 100) – Padre Boulevard is a four-lane divided roadway with a continuous center left-turn lane, and runs north-to-south through the Town of South Padre Island. Padre Boulevard is an important roadway that connects the Town of South Padre Island to the Queen Isabella Causeway and Port Isabel, and also provides a major north-to-south thoroughfare for the town and Island. According to a traffic study conducted by Halff Associates, Inc., the 2004 daily traffic volume was approximately 23,900 vehicles per day (vpd) on Padre Boulevard, just east of the Queen Isabella Causeway. It should be noted that traffic volumes varied from 37,300 vpd to 22,400 vpd over the study period in June, 2004.

Gulf Boulevard – Gulf Boulevard is a two-lane undivided roadway that parallels Padre Boulevard along the east side of the Town of South Padre Island. Gulf Boulevard provides north-to-south access for hotels, businesses, and residences on the east side of the Island, along the Gulf Coast. 24-hour daily traffic volumes were not available for this roadway.

Laguna Boulevard – Laguna Boulevard is a two-lane undivided roadway that parallels Padre Boulevard along the west side of the Town of South Padre Island. Laguna Boulevard provides north-to-south access beginning in the Entertainment District extending northward to Morningside and the high-end residential neighborhood beyond Morningside. Laguna has concrete sidewalks along the east side of the street. 24-hour daily traffic volumes were not available for this roadway.

Connecting Cross Streets – Numerous roadways run east-to-west across the Town of South Padre Island to connect Laguna Boulevard, Padre Boulevard, Gulf Boulevard and the beach accesses along Gulf Boulevard. These roadways are typically two-lane undivided roadways with no lane markings, and run the entire length of Gulf Boulevard, from Haas Street on the south to Sunset Drive on the north.

EXISTING TRAFFIC ISSUES

South Padre Island is currently being accessed from the mainland via one bridge, the Queen Isabella Causeway. This limitation on access impacts traffic operations on the Island significantly by causing excessive queuing and bottlenecking on area roadways during peak tourist seasons, such as Spring Break and 4th of July. During field observations, several operational issues were identified that impede traffic flow on the South Padre Island roadway network during "normal" traffic conditions. Below is a brief summary of the operational issues that were observed:

Padre Boulevard

- Traffic flow along Padre Boulevard is impeded by conflicting movements occurring from both sides of the travel way. The presence of an extensive number of retail driveways along Padre Boulevard results in conflicting turning movements from the existing continuous center left-turn lane.
- Head-in parking along the retail frontage impedes traffic flow significantly along Padre Boulevard. Parking maneuvers associated with both entering and exiting the space create safety hazards for pedestrians and bicyclists using sidewalks or the shoulder along Padre Boulevard.

Figure 37 - Padre Boulevard with Shoulder Lane

- Pedestrians were observed to cross Padre Boulevard at mid-block locations and will often use the center left-turn lane as a refuge. This creates a significant safety hazard.
- Traffic signals are not properly coordinated to provide progression along Padre Boulevard.
- Sidewalk design along Padre Boulevard is not adequate to meet ADA safety requirements.
- Lack of wayfinding signs along Padre Boulevard where most of the travelers are tourists. Inadequate signing results in unsafe and confusing driving conditions.

Figure 38 - Center Turn Lane Accident

- Businesses along Padre Boulevard use head-in access/parking from Padre Boulevard rather than cross streets, even if there is adequate real estate to configure the parking lot.

Figure 39 - Pedestrian Path Conditions

Figure 40 - Padre Boulevard: Head-in Parking

Gulf Boulevard and Cross Streets

- Enforcement was observed to be a major issue for traffic flow along Gulf Boulevard. Vehicles were observed to park at non-designated locations which results in impedance of traffic and pedestrian flows, and limits available sight distance at those locations.
- Pedestrians were seen crossing Gulf Boulevard at mid-block locations creating a significant safety hazard.
- Lack of wayfinding signs along Gulf Boulevard to direct tourists to beach access areas that provide public parking results in excessive travel along Gulf Boulevard. Inadequate signing results in unsafe and confusing driving conditions.
- Existing sidewalk striping on the asphalt pavement creates confusion among drivers trying to find a parking space. Sidewalks are sometimes blocked as a result.
- Inadequate parking at the beach access roads results in irregular parking on paved surfaces and in the right-of-way areas along Gulf Boulevard. This haphazard parking impedes traffic flow.
- Lack of pedestrian facilities and crosswalks results in pedestrians walking in travel lanes.

Figure 41 - Gulf Boulevard - Typical

Figure 42 - Right-of-Way Parking on Side Streets

The issues listed above along the two major roadways of South Padre Island impact traffic operations significantly and require mitigation. Recommendations to mitigate these concerns and to improve traffic operations will be discussed in the following sections.

FUTURE THOROUGHFARE SYSTEM

Some roadway improvements are planned or already underway for the Town of South Padre Island roadway network.

Padre Boulevard (SH 100) – A raised median is currently under construction in place of the center left-turn lane along Padre Boulevard (SH 100). This raised median will allow for controlled access for businesses and residences along Padre Boulevard (SH 100).

Gulf Boulevard – No improvements are currently scheduled for this roadway.

Connecting Cross Streets – No improvements are currently scheduled for these roadways.

RIGHT OF WAY ANALYSIS

In order to develop recommendations to improve traffic operations along Padre Boulevard, Gulf Boulevard, and cross streets connecting the two, a detailed evaluation of existing right-of-way for these streets was conducted. In addition, previous studies and reports prepared for the Town of South Padre Island were reviewed to document and identify improvements that are consistent. It should be noted that the intent of these recommendations is to improve traffic operations and safety. It is recognized that they may impact business operations of major retail establishments along Padre Boulevard. The Town of South Padre Island should work with the stakeholders to develop a set of recommendations from this list to obtain the maximum return from the investment in the plan to improve traffic operations. The following paragraphs address issues pertaining to the major roadways of Town of South Padre Island and describe potential solutions for mitigations.

Padre Boulevard

Existing Conditions - Existing right-of-way along Padre Boulevard varies throughout the Town. Currently it is a four-lane divided section with the center left-turn lane and shoulder in both directions. Most of the frontage along Padre Boulevard consists of retail and commercial development. Although the newer developments are being designed to eliminate head-in parking, the existing retail establishments consist of extra wide driveways with head-in parking, which creates significant safety and operational issues along the corridor. Moreover, the combination of the wider driveways, head-in parking, and a center left-turn lane results in a roadway beset with conflict points. Existing pedestrian facilities are sub-par and require significant overhaul for a Town whose main source of income is tourism. Although, the Wave provides transit service along Padre Boulevard and Gulf Boulevard, it is not heavily utilized.

Recommendations - The following recommendations are listed for consideration of the Town of South Padre Island for enhancing traffic operations along Padre Boulevard.

- Padre Boulevard should maintain a uniform cross-section of two travel lanes, one special use shoulder, and wide sidewalks on both sides of the raised median. Exclusive left-turn and right-turn lanes can/shall be provided at intersections by using the raised median and the special use shoulder, as shown in Figure 43.

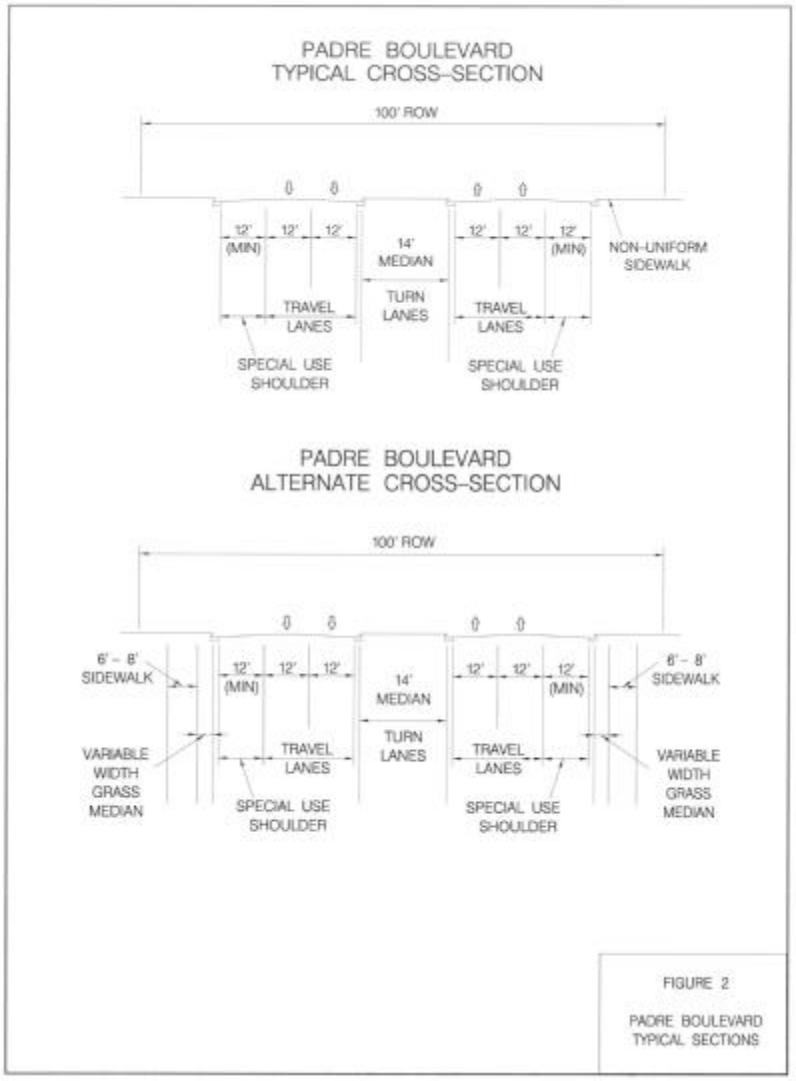


Figure 43

- Sidewalks should be provided along Padre Boulevard for safe and efficient pedestrian movement. Sidewalks should be 6 to 8 feet wide and should be separated by a grass median from the travel lanes, as shown in Figure 43. The proposed cross-section will define the pedestrian walkways clearly and will enhance pedestrian safety by making the walkway more visible to drivers accessing the head-in parking spaces. Landscaping along the boulevard between driveways will not only enhance the aesthetics of the roadway but will help make the pedestrian sidewalk more prominent, even along block faces with substantial head-in parking.

- Sidewalks should be located within the Padre Boulevard right-of-way rather than through private property for the following reasons:

  - Access to private property can limit pedestrian access if the property is closed for general admission.

  - Maintenance of sidewalks on private property is more difficult to coordinate and carry out than sidewalks located on the public right-of-way.

  - Americans with Disability Act (ADA) requirements would be difficult to achieve. The elevation changes from block to block and even within single blocks could create a particular challenge.

  - Property owners would be liable for claims associated with pedestrians using the sidewalks because they are on private property outside of the public right-of-way.

- Design adequate mid-block pedestrian crosswalks to ensure that pedestrians are not required to walk multiple blocks to reach a signalized intersection to cross Padre Boulevard.

- Prohibit head-in parking for all new developments planned along Padre Boulevard.

- Prohibit head-in spaces that are on the street side of normal parking spaces accessed from within the property if those spaces are not needed to meet minimum zoning requirements.

- Allow existing head-in parking to remain, but offer the following alternatives to the retail owners if they are willing to reconfigure their parking lot to eliminate head-in parking:
  - Allow a waiver of minimum parking requirements (zoning) where the head-in portion of parking for a particular property is only needed in order to meet minimum zoning requirements and the owner is willing to remove it.
  - Require property owners to reconfigure their parking lot to remove head-in parking if adequate real estate is available within the property to provide same number of parking spaces with proper configuration.
- Prepare an informational brochure for distribution to property owners that provides a set of typical parking lot layouts designed for maximum efficiency and proper maneuverability. The layouts would include proper dimensioning of spaces and drive aisles. The brochure could also address some of the basics of proper design of ADA spaces.

Figure 44 - People-powered Tram in Shoulder Lane

- The outside lanes presently used by bicycles and peddle-cars should be striped as a special use lane. Although there is some concern about these vehicles operating close to the adjacent travel lane, this arrangement is preferred to the alternatives – assuming that it is not practical to prohibit the use of these non-motorized vehicles. During the summer, population on the Island grows, resulting in higher use of those alternative vehicles. Use of alternative means of travel should be encouraged as a means of reducing motorized vehicle traffic (cars). Bike lanes are being added to roadways all over the country to improve safety and promote the use of alternative transportation modes. The same benefits are available to South Padre Island.

Gulf Boulevard

Existing Conditions - Gulf Boulevard is a north-south roadway on the east side of the Town of South Padre Island. Existing right-of-way along Gulf Boulevard varies throughout the Town. Gulf Boulevard provides two-way traffic operations with parallel parking on the east side, as shown in Figure 45. The parallel parking spaces are delineated with solid white edge-lines. Additionally, a pedestrian/bike lane is provided along Gulf Boulevard, east of the parallel parking. This lane is not barrier separated, but is delineated with solid white edgelines and pedestrian symbols. This lane is located between the parallel parking spaces on Gulf Boulevard and various other facilities, such as head-in parking (for hotels, condos, and private homes), restaurants, and pathways leading to the beach. Currently, the right-of-way on the west side of Gulf Boulevard acts as space for overflow parking during the peak periods.

Recommendations - The following are recommendations for consideration by the Town of South Padre Island as measures to enhance traffic operations along Gulf Boulevard.

- A more clearly defined pedestrian area is recommended. Additional pedestrian symbols on the pavement, as well as improved signage of the pedestrian facility should be considered.

- Crosswalks are recommended for pedestrians to cross Gulf Boulevard. This is critical at the cross-streets that will have a designated

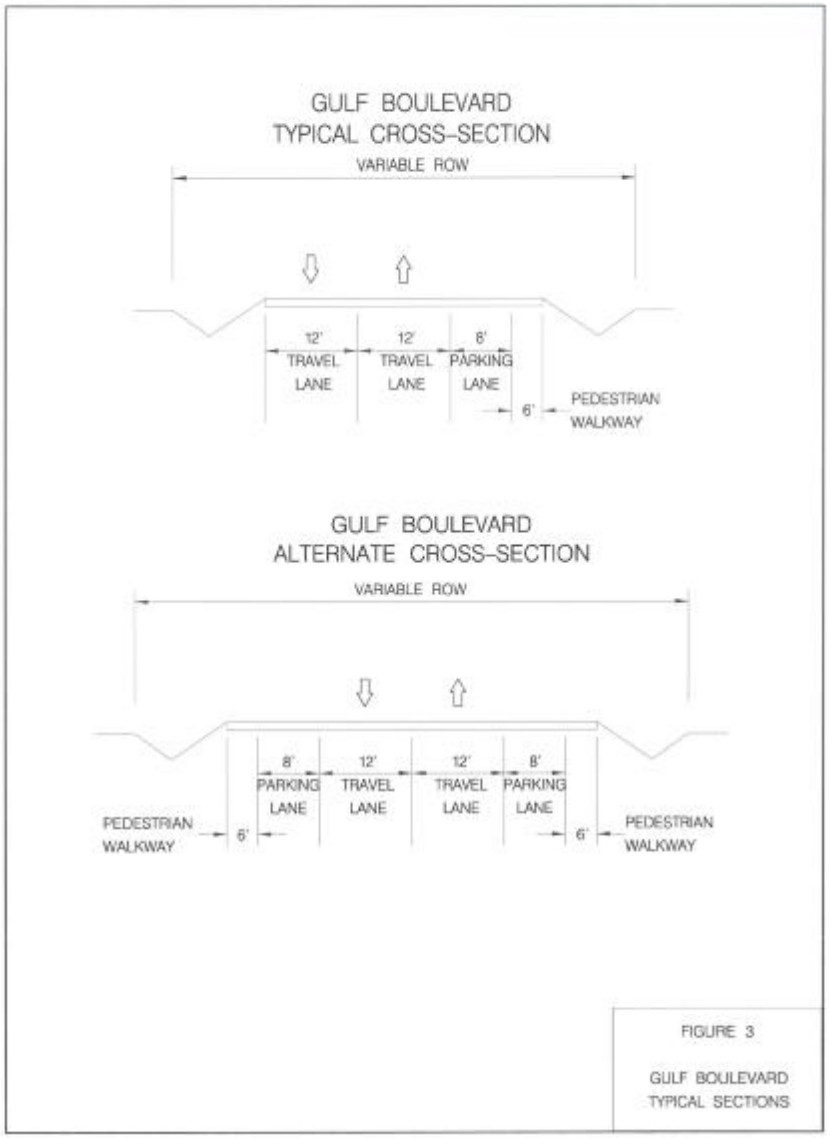


Figure 45 - Gulf Boulevard

pedestrian crossing on Padre Boulevard once the center-raised median is constructed. This includes, but is not limited to:

- Harbor Street
- Palm Street
- Sheep-Head Street

In conjunction with the crosswalk installation, appropriate signage should be installed along Gulf Boulevard to warn oncoming motorists of pedestrian crossings.

- If sufficient right-of-way is available, additional pavement width could be added to the west side of Gulf Boulevard to create additional parking spaces, as shown in Figure 45. A well-defined pedestrian path would also be needed on the west side if parallel parking spaces are provided. This creation of more formalized parking on the west side of Gulf Boulevard would provide additional parking capacity for beach visitors and can be expected to decrease the level of illegal parking. At the same time, the increase in parking maneuvers associated with any increase in parking capacity is likely to slow traffic movement along Gulf Boulevard to some extent.

Increased parking enforcement is recommended to reduce illegal parking along Gulf Boulevard.

Connecting Cross Streets

Existing Conditions - Several cross streets run east-west across the Town of South Padre Island, connecting Padre Boulevard to Gulf Boulevard. In general, the cross streets are narrow two-lane roadways with no pavement markings. On-street parking is not provided in the cross-streets and not allowed on the pavement. There do not appear to be vehicle capacity issues on any of these roadways, but there is a lack of defined pedestrian/bike pathways to facilitate safe walking and safe use of non-motorized transportation modes.

Recommendations - The following recommendations are provided for the cross streets:

- Defined parallel parking should be considered on cross streets that are aligned with a limited purpose or full purpose median opening on Padre Boulevard. This includes, but is not limited to:

- Harbor Street
- Palm Street
- Pompano Street

- Clearly defined pedestrian pathways should be considered on cross streets that are aligned with a designated pedestrian crossing on Padre Boulevard. The Town has already begun a plan to install formal sidewalks on principal side streets as shown in Figure 46. This includes, but it not limited to:
  - Harbor Street
  - Palm Street
  - Sheep-Head Street

- If additional formal parking is created along Gulf Boulevard, grass right-of-way areas on the adjacent cross streets can be signed for no parking until such time that the additional capacity is needed in the future to accommodate new demand.

Figure 46 - New Sidewalk Design - Cross Street

WAYFINDING

Effective wayfinding is an important issue for any community that attracts visitors nationally and internationally. Visitors who are unfamiliar with the area need effective, strategically placed signage to help them become oriented to the island and to find their way to their intended destination. It can also be used to promote key attractions that will expose visitors to the natural features that the island has to offer as well as the businesses that depend on them as customers.

Conditions on South Padre Island actually facilitate the wayfinding process in several ways:

- All visitors to the island arrive at a single point of entry – the causeway. This provides a perfect opportunity to introduce arriving visitors to the wayfinding system and the signage scheme.
- The simple configuration of the island itself simplifies orientation. The Gulf is on one side of the island and the Bay is on the other, less than ½ mile apart. There are only three north-south roadways and the balance of the island is a fairly uniform series of cross streets.

The Beach Access points are already fairly well marked with very distinctive signs that incorporate the beach umbrella icon that is part of the Town logo. This same theme should be continued out to the point where the beach locations are first introduced near the causeway and used to identify turning points at the appropriate streets.

Wayfinding to the Beach Access Points

As long as the primary beach parking is provided at beach access points, the orientation of the wayfinding program is those beach access points along Gulf Boulevard. However, it is recommended that the route to those locations be primarily along Padre Boulevard until the appropriate cross street is reached for each beach access. This will introduce visitors to the retail area while in route to the beach.

- Since the wayfinding signage is directing visitors to the beach access points, not just the beach parking areas, there is no need to include the international "P" symbol or any other parking identifier until drivers actually reach a beach access.

- It is recommended that standardized wayfinding signs be positioned along Padre Boulevard at the turning point to reach each access. The beach umbrella symbol should be used in combination with the dark blue and white numbering scheme already established for the beach access points.

- The first objective, however, is to communicate the beach access locations and wayfinding system to arriving visitors. This is best accomplished by an oversized sign that presents the basic configuration of the island, the beach access points, and the routing system to those points. A general concept is shown in Figure 47.

  - If a map and symbols are used as the primary means of communicating the program, the text can be brief and can be provided in both English and Spanish. Unnecessary text should be avoided in favor of clear diagrams and symbols as much as possible.

  - It is important that a representation of the actual signs that will be found along Padre Boulevard be introduced at the causeway and at the first turning point coming off of the causeway.

    - An example can be included in the introductory super-graphic, or provided on a second sign that follows closely after the first one, so that it is clear that it is part of the same message.

    - The colors and shape of the introductory sample sign must correspond to the actual sign shapes and colors used along Padre Boulevard. Distinctive shapes and colors significantly increase recognition distance and will facilitate traffic movement along Padre Boulevard, especially after arriving visitors have seen the first turn sign on Padre Boulevard to reinforce what they should expect to see at subsequent turn points.

Figure 47
Wayfinding System
Orientation Sign

§ In cases where the beach access is not aligned with the cross street route for that access, a secondary sign should be positioned at the intersection with Gulf Boulevard, facing traffic in the eastbound lane of the cross street.

- On the return route, two-sided signs, using the same basic shape and color scheme, should be positioned at each beach access to direct departing drivers toward the closest cross street with a signalized intersection with Padre Boulevard. This will allow drivers to return to the causeway without having to make a U-turn.

  o The signs should include a graphic representation of the causeway bridge to clarify the destination of the route.

  o A separate symbol can be used to identify and promote the Entertainment District to the point where the routes separate.

Figure 48
Sample #1

Wayfinding to a New Entertainment District Parking Facility

If a new parking facility is provided in the Entertainment District, the introductory signage at the causeway should include bold symbols for the Entertainment District, the parking facility, and the shuttle route. Cartoon representations would be appropriate and in keeping with the "fun" atmosphere of the Island.

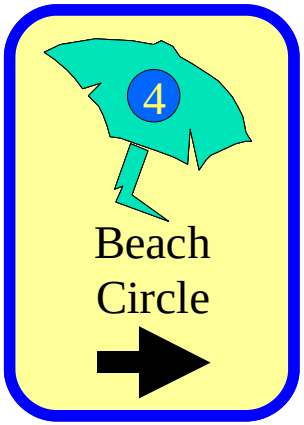


Figure 49
Sample #2

SHUTTLE OPTIONS

The current WAVE shuttle service provides a real convenience for people traveling to different points on the island. It travels north on Gulf Boulevard to the Convention Center and South on Laguna Boulevard with a total of 28 stops including 6 stops in Port Isabel. The route extends south to Isla Blanca Park and the entire route is completed in one hour. One attractively painted mid-sized bus is able to provide the hourly service.

Figure 50 - The Wave

If the WAVE or a similar free shuttle service is to become part of a larger strategy for moving visitors and residents between various beach, entertainment, shopping or parking locations, the route frequency, route configuration, and the character of the vehicle should be re-evaluated.

Route Frequency

A single hourly circuit may provide a reasonable service to local residents who may use it regularly or on occasion to get from point to point when time is not a factor. A frequency of 30 minutes would be needed to provide the level of service that will encourage use by visitors. Vacation time is valuable and time lost to waiting for a shuttle will discourage use. If possible, frequencies of 15 minutes should be the target during the active seasons, particularly on the weekend. If volume does grow, longer frequencies also increase the chance of having full buses, forcing customers to wait another hour or stand on the bus in what may be unsafe conditions.

Route Configuration

If the shuttle service is to be effective in transporting people between points on the island, bi-directional service is essential. For example, riding the shuttle north for ½ mile along Gulf Boulevard to a destination may be convenient, but getting back to the point of origin on the shuttle requires that the person complete the balance of the 1-hour route down Laguna, to Port Isabel and back to the starting point. Bi-directional service would put a

second bus on the route, operating in the opposite direction. This places any two points on the route the same distance apart on both the outbound and return leg of the passenger's trip.

Adding bi-directional service is the first step in providing a shuttle service that will grow in use and popularity. Any promotion effort aimed at either visitors or residents is limited, by default, without bi-directional service.

Shuttle Vehicle

The current WAVE vehicle is the type commonly used for shuttle services in a number of environments, including hotel shuttles, rental car shuttles, and shuttles to off-airport parking facilities. They are designed for a limited number of passengers but, more importantly, they are designed for a fairly predictable amount of luggage that is designed to be portable, reasonable compact and of fairly uniform proportions. The type of equipment that is taken to the beach does not follow that pattern. There is such a wide range of items that are candidates for transport on a beach shuttle, from coolers to rafts and surfboards. If visitors to the beach are expected to depend on a shuttle for transport to the beach, whether from a hotel or a parking area, the vehicle must be able to accommodate the "stuff" these passengers are likely to be taking with them.

Solutions include:

- selecting a base vehicle that is large enough to accommodate a sufficient number of people along with their "stuff"
- Providing well-designed racks inside the bus to transport beach equipment
- Providing racks on the outside of the bus for larger equipment that might be dangerous to transport inside

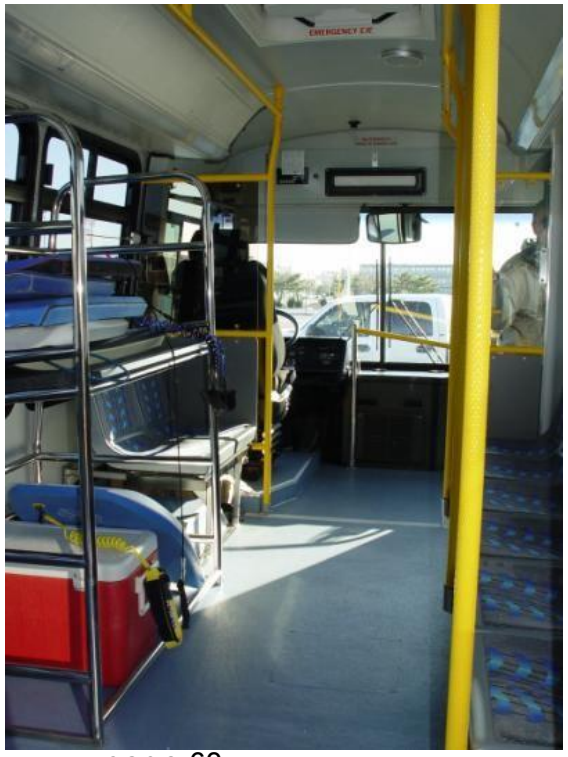
Examples of buses and trams used in other beachfront communities are provided on the next two pages.

Figure 51 - Examples of beach shuttle vehicles and graphics

A

B

C



THE BUS

D

BOARDWALK TRAM

PARKING REQUIREMENTS & ZONING

One of the key issues that developed during the course of this study, as the result of public input, was concern about the validity of parking requirements that are part of the current zoning ordinances. Although there were issues related to the requirements for retail businesses, requirements for large condominium projects became the focus. Approximately two years ago, the parking requirements for condominiums on South Padre Island was increased from 1.5 parking spaces per unit to 2.0 parking spaces per unit. That action was taken out of a concern for the apparent overflow of condominium parkers into nearby beach access parking areas and into grass right-of-way areas – particularly along Gulf Boulevard and the adjacent side streets. As a result, the study team researched 25 beachfront communities on the east coast, in Florida, and along the Gulf Coast to determine the norms for condominium parking requirements in those communities. The ordinances for each these 25 communities were reviewed and the parking requirements applicable to condominium developments were compiled. The results of that compilation are shown in the tables and graphs that follow.

In most cases, parking requirements were fairly straightforward, expressed as the number of spaces required per unit or per bedroom. In some cases there was an additional scale based in some way on building size, whether expressed in terms of the number of stories of number of units. Finally, some requirements were based on the size of the individual units in square feet.

In order to provide a basis for rational comparison, all of these criteria were translated into the number of parking spaces required for a 1, 2, 3 or 4 bedroom unit. We also grouped the comparisons by building size. A scale of 20, 40, 60 and 100+ units allowed all of the requirements to fall within one of these categories. Finally, we surveyed a number of condominium developments on South Padre Island to determine the range and typical size of 1, 2 and 3 bedroom units in order to convert ordinances based on "square footage" to a "bedrooms" basis.

Based on the research results, a requirement of 2.0 or more spaces for condominiums of 2 or more bedrooms is the norm. Requirements for 1-bedroom units were 1.5 spaces per unit (or per bedroom) in half of the communities surveyed, with a range of 1.0 to 2.25 spaces.

Just under a third of the communities surveyed required more than 2.0 spaces for units of 3 or more bedrooms. Most of these required 2.25 or 2.5 spaces, with only one community requiring 3.0 spaces.

We have reviewed and considered the results of the local property owner survey provided by the Town. We have also considered comments related to condominium parking made by local property owners and other interested citizens. Although the survey provides some useful information related to the opinions and unconfirmed observations by local property owners, we cannot rely on that informal process in recommending policy decisions. In order to recommend parking requirements that clearly fall below the norm, based on our broad survey of other similar communities, we would have to know that the information about local parking and vehicle accumulation patterns was based on valid field surveys by impartial observers with full access to all parking facilities during a typical peak period (excluding extraordinary peaks such as the Spring Break period).

We have also reviewed photos of accumulation in condominium parking facilities taken on the weekends of 7/4, 7/30 and 8/5 (2006). Although parking areas at some condominiums were very full, there were a sufficient number of properties with ample surplus parking to raise the question of whether the current occupancy pattern for properties on South Padre Island may, in fact, generate lower parking demand than typical parking zoning ratios would indicate. A late evening survey would probably show a higher occupancy level that revealed in the photos.

One of the challenges in determining appropriate parking ratios for condominiums is the number of variables that can affect parking demand. Here are some examples:

- A property occupied by permanent residents will have a high parking demand compared to other properties.
    - Permanent residents are more likely to have two automobiles.
    - Properties serving permanent residents have a high occupancy rate because they are the primary residence for the owners.
- High-end properties tend to need more spaces than low-end properties because residents and renters of high-end units normally expect assigned parking spaces. The same number of parking spaces are needed, whether actual occupancy in the building is high or low at the time. With the possible exception of visitor spaces, parking is not shared.
- The physical parking facilities affect the ability to share parking and take advantage of any vacancies in the building. Separate garages may be dedicated or owned by specific condominium units and not accessible to others.

- Parking spaces and enclosed individual garage units may be used for boat storage or other storage, reducing the effective number of spaces available for parking.

- The character of a condominium property, and the resulting parking demand pattern, may change over time. A property, originally marketed to high-end part-year residents who occupy their units for only a few weeks during the year, may later become rental units with high occupancy during the peak season. The ultimate use of a property cannot be predicted with certainty.

One approach to achieving a more workable ratio is to base that ratio on the number of bedrooms. The number of bedrooms is obviously the best predictor of the number of people occupying the unit and the number of people on the property. It is also the most predictable indicator of parking demand when comparing similar categories of condominium properties. Rather than the current requirement of 2.0 spaces per unit, a set of graduated ratios might be more appropriate, such as:

1.5 spaces	1 Bedroom Units
1.75 spaces	2 Bedroom Units
2.0 spaces	3 Bedroom Units
0.2 spaces	For each additional bedroom as shared visitor parking.

During the course of this study, the Town forwarded a privately initiated and compiled survey of anecdotal information from a number of condominium owners/managers indicating their general opinion that a ratio of 1.5 spaces per unit would be sufficient to meet the parking demand generated by their properties. Although this consensus of opinion among the surveyed properties may have some validity, the Town should not base any decision to change current zoning requirements on a survey of general opinions when the source of those opinions has a direct interest in the result.

Determining the "correct" ratio(s) for South Padre Island will require fairly extensive research by the Town or an unbiased third party with full cooperation from owners and managers of condominium properties on the island. The process would involve multiple field counts of vehicles at various "normal" peak periods during the season. In addition to base information about the number of units and number of parking spaces, the following additional information would have to be secured in conjunction with each field count:

- The number of units occupied at the time of the vehicle counts.
- The total number of bedrooms associated with the occupied units at the time of the vehicle counts.
- The number of parking spaces used for boat storage.

This information would provide the basis to determine whether there is a consistent relationship between the number of "occupied bedrooms" and the number of vehicles on premises. Obviously, information obtained from properties with space still available at the time of the field surveys will be more relevant than data from properties where all on-site parking was full (or nearly full). When the on-site parking is full, some condominium cars are likely to be parked on the street or in the beach access parking areas. Without the inclusion of that overflow, accurate data for those properties would not be captured.

Recommendation

It is recommended that the current parking requirements for condominiums remain in place until more definitive information (as described) is developed and the true parking demand ratio, on a "per bedroom" basis, is clarified.

Figure 52 - Summary of Condominium Parking Requirements – Group 1

	Ocean City MD	Biloxi MS	Destin FL	Marco Island FL	Virginia Beach VA	Myrtle Beach SC	Daytona Beach FL	Panama City Beach FL	Sanabel Island FL	Miami Beach FL	Ft. Lauderdale FL	Jacksonville Beach FL
20 Units												
1BR	1.50	1.00	2.25	1.75	2.00	1.15	1.50	1.60	1.50	1.50	2.00	2.25
2BR	2.00	2.00	2.25	2.00	2.00	1.75	2.00	1.60	1.50	1.75	2.00	2.25
3BR	2.50	2.50	2.25	2.00	2.00	2.00	2.00	1.60	1.50	2.00	2.00	2.25
4BR	3.00	2.50	2.25	2.00	2.00	2.50	2.00	1.60	1.50	2.00	2.00	2.25
40 Units												
1BR	1.50	1.00	2.25	1.75	2.00	1.15	1.50	1.60	1.50	1.50	2.00	2.25
2BR	2.00	2.00	2.25	2.00	2.00	1.75	2.00	1.60	1.50	1.75	2.00	2.25
3BR	2.50	2.50	2.25	2.00	2.00	2.00	2.00	1.60	1.50	2.00	2.00	2.25
4BR	3.00	2.50	2.25	2.00	2.00	2.50	2.00	1.60	1.50	2.00	2.00	2.25
60 Units												
1BR	1.50	1.00	2.25	1.75	1.96	1.15	1.50	1.60	1.50	1.50	2.00	2.25
2BR	2.00	2.00	2.25	2.00	1.96	1.75	2.00	1.60	1.50	1.75	2.00	2.25
3BR	2.50	2.50	2.25	2.00	1.96	2.00	2.00	1.60	1.50	2.00	2.00	2.25
4BR	3.00	2.50	2.25	2.00	1.96	2.50	2.00	1.60	1.50	2.00	2.00	2.25
100 Units												
1BR	1.50	1.00	2.00	1.75	1.88	1.15	1.50	1.60	1.50	1.50	2.00	2.25
2BR	2.00	2.00	2.00	2.00	1.88	1.75	2.00	1.60	1.50	1.75	2.00	2.25
3BR	2.50	2.50	2.00	2.00	1.88	2.00	2.00	1.60	1.50	2.00	2.00	2.25
4BR	3.00	2.50	2.00	2.00	1.88	2.50	2.00	1.60	1.50	2.00	2.00	2.25

Figure 53 - Summary of Condominium Parking Requirements – Group 2

	Melbourne Beach FL	Clearwater FL	Hilton Head SC	Cocoa Beach FL	Dania Beach FL	Ft. Walton Beach FL	Neptune Beach FL	St. Pete Beach FL	Port Aransas TX	Corpus Christi TX	Galveston TX	Rockport TX	McAllen TX
20 Units													
1BR	2.00	2.00	1.40	2.00	1.75	2.00	2.00	2.00	2.25	1.50	1.00	2.25	1.50
2BR	2.00	2.00	1.70	2.00	2.00	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
3BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
4BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
40 Units													
1BR	2.00	2.00	1.40	2.00	1.75	2.00	2.00	2.00	2.25	1.50	1.00	2.25	1.50
2BR	2.00	2.00	1.70	2.00	2.00	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
3BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
4BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
60 Units													
1BR	2.00	2.00	1.40	2.00	1.75	2.00	2.00	2.00	2.25	1.50	1.00	2.25	1.50
2BR	2.00	2.00	1.70	2.00	2.00	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
3BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
4BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
100 Units													
1BR	2.00	2.00	1.40	2.00	1.75	2.00	2.00	2.00	2.25	1.50	1.00	2.25	1.50
2BR	2.00	2.00	1.70	2.00	2.00	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
3BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00
4BR	2.00	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.25	2.00	1.00	2.25	2.00

Figure 54 - Chart of Survey Results – 20 Unit Condominiums

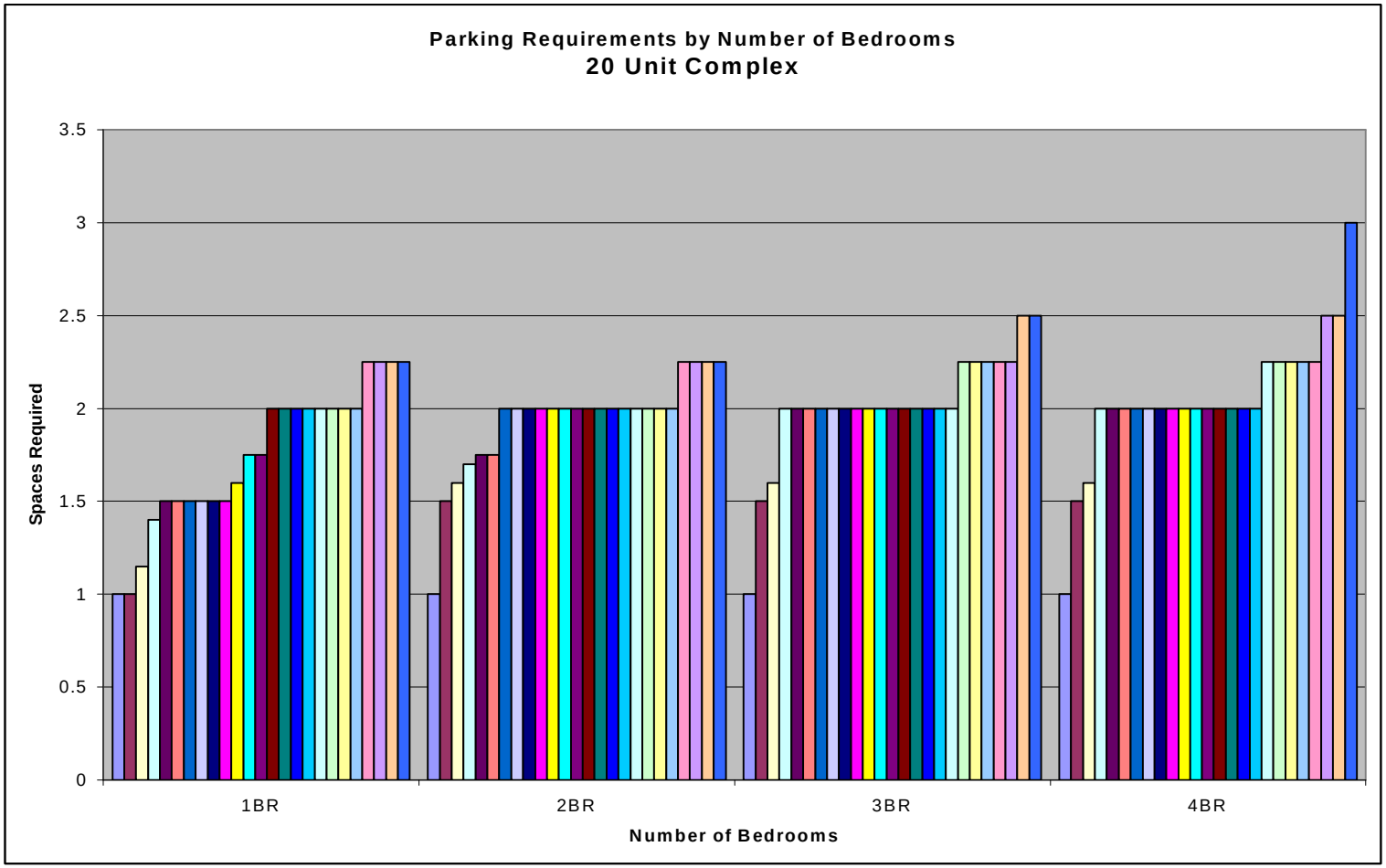


Figure 55 - Chart of Survey Results – 40 Unit Condominiums

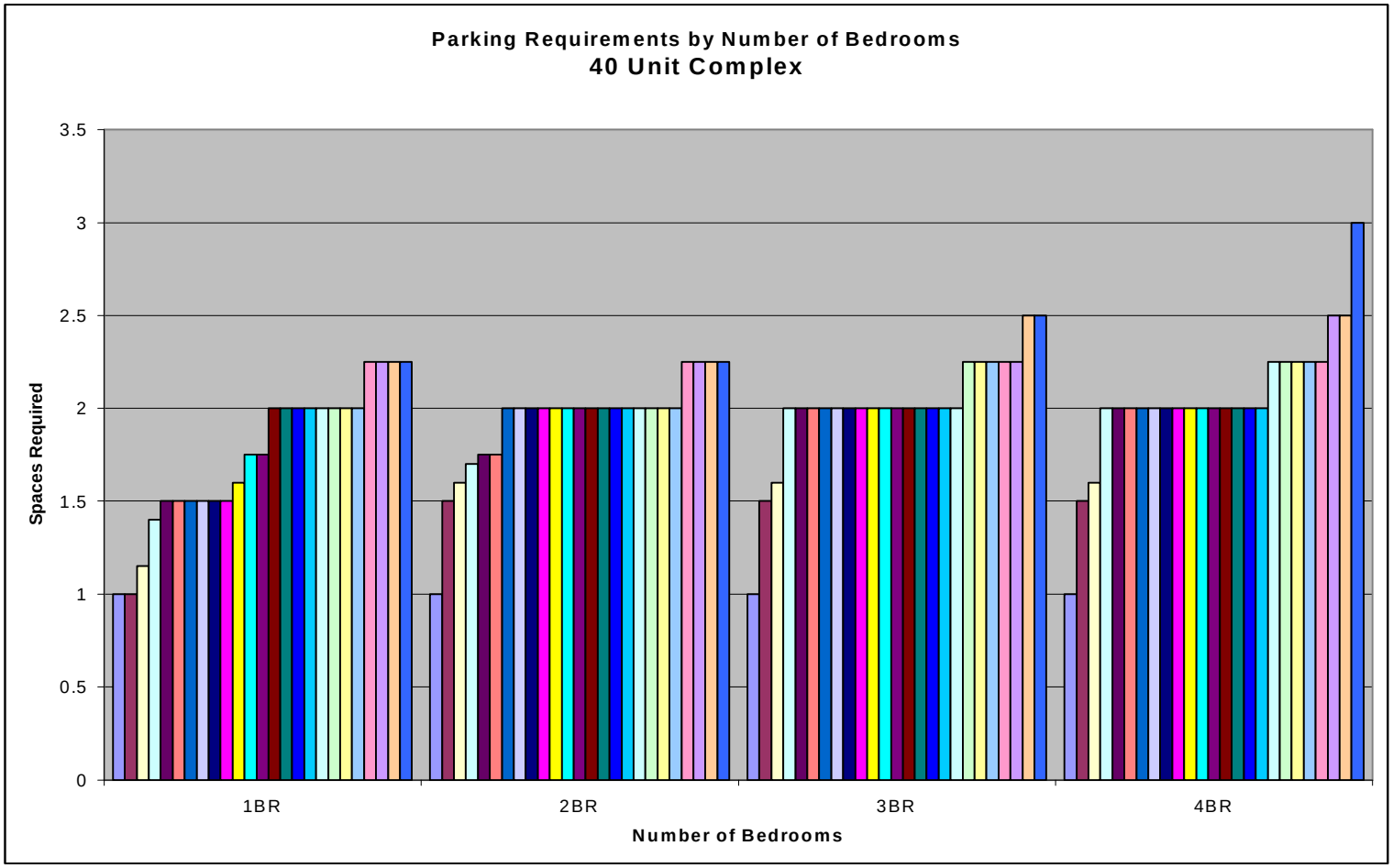


Figure 56 - Chart of Survey Results – 60 Unit Condominiums

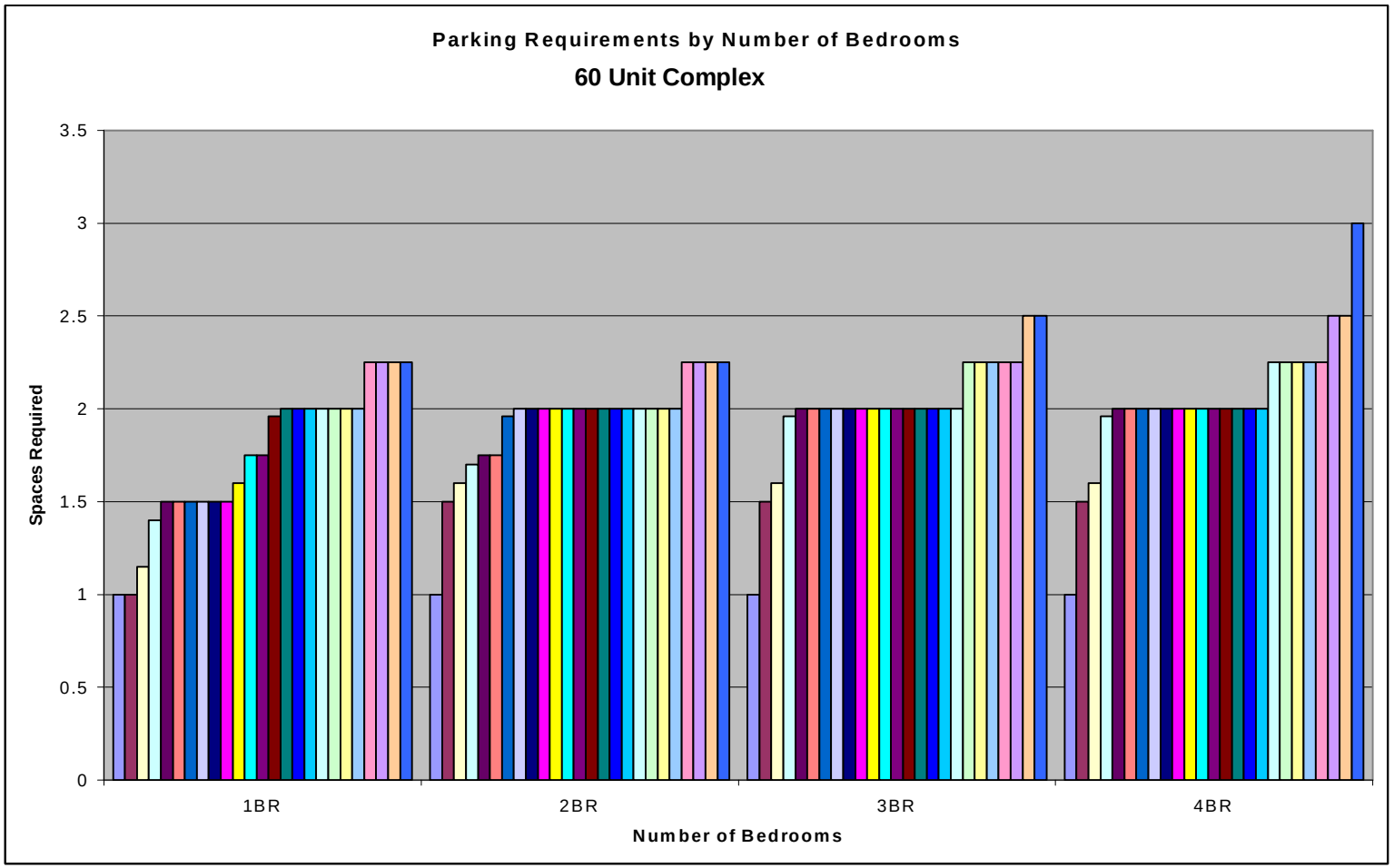
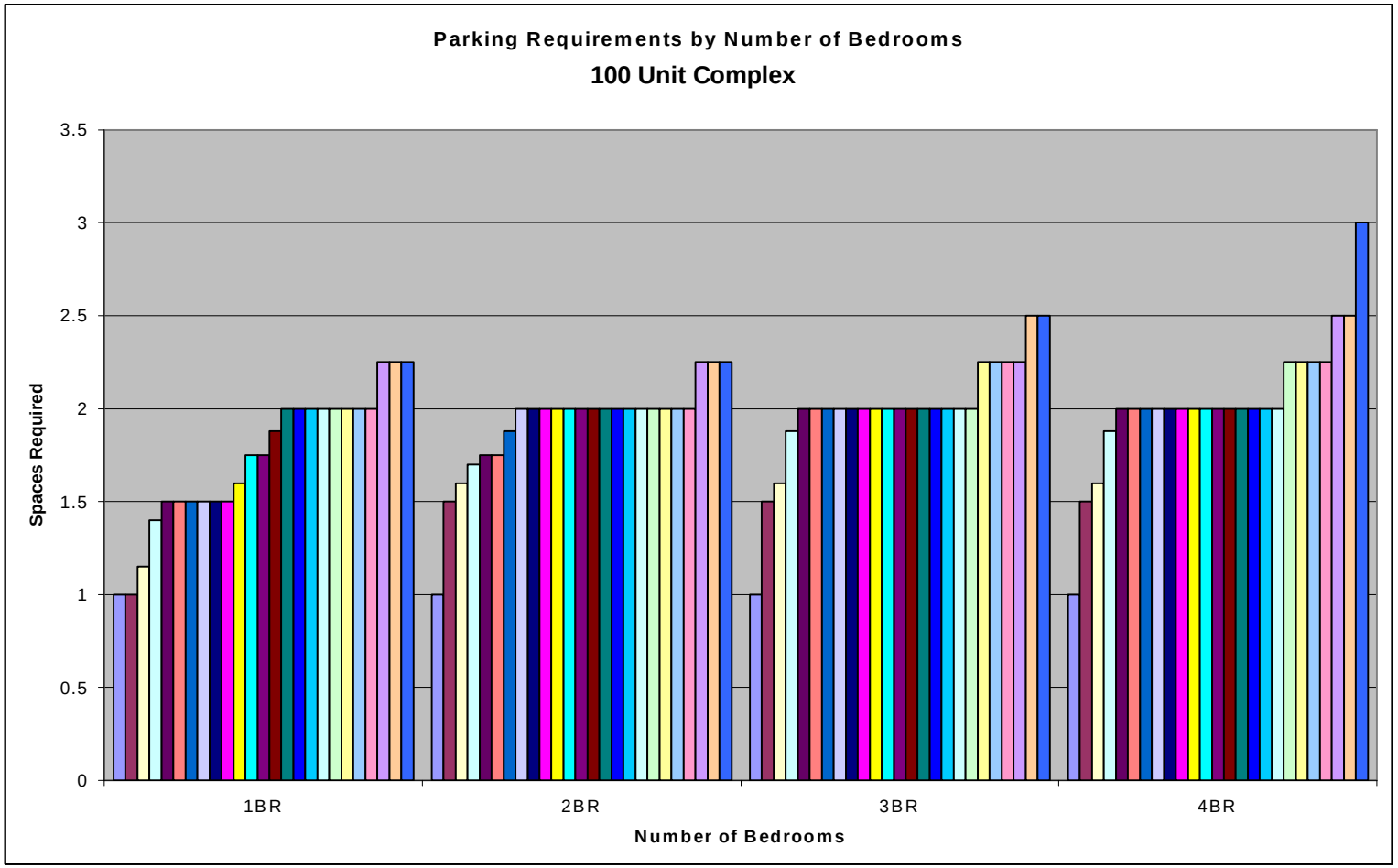


Figure 57 - Chart of Survey Results – 100 Unit Condominiums



SUMMARY RECOMMENDATIONS

GULF BOULEVARD

1) The Town should not invest in purchasing land for additional surface parking along Gulf Boulevard at this time unless that land has been identified for a higher public use at some point in the future. No plans should be made to add structured parking (public) along Gulf Boulevard in the foreseeable future.

2) The current basic configuration of Gulf Boulevard should remain, with cars parked in parallel spaces providing a buffer between the travel lanes and the marked pedestrian pathway. Pavement markings should be upgraded and "illegitimate" markings removed.

3) A phased program should be planned and implemented for adding formal, delineated parallel parking spaces to the west side of Gulf Boulevard. Initially, the focus should be areas nearest the beach access points or in response to any significant addition of public amenities along Gulf Boulevard, including new beach-oriented restaurants or bars that may be allowed at hotels or rental properties. Additional segments should be added as growing demand dictates and funds are available.

4) If future demand exceeds the surplus provided by these new spaces, the Town can add similar formal parking spaces on the right-of-way areas in the cross-streets as needed, but the character of the improvements made to residential cross-streets should be attractive and suitable for a residential area. Paving materials other than asphalt should be used in the cross-streets. If formal parking spaces are added to the cross-streets in the future, streets leading to the beach access points should be given priority.

5) Clearly marked and signed pedestrian crosswalks should be installed at all intersections with cross-streets.

6) Paid parking should be instituted in the beach access lots and for all public on-street parking, including parking in the undeveloped right-of-way areas. Multi-space pay-and-display meters should be used to manage this new system because of their ability to manage unmarked spaces, including parking on the unimproved right-of-way. In conjunction with the implementation of paid parking, "No Parking" signs should be posted

in the unimproved right-of-way on cross streets that are primarily residential. Formal business parking spaces on the side streets can be exempted.

PADRE BOULEVARD

1) The existing basic cross-section for Padre Boulevard, with two travel lanes and an outboard special use shoulder in each direction of travel, should be maintained and the cross-section should be consistent. The cross-section includes exclusive left-turn lanes using the raised median and exclusive right-turn lanes using the special use shoulder.

2) A reconfiguration plan for the existing right-of-way should be planned and implemented to improve walking conditions and safety.

   a) The recommended configuration is to leave the pedestrian pathway in its current location adjacent to the outboard shoulder lane in order to keep the sidewalk within the public right-of way and to provide a level path for pedestrians, particularly those with mobility limitations.

   b) Existing head-in parking should be allowed to remain unless it is feasible to replace that capacity on-site through reconfiguration of existing parking areas or zoning requirements can be met on-site without the head-in spaces.

   c) Right-of-way improvements should be designed to provide a more prominent and more clearly identified pedestrian walkway that is more obvious to both pedestrians and drivers. A landscaping strip should be created between the edge of the sidewalk and the edge of the shoulder lane to help in this delineation. Standard curb cuts should be used to provide driveway access. Landscaping that may block pedestrians from the view of drivers making turns or maneuvering into head-in spaces should be avoided. Only low-profile plants should be used.

3) Creation of any new head-in parking associated with new property development should be prohibited.

4) The shoulder lane should be clearly marked for use by alternative vehicles, including bicycles and other people-powered vehicles.

FUTURE PARKING CAPACITY PLACEMENT

1) Future development plans should include potential addition of a parking structure in the Entertainment District to support the development of a new, higher-density mix of daytime and evening businesses focusing on island visitors. An efficient shuttle service should be implemented to provide quick and convenient transport between the parking facility, the Entertainment District and the beach areas. The fundamental purpose of this proposed location is to facilitate higher density in the area and to provide a means of introducing more beach visitors to the growing number of amenities and attractions that will be there to serve them. The higher density and potential for both daytime and evening activity also offers opportunities for shared parking.

2) Specific placement of a parking facility should be determined by close coordination with the Town Master Plan and plans for prospective demand generators in the area. Specific placement should also be tested through a formal site feasibility analysis that considers relevant factors such as proximity to generators, access, street system interface, street system signalization, queuing, building height and massing.

3) A funding plan should be developed that includes revenues from paid parking along Gulf Boulevard and participation by businesses that benefits from the parking capacity and additional visitor traffic that the parking structure brings to the area. Direct financial participation by local businesses in the form of in-lieu fees, special assessments, certificates of participation or parking space lease agreements should be used to help provide funding for the facility and to provide an opportunity for higher density development through the reduction of required surface parking.

4) The parking structure should be designed to efficiently support shuttle bus service.

5) If feasible, the Visitor's Center should be relocated to the new facility as a point of information, orientation and convenient access to both parking and the shuttle service.

SHUTTLE SERVICE IMPROVEMENTS

1) Bi-directional service should be implemented to increase utilization by reducing travel times and distances between points of origin and destinations, including the return trip.

2) Headways should be reduced to 30 minutes (minimum improvement). During the active season, particularly on weekends, the headway goal should be 15 minutes between buses (going in the same direction).

3) Expansion of the fleet to support a higher level of service should consider the features and equipment needed to support beach visitors, including external racks for large items.

WAYFINDING

1) An integrated wayfinding system should be implemented to guide visitors to the beach access areas, using Padre Boulevard as the primary route in order to introduce arriving visitors to retail opportunities along the route. Any future municipal parking facility should be included in the wayfinding program and signage.

2) An initial "system orientation" sign should be placed at the entry point to the island near the causeway.

   a) That sign should include a graphic depiction of the island and beach access locations.

   b) The sign should also include an identifiable, brightly colored logo or icon that can be used to help recognize additional system signage that will be located along the route. Use of the South Padre Island umbrella icon is recommended because it is already associated with the Town's promotional materials and signage.

3) "Turn" signs, identifying routes to the numbered beach access points should be positioned prominently along Padre Boulevard at the appropriate cross streets. The signs and any text should be larger than called for in standard highway specifications. They should be positioned to be clearly visible to approaching traffic without obstructions.

PARKING REQUIREMENTS FOR CONDOMINIUMS

1) Until more definitive information is obtained about parking demand patterns for condominiums on South Padre Island, the Town should maintain its present standard of 2.0 per unit. This is consistent with nearly all other beachfront communities surveyed as part of this study.

2) The Town should plan for and initiate a methodical survey of condominium parking occupancy related to the number of bedrooms in each property.

3) Actual field surveys should be conducted during the high active season.

4) Information about both the number of units and the total number of bedrooms should be obtained from the property owners managers.

5) Actual vehicle accumulation patterns should be compared to the number of bedrooms and, preferably, the number of occupied units (and associated number of bedrooms) to determine the local relationship between the number of bedrooms in a property, the number of bedrooms occupied during each car count, and the number of vehicles present. More weight should be given to those properties with sufficient capacity, where all parking demand is likely to be captured on-site (everyone parking on-site vs. elsewhere).

APPENDIX

A - Parking Inventory and Occupancy Tables

B - Parking % Occupancy maps – data by block

C - Parking Surplus/Deficit maps – data by block

D - Turnover Analysis

E - Beach Survey Results (compiled) and Beach Survey Questions

F - Potential Parking Structure Sites

G - Funding Strategies White Paper

Appendix A

Parking Inventory and Occupancy Tables

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
All Categories

Block	Capacity	Occupancy	Available Space	% Occupancy
1	573	1	572	0.2%
2	394	299	95	75.9%
3	153	127	26	83.0%
4	90	79	11	87.8%
5	115	58	57	50.4%
6	176	89	87	50.6%
7	262	191	71	72.9%
8	9	0	9	0.0%
9	85	37	48	43.5%
10	137	39	98	28.5%
11	108	5	103	4.6%
12	0	0	0	0.0%
13	0	0	0	0.0%
14	0	0	0	0.0%
15	25	25	0	100.0%
16	15	8	7	53.3%
17	8	3	5	37.5%
18	26	7	19	26.9%
19	92	12	80	13.0%
20	138	21	117	15.2%
21	0	0	0	0.0%
22	112	46	66	41.1%
23	0	0	0	0.0%
24	0	0	0	0.0%
25	84	22	62	26.2%
26	0	0	0	0.0%
27	65	13	52	20.0%
28	147	5	142	3.4%
29	0	0	0	0.0%
30	6	0	6	0.0%
31	123	0	123	0.0%
32	68	63	5	92.6%
33	57	35	22	61.4%
34	0	0	0	0.0%
35	0	0	0	0.0%
36	75	14	61	18.7%
37	86	21	65	24.4%
38	30	6	24	20.0%
39	80	28	52	35.0%
40	12	12	0	100.0%
41	12	6	6	50.0%
42	101	99	2	98.0%
43	58	2	56	3.4%
44	91	0	91	0.0%
45	68	15	53	22.1%
46	20	6	14	30.0%
47	107	22	85	20.6%
48	0	0	0	0.0%
49	0	0	0	0.0%
50	38	10	28	26.3%

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
All Categories

Block	Capacity	Occupancy	Available Space	% Occupancy
51	65	18	47	27.7%
52	40	20	20	50.0%
53	49	15	34	30.6%
54	76	25	51	32.9%
55	37	21	16	56.8%
56	0	0	0	0.0%
57	27	2	25	7.4%
58	50	28	22	56.0%
59	0	0	0	0.0%
60	41	10	31	24.4%
61	152	58	94	38.2%
62	68	60	8	88.2%
63	0	0	0	0.0%
64	130	34	96	26.2%
65	60	22	38	36.7%
66	33	6	27	18.2%
67	85	16	69	18.8%
68	46	12	34	26.1%
69	36	27	9	75.0%
70	20	5	15	25.0%
71	110	15	95	13.6%
72	25	22	3	88.0%
73	0	0	0	0.0%
74	107	22	85	20.6%
75	97	11	86	11.3%
76	50	36	14	72.0%
77	0	0	0	0.0%
78	86	24	62	27.9%
79	37	15	22	40.5%
80	0	0	0	0.0%
81	0	0	0	0.0%
82	0	0	0	0.0%
83	69	37	32	53.6%
84	0	0	0	0.0%
85	132	6	126	4.5%
86	15	14	1	93.3%
87	20	2	18	10.0%
88	48	33	15	68.8%
89	180	49	131	27.2%
90	15	0	15	0.0%
91	107	16	91	15.0%
92	149	54	95	36.2%
93	123	50	73	40.7%
94	28	5	23	17.9%
95	65	4	61	6.2%
96	71	19	52	26.8%
97	0	0	0	0.0%
98	68	20	48	29.4%
99	84	4	80	4.8%
100	118	28	90	23.7%

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
All Categories

Block	Capacity	Occupancy	Available Space	% Occupancy
101	53	0	53	0.0%
102	65	20	45	30.8%
103	42	0	42	0.0%
104	37	12	25	32.4%
105	101	16	85	15.8%
106	39	15	24	38.5%
107	29	7	22	24.1%
108	82	52	30	63.4%
109	147	143	4	97.3%
110	70	12	58	17.1%
111	34	18	16	52.9%
112	64	11	53	17.2%
113	88	25	63	28.4%
114	29	1	28	3.4%
115	38	9	29	23.7%
116	41	20	21	48.8%
117	0	0	0	0.0%
118	109	20	89	18.3%
119	36	14	22	38.9%
120	122	26	96	21.3%
121	148	74	74	50.0%
122	91	72	19	79.1%
123	20	15	5	75.0%
124	144	18	126	12.5%
125	132	45	87	34.1%
126	20	6	14	30.0%
127	57	16	41	28.1%
128	49	3	46	6.1%
129	24	9	15	37.5%
130	230	18	212	7.8%
131	110	14	96	12.7%
132	192	116	76	60.4%
133	0	0	0	0.0%
134	84	14	70	16.7%
135	70	29	41	41.4%
136	0	0	0	0.0%
137	69	8	61	11.6%
138	50	25	25	50.0%
139	45	1	44	2.2%
140	57	25	32	43.9%
141	54	13	41	24.1%
142	97	9	88	9.3%
143	264	22	242	8.3%
144	28	4	24	14.3%
145	217	203	14	93.5%
146	492	90	402	18.3%
147	18	3	15	16.7%
148	28	13	15	46.4%
149	66	5	61	7.6%
150	30	2	28	6.7%

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
All Categories

Block	Capacity	Occupancy	Available Space	% Occupancy
151	53	39	14	73.6%
152	455	167	288	36.7%
153	460	136	324	29.6%
154	345	55	290	15.9%
155	575	413	162	71.8%
156	319	184	135	57.7%
157	347	155	192	44.7%
158	798	412	386	51.6%
159	596	84	512	14.1%
160	542	500	42	92.3%
161	1,043	836	207	80.2%
TOTALS:	**16,310**	**6,565**	**9,745**	**40.3%**
		40.3%	**59.7%**	

Note: Does not include areas that are exclusively residential and does not include single family residential or small multi-family properties. Occupancy does not include any vehicles present in private garage enclosures that were closed at the time of the field survey.

ZONE SUMMARY: All Categories

Blocks	Capacity	Occupied	Empty	% Occupied
1-40	3,351	1,266	2,085	38%
41-80	2,022	684	1,338	34%
81-100	1,292	341	951	26%
101-140	2,818	929	1,889	33%
141-161	6,827	3,345	3,482	49%
Totals:	**16,310**	**6,565**	**9,745**	**40%**

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
NON-RESIDENTIAL PARKING FACILITIES ONLY

Block	Capacity	Occupancy	Available Space	% Occupancy
1	573	1	572	0.2%
2	394	299	95	75.9%
3	153	127	26	83.0%
4	90	79	11	87.8%
5	115	58	57	50.4%
6	45	31	14	68.9%
7	262	191	71	72.9%
8	9	0	9	0.0%
9	85	37	48	43.5%
10	137	39	98	28.5%
11	0	0	0	0.0%
12	0	0	0	0.0%
13	0	0	0	0.0%
14	0	0	0	0.0%
15	25	25	0	100.0%
16	15	8	7	53.3%
17	8	3	5	37.5%
18	26	7	19	26.9%
19	0	0	0	0.0%
20	2	0	2	0.0%
21	0	0	0	0.0%
22	112	46	66	41.1%
23	0	0	0	0.0%
24	0	0	0	0.0%
25	84	22	62	26.2%
26	0	0	0	0.0%
27	40	2	38	5.0%
28	132	5	127	3.8%
29	0	0	0	0.0%
30	6	0	6	0.0%
31	45	0	45	0.0%
32	68	63	5	92.6%
33	57	35	22	61.4%
34	0	0	0	0.0%
35	0	0	0	0.0%
36	75	14	61	18.7%
37	86	21	65	24.4%
38	30	6	24	20.0%
39	11	0	11	0.0%
40	12	12	0	100.0%
41	0	0	0	0.0%
42	101	99	2	98.0%
43	3	0	3	0.0%
44	91	0	91	0.0%
45	31	5	26	16.1%
46	0	0	0	0.0%
47	107	22	85	20.6%
48	0	0	0	0.0%
49	0	0	0	0.0%

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
NON-RESIDENTIAL PARKING FACILITIES ONLY

Block	Capacity	Occupancy	Available Space	% Occupancy
50	38	10	28	26.3%
51	65	18	47	27.7%
52	0	0	0	0.0%
53	49	15	34	30.6%
54	76	25	51	32.9%
55	37	21	16	56.8%
56	0	0	0	0.0%
57	27	2	25	7.4%
58	50	28	22	56.0%
59	0	0	0	0.0%
60	41	10	31	24.4%
61	152	58	94	38.2%
62	68	60	8	88.2%
63	0	0	0	0.0%
64	130	34	96	26.2%
65	60	22	38	36.7%
66	17	1	16	5.9%
67	85	16	69	18.8%
68	46	12	34	26.1%
69	14	10	4	71.4%
70	5	2	3	40.0%
71	110	15	95	13.6%
72	25	22	3	88.0%
73	0	0	0	0.0%
74	107	22	85	20.6%
75	97	11	86	11.3%
76	50	36	14	72.0%
77	0	0	0	0.0%
78	86	24	62	27.9%
79	37	15	22	40.5%
80	0	0	0	0.0%
81	0	0	0	0.0%
82	0	0	0	0.0%
83	69	37	32	53.6%
84	0	0	0	0.0%
85	132	6	126	4.5%
86	0	0	0	0.0%
87	0	0	0	0.0%
88	48	33	15	68.8%
89	54	18	36	33.3%
90	0	0	0	0.0%
91	107	16	91	15.0%
92	109	41	68	37.6%
93	123	50	73	40.7%
94	0	0	0	0.0%
95	49	0	49	0.0%
96	47	13	34	27.7%
97	0	0	0	0.0%
98	68	20	48	29.4%

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
NON-RESIDENTIAL PARKING FACILITIES ONLY

Block	Capacity	Occupancy	Available Space	% Occupancy
99	73	2	71	2.7%
100	4	0	4	0.0%
101	53	0	53	0.0%
102	54	18	36	33.3%
103	2	0	2	0.0%
104	37	12	25	32.4%
105	28	5	23	17.9%
106	0	0	0	0.0%
107	11	5	6	45.5%
108	82	52	30	63.4%
109	147	143	4	97.3%
110	8	7	1	87.5%
111	34	18	16	52.9%
112	44	10	34	22.7%
113	65	13	52	20.0%
114	29	1	28	3.4%
115	38	9	29	23.7%
116	41	20	21	48.8%
117	0	0	0	0.0%
118	109	20	89	18.3%
119	36	14	22	38.9%
120	122	26	96	21.3%
121	65	33	32	50.8%
122	91	72	19	79.1%
123	20	15	5	75.0%
124	144	18	126	12.5%
125	33	6	27	18.2%
126	20	6	14	30.0%
127	57	16	41	28.1%
128	49	3	46	6.1%
129	0	0	0	0.0%
130	230	18	212	7.8%
131	89	11	78	12.4%
132	162	91	71	56.2%
133	0	0	0	0.0%
134	61	9	52	14.8%
135	22	10	12	45.5%
136	0	0	0	0.0%
137	57	3	54	5.3%
138	36	21	15	58.3%
139	8	0	8	0.0%
140	51	25	26	49.0%
141	54	13	41	24.1%
142	97	9	88	9.3%
143	264	22	242	8.3%
144	28	4	24	14.3%
145	217	203	14	93.5%
146	492	90	402	18.3%
147	18	3	15	16.7%

SOUTH PADRE ISLAND
PARKING CAPACITY & PEAK OCCUPANCY
NON-RESIDENTIAL PARKING FACILITIES ONLY

Block	Capacity	Occupancy	Available Space	% Occupancy
148	28	13	15	46.4%
149	66	5	61	7.6%
150	30	2	28	6.7%
151	53	39	14	73.6%
152	455	167	288	36.7%
153	460	136	324	29.6%
154	345	55	290	15.9%
155	575	392	183	68.2%
156	319	184	135	57.7%
157	347	155	192	44.7%
158	663	358	305	54.0%
159	596	84	512	14.1%
160	542	500	42	92.3%
161	1,043	836	207	80.2%
TOTALS:	**14,212**	**5,982**	**8,230**	**42.1%**
		42.1%	**57.9%**	

ZONE SUMMARY: Non-Residential

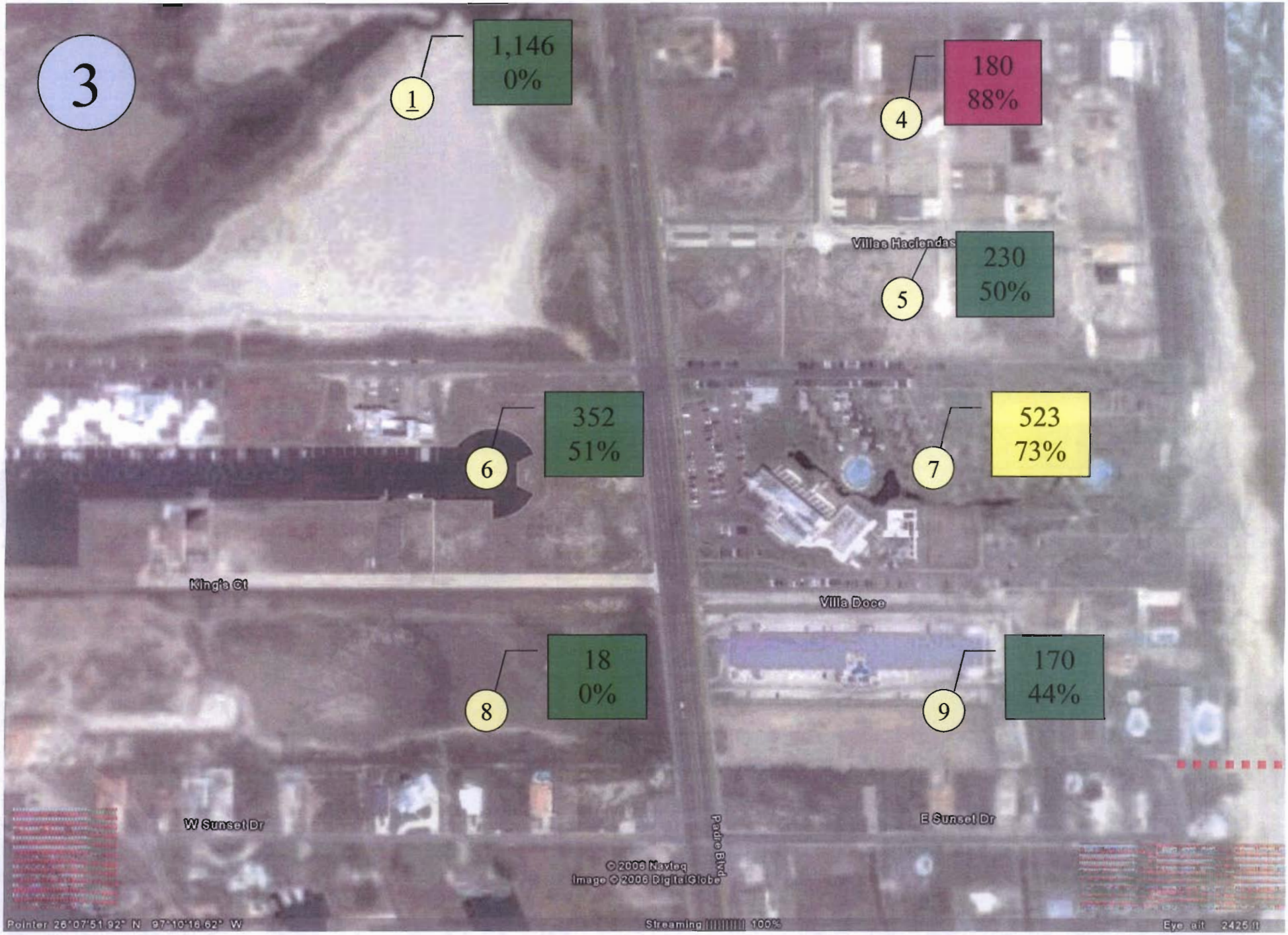
Blocks	Capacity	Occupied	Empty	% Occupied
1-40	2,697	1,131	1,566	42%
41-80	1,805	615	1,190	34%
81-100	883	236	647	27%
101-140	2,135	730	1,405	34%
141-161	6,692	3,270	3,422	49%
Totals:	**14,212**	**5,982**	**8,230**	**42%**

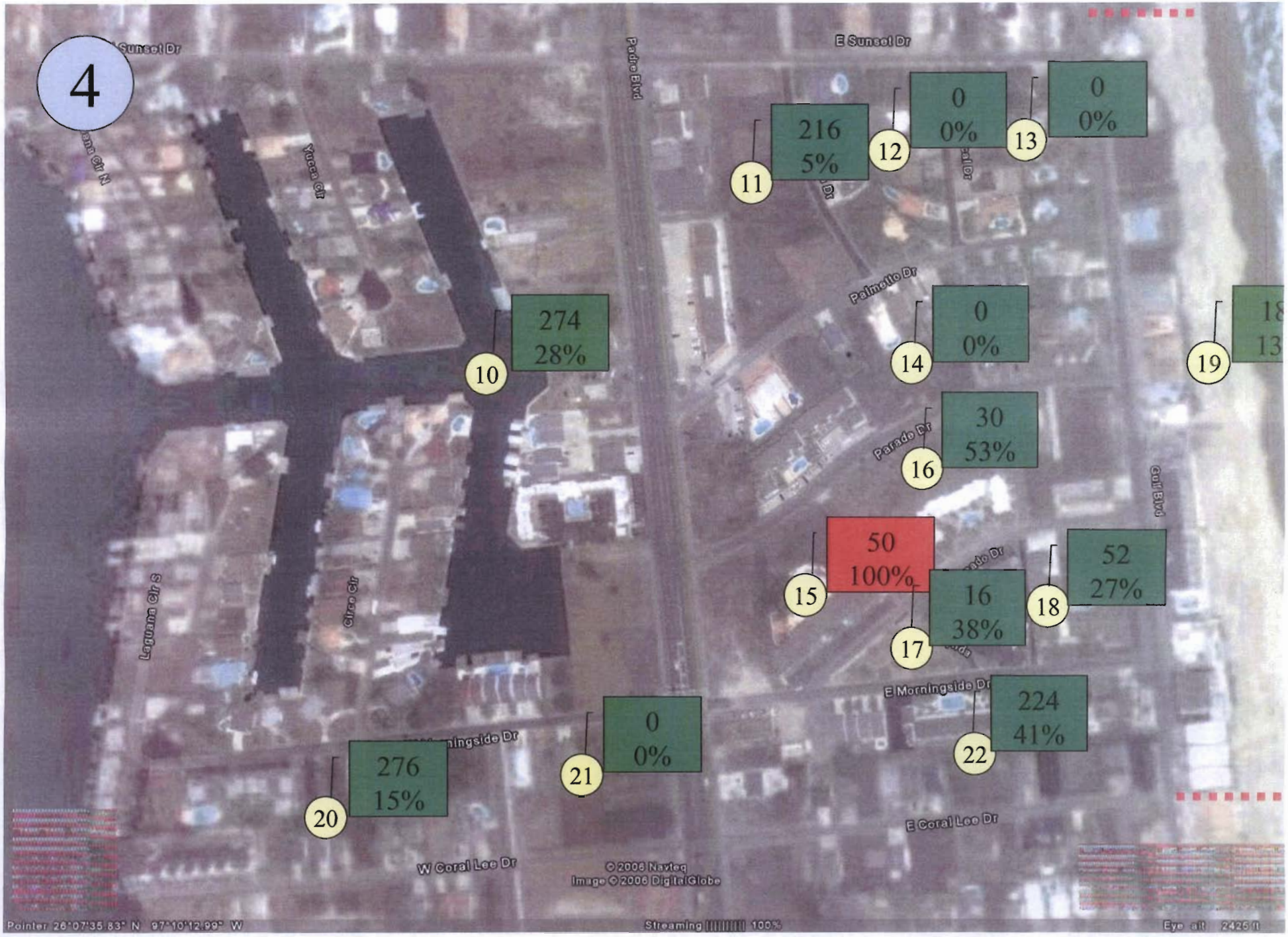
Appendix B

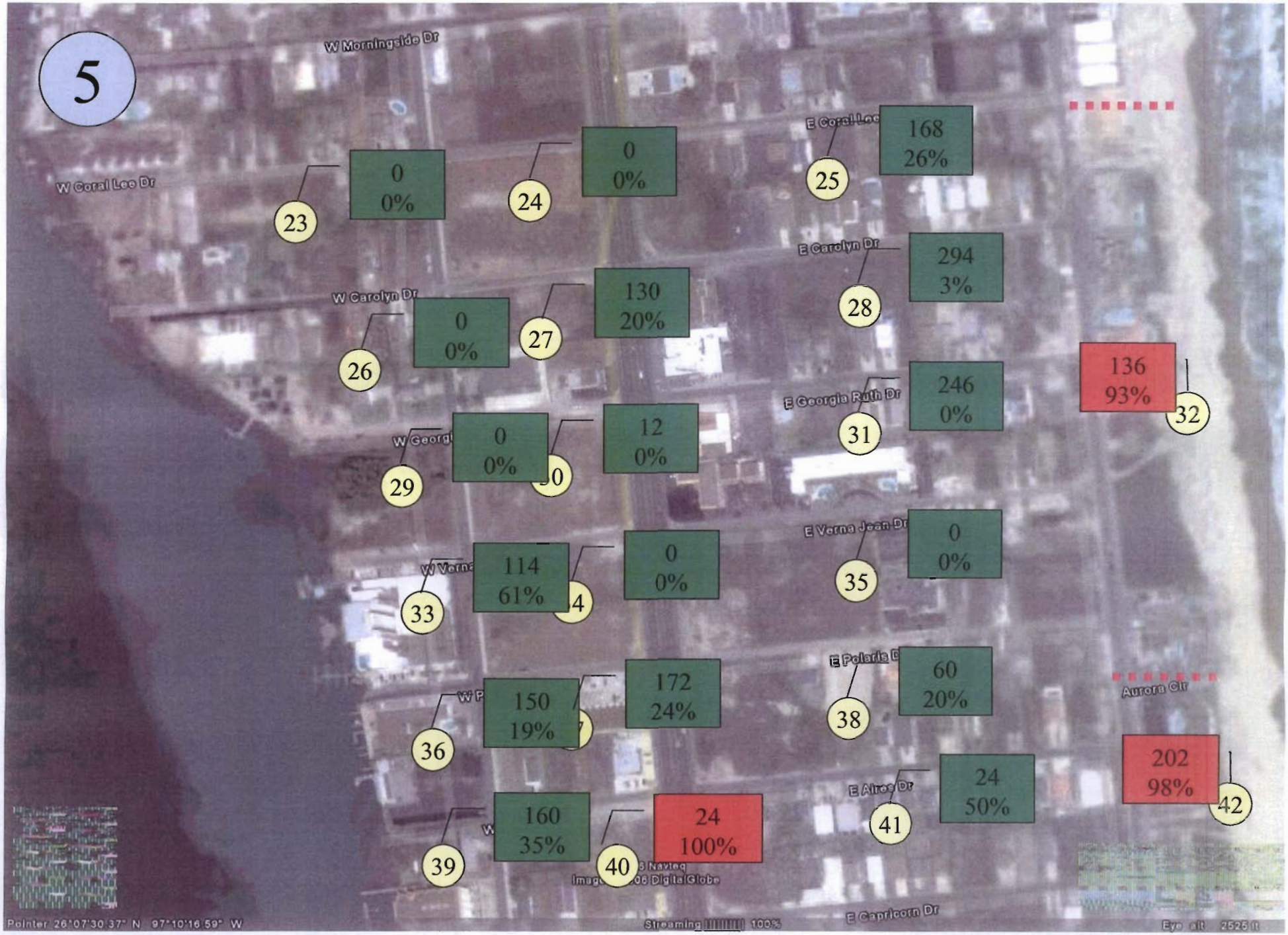
Parking % Occupancy Maps – data by block

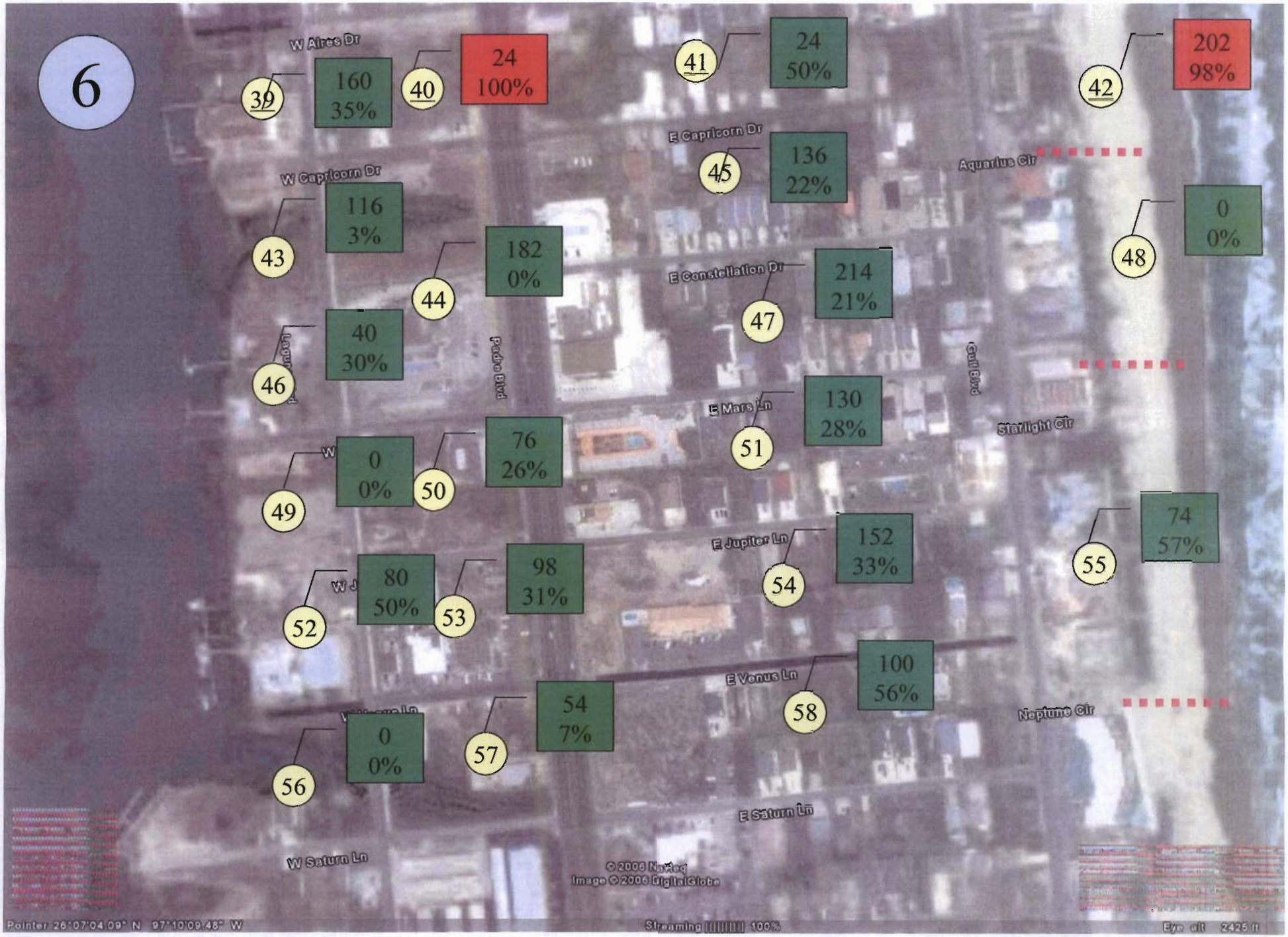

1
Padre Blvd
1,146
0%
1
788
76%
2
Orca Cir
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°08'27.31" N 97°10'18.14" W
Streaming 100%
Eye alt 2425 ft

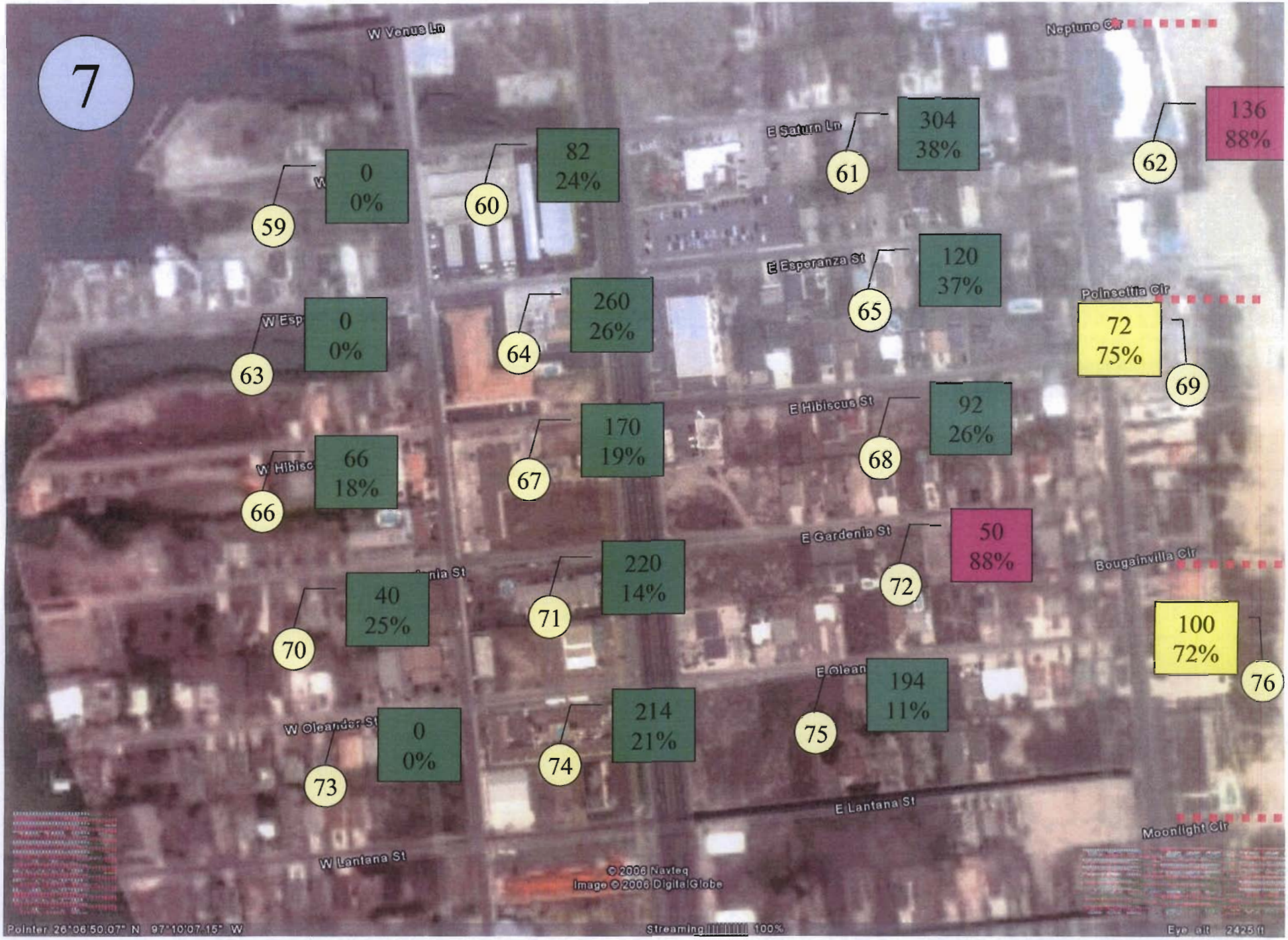

2
Orca Cir
1,146
0%
1
Padre Blvd
788
76%
2
White Sands Dr
306
83%
3
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°08'08.67" N 97°10'18.33" W
Streaming 100%
Eye alt 2425 ft

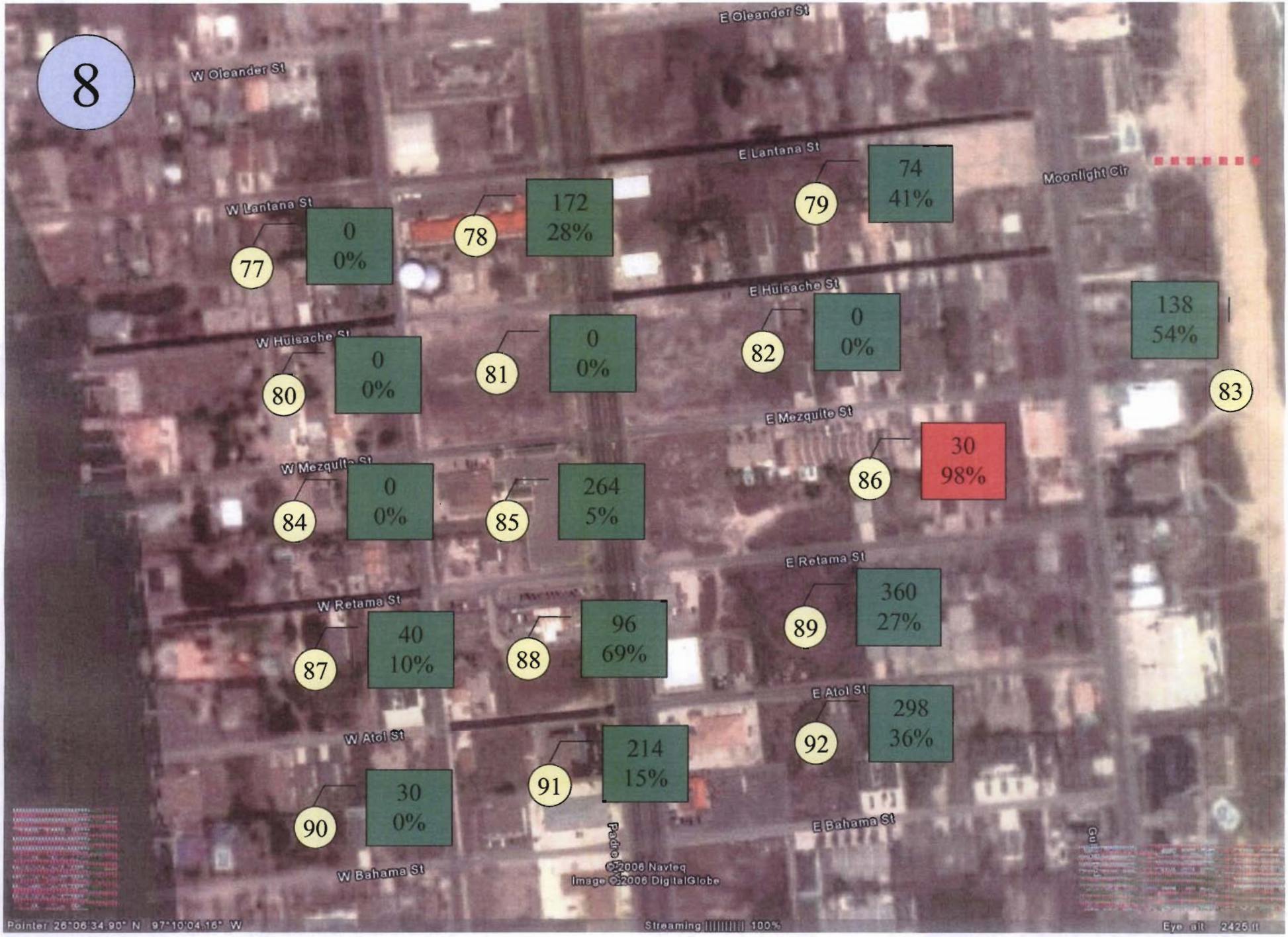

3
1
1,146
0%
4
180
88%
Villas Haciendas
5
230
50%
6
352
51%
7
523
73%
King's Ct
Villa Doce
8
18
0%
9
170
44%
W Sunset Dr
E Sunset Dr
Padre Blvd
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°07'51.92" N 97°10'16.62" W
Streaming 100%
Eye alt 2425 ft

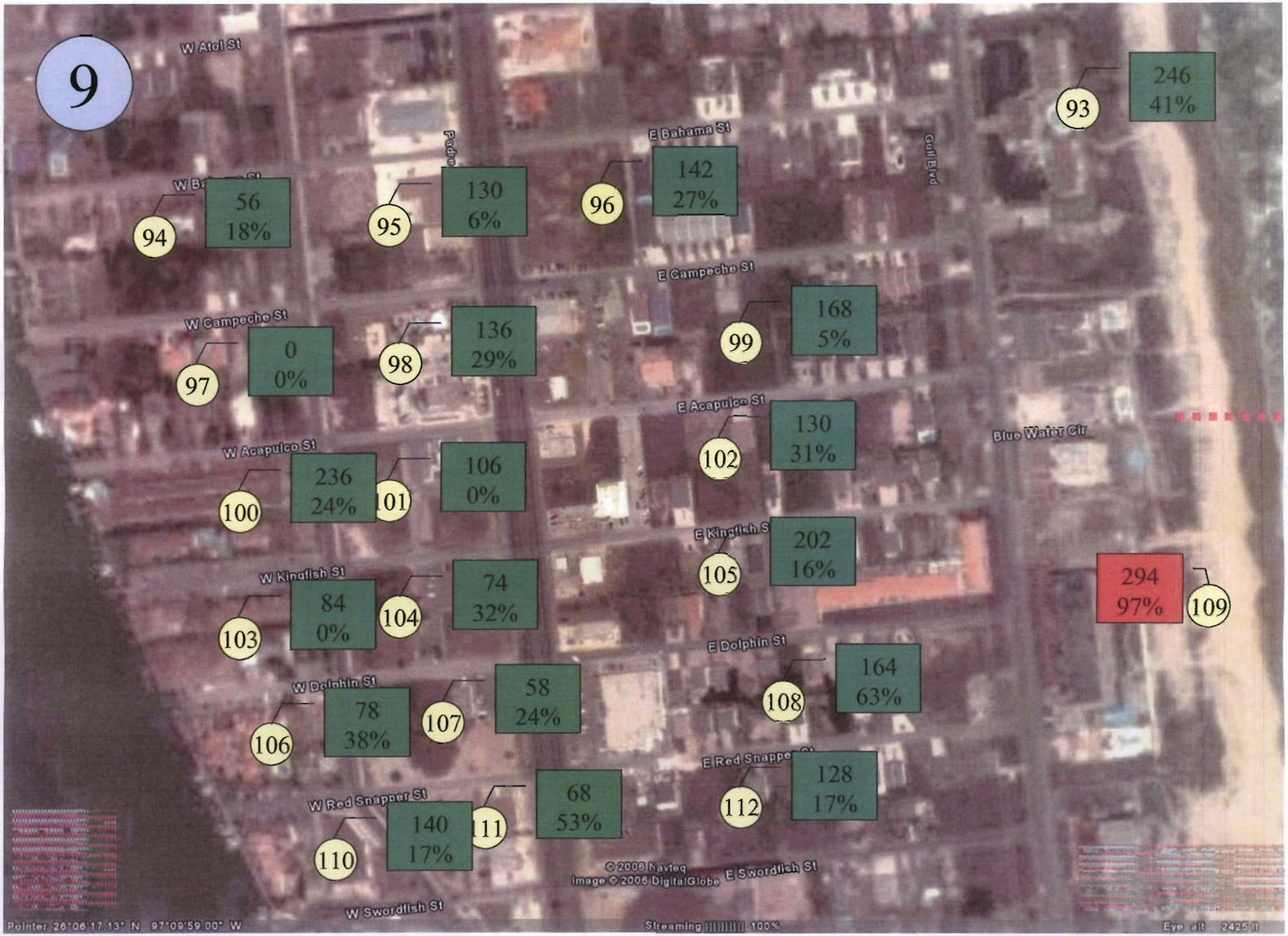

4
E Sunset Dr
Padre Blvd
Yucca Cir
Palmetto Dr
Parade Dr
Gulf Blvd
Laguna Cir S
Circo Cir
E Morningside Dr
W Coral Loe Dr
E Coral Loe Dr
216
5%
11
0
0%
12
0
0%
13
274
28%
10
0
0%
14
30
53%
16
50
100%
15
16
38%
17
52
27%
18
0
0%
21
276
15%
20
224
41%
22
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°07'35.83" N 97°10'12.99" W
Streaming 100%
Eye alt 2425 ft

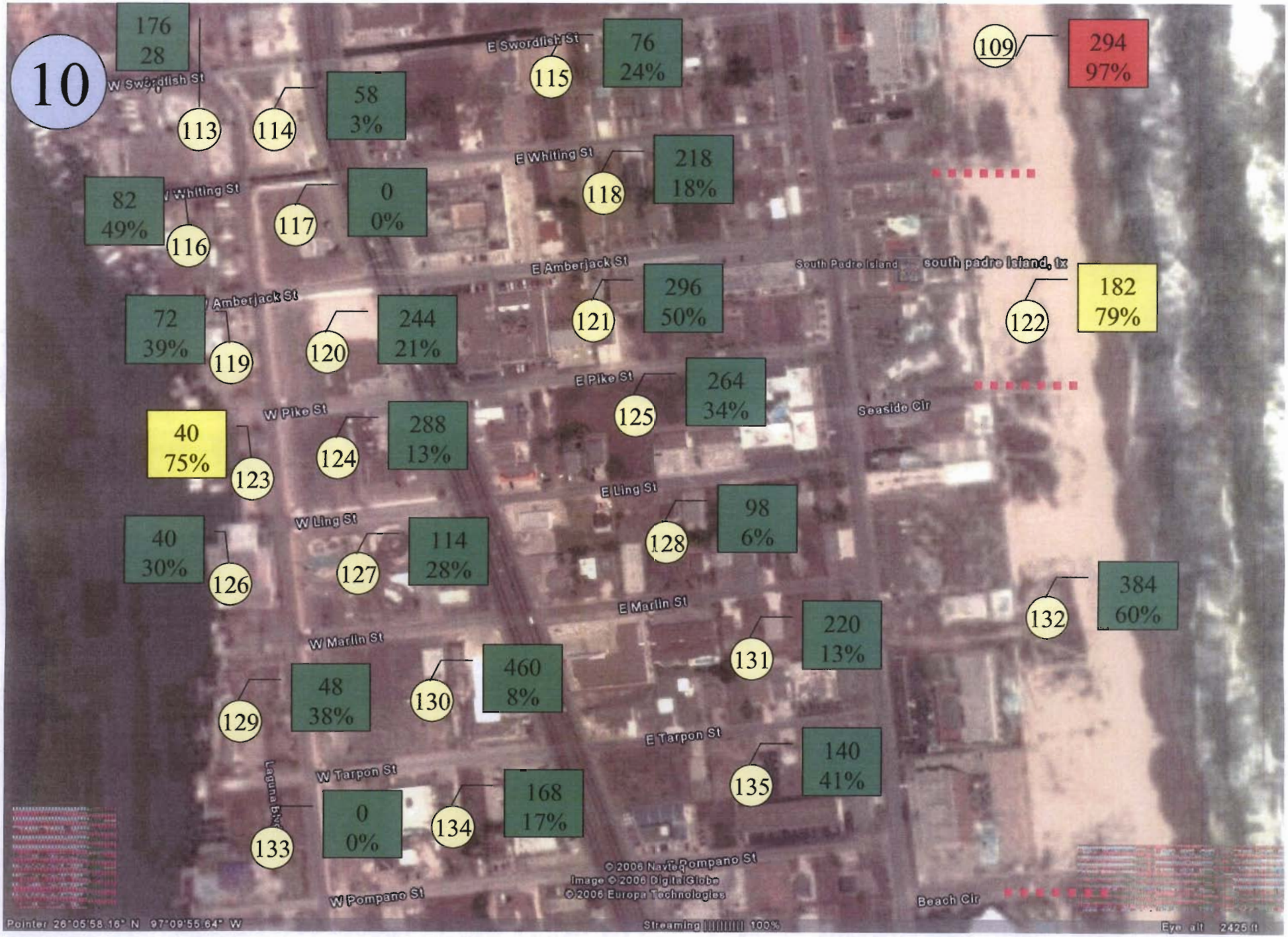

5
W Morningside Dr
W Coral Lee Dr
E Coral Lee
E Carolyn Dr
W Carolyn Dr
E Georgia Ruth Dr
E Verna Jean Dr
E Polaris Dr
E Aires Dr
Aurora Cir
E Capricorn Dr
23
0
0%
24
0
0%
25
168
26%
26
0
0%
27
130
20%
28
294
3%
29
0
0%
30
12
0%
31
246
0%
32
136
93%
33
114
61%
34
0
0%
35
0
0%
36
150
19%
172
24%
38
60
20%
39
160
35%
40
24
100%
41
24
50%
42
202
98%
Pointer 26°07'30.37" N 97°10'16.59" W
Streaming 100%
Eye alt 2525 ft


6
W Aires Dr
39
160
35%
40
24
100%
41
24
50%
42
202
98%
E Capricorn Dr
45
136
22%
Aquarius Cir
W Capricorn Dr
43
116
3%
44
182
0%
48
0
0%
E Constellation Dr
47
214
21%
46
40
30%
Gulf Blvd
E Mars Ln
51
130
28%
Starlight Cir
49
0
0%
50
76
26%
55
74
57%
E Jupiter Ln
54
152
33%
52
80
50%
53
98
31%
E Venus Ln
58
100
56%
Neptune Cir
56
0
0%
57
54
7%
E Saturn Ln
W Saturn Ln
© 2006 NavTeq
Image © 2006 DigitalGlobe
Pointer 26°07'04.09" N 97°10'09.48" W
Streaming [||||||||] 100%
Eye alt 2425 ft

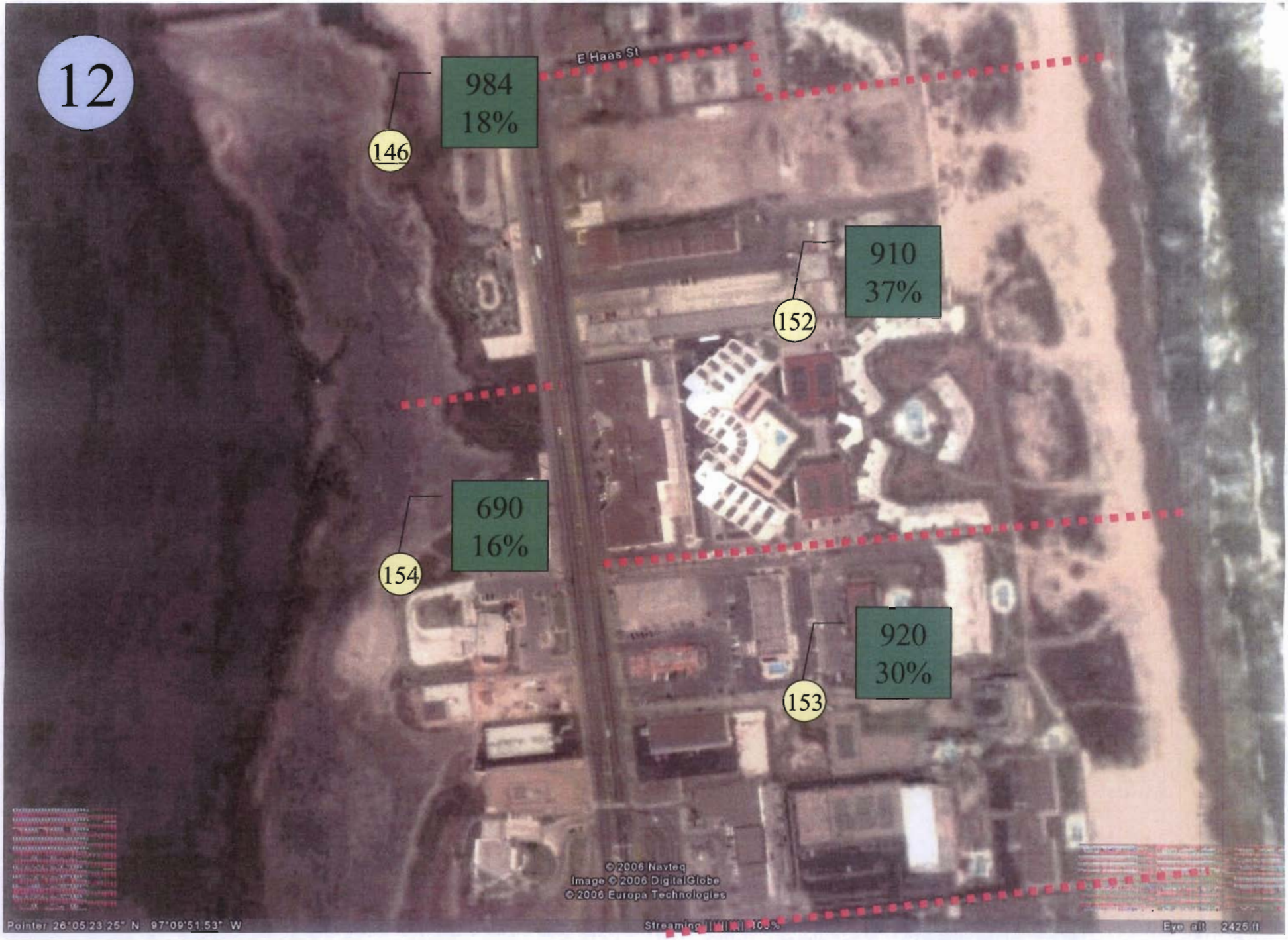

7
W Venus Ln
Neptune Cir
E Saturn Ln
E Esperanza St
Poinsettia Cir
E Hibiscus St
E Gardenia St
Bougainvillea Cir
E Oleander St
E Lantana St
W Lantana St
Moonlight Cir
59
0
0%
60
82
24%
61
304
38%
62
136
88%
63
0
0%
64
260
26%
65
120
37%
72
75%
69
66
66
18%
67
170
19%
68
92
26%
50
88%
72
70
40
25%
71
220
14%
100
72%
76
73
0
0%
74
214
21%
75
194
11%
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°06'50.07" N 97°10'07.15" W
Streaming 100%
Eye alt 2425 ft


8
E Oleander St
W Oleander St
E Lantana St
Moonlight Cir
W Lantana St
79
74
41%
78
172
28%
77
0
0%
E Hulsache St
W Hulsache St
82
0
0%
138
54%
81
0
0%
80
0
0%
83
E Mezquite St
W Mezquite St
86
30
98%
84
0
0%
85
264
5%
E Retama St
W Retama St
89
360
27%
87
40
10%
88
96
69%
E Atol St
92
298
36%
W Atol St
91
214
15%
90
30
0%
E Bahama St
W Bahama St
Padre
©2006 Navteq
Image ©2006 DigitalGlobe
Pointer 26°06'34.90" N 97°10'04.16" W
Streaming 100%
Eye alt 2425 ft


9
W Atol St
W Campeche St
E Campeche St
E Bahama St
Gulf Blvd
Blue Water Cir
W Acapulco St
E Acapulco St
W Kingfish St
E Kingfish S
W Dolphin St
E Dolphin St
W Red Snapper St
E Red Snappe
E Swordfish St
W Swordfish St
94
56
18%
95
130
6%
96
142
27%
93
246
41%
97
0
0%
98
136
29%
99
168
5%
100
236
24%
101
106
0%
102
130
31%
103
84
0%
104
74
32%
105
202
16%
109
294
97%
106
78
38%
107
58
24%
108
164
63%
110
140
17%
111
68
53%
112
128
17%
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°06'17.13" N 97°09'59.00" W
Streaming 100%
Eye alt 2425 ft

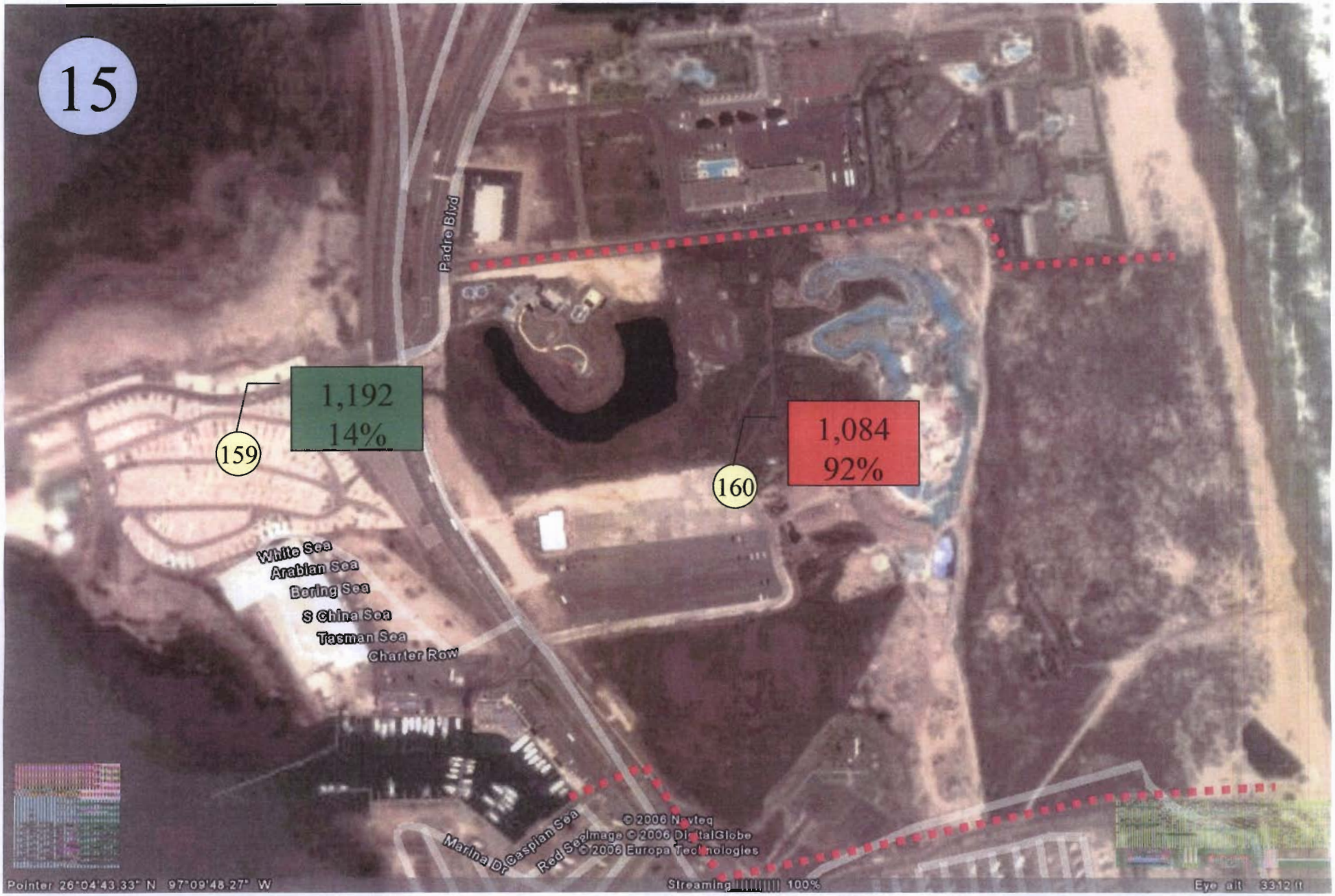

10
176
28
W Swordfish St
113
114
58
3%
E Swordfish St
115
76
24%
109
294
97%
E Whiting St
118
218
18%
82
49%
116
117
0
0%
E Amberjack St
South Padre Island
south padre island, tx
121
296
50%
122
182
79%
72
39%
119
120
244
21%
E Pike St
125
264
34%
W Pike St
40
75%
123
124
288
13%
Seaside Cir
E Ling St
128
98
6%
W Ling St
40
30%
126
127
114
28%
E Marlin St
132
384
60%
131
220
13%
W Marlin St
129
48
38%
130
460
8%
E Tarpon St
135
140
41%
W Tarpon St
Laguna Bay
133
0
0%
134
168
17%
W Pompano St
© 2006 NavTeq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Beach Cir
Pointer 26°05'58.16" N 97°09'55.64" W
Streaming 100%
Eye alt 2425 ft


11
136
PVT
0%
137
138
12%
138
100
50%
139
90
2%
140
114
44%
141
108
24%
145
434
94%
144
56
14%
143
528
8%
142
194
9%
147
36
17%
146
984
18%
148
56
46%
149
132
8%
150
60
7%
151
106
74%
W Pompano St
E Pompano St
E Sheepshead St
W Sheepshead St
E Corral St
W Corral St
E Palm St
W Palm St
E Marisol Dr
E Sunny Isle Dr
W Sunny Isle Dr
E Harbor St
E Haas St
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°05'41.08" N 97°09'52.01" W
Streaming 100%
Eye alt 2425 ft


12
E Haas St
984
18%
146
910
37%
152
690
16%
154
920
30%
153
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°05'23.25" N 97°09'51.53" W
Eye alt 2425 ft


13
690
16%
154
1,150
72%
155
638
58%
156
694
45%
157
Padre Blvd.
100
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°05'05.71" N 97°09'49.55" W
Streaming 100%
Eye alt 2425 ft


14
100
Padre Blvd
157
694
45%
158
1,596
52%
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°04'58.63" N 97°09'47.01" W
Streaming 100%
Eye alt 2425 ft


15
Padre Blvd
1,192
14%
159
1,084
92%
160
White Sea
Arabian Sea
Boring Sea
S China Sea
Tasman Sea
Charter Row
Marina Dr
Caspian Sea
Red Sea
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°04'43.33" N 97°09'48.27" W
Streaming 100%
Eye alt 3312 ft

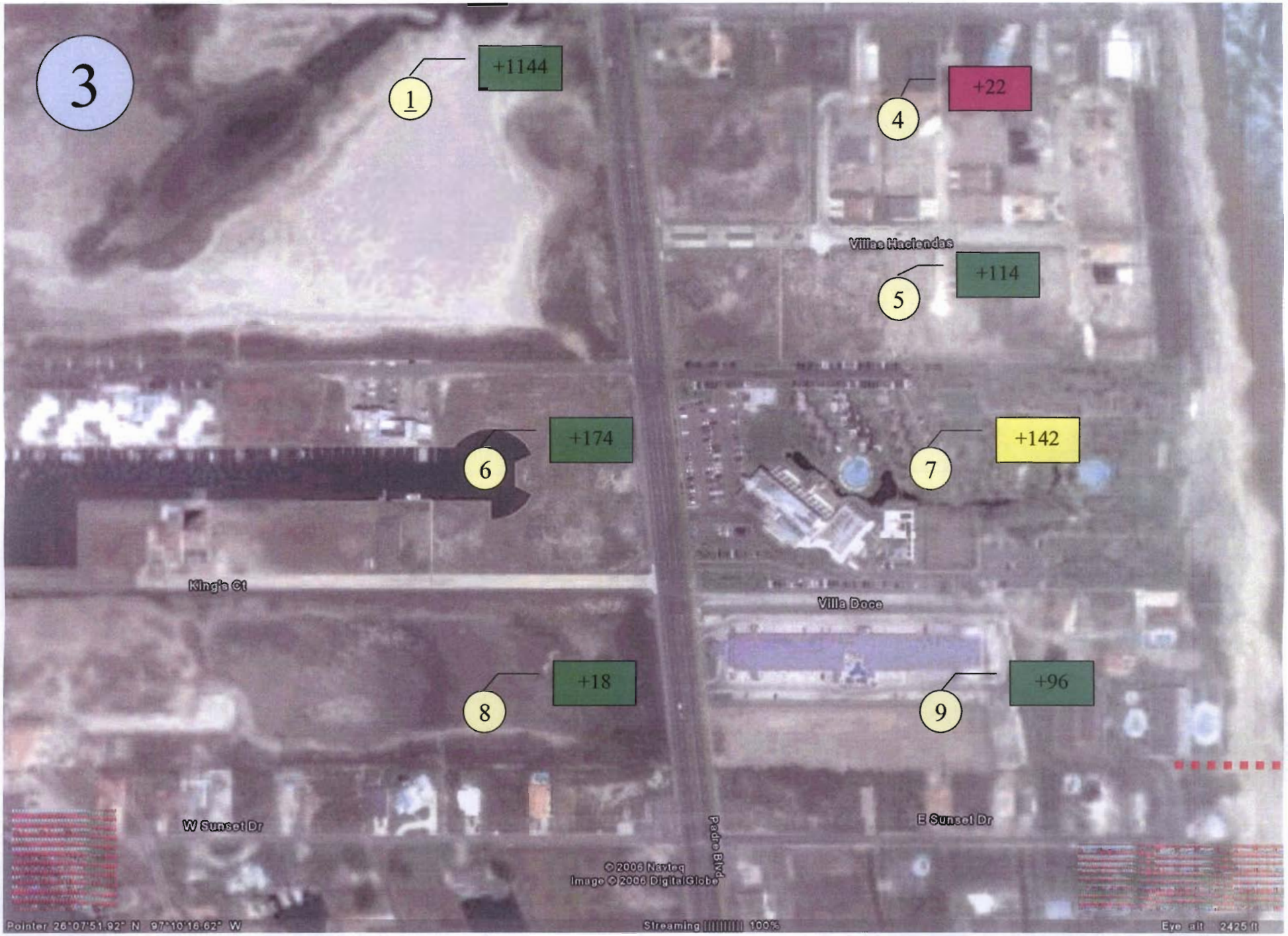

16
Marina Dr
Caspian Sea
Red Sea
Kara Sea
Beaufort Sea
Saltan Sea
Wallace L Reed Dr
Pacific Ocean
Atlantic Ocean
Arctic Ocean
Indian Ocean
Aegean Sea
Caribbean Sea
Timor Sea
Marine Lab Dr
Gulf Side Loop
Park Rd 100
161
2,086
80%
Channel View Loop
Baltic Sea
Coral Sea
Irish Sea
Bucker St
Carizales St
Turner St
Dodson St
Emerald Sea
Channelview Rd
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°04'32.22" N 97°09'44.63" W
Streaming 100%
Eye alt 3312 ft

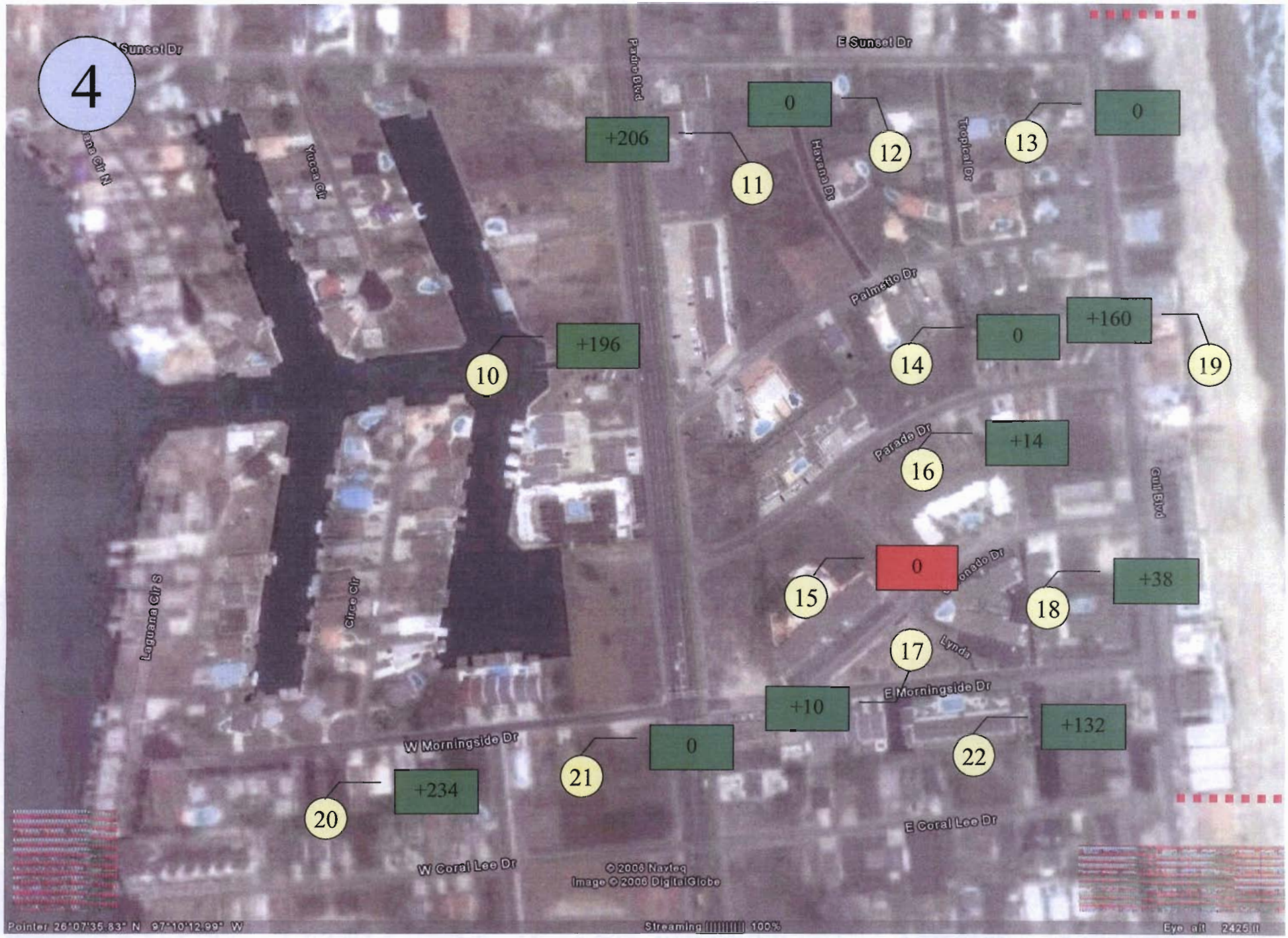
Appendix C

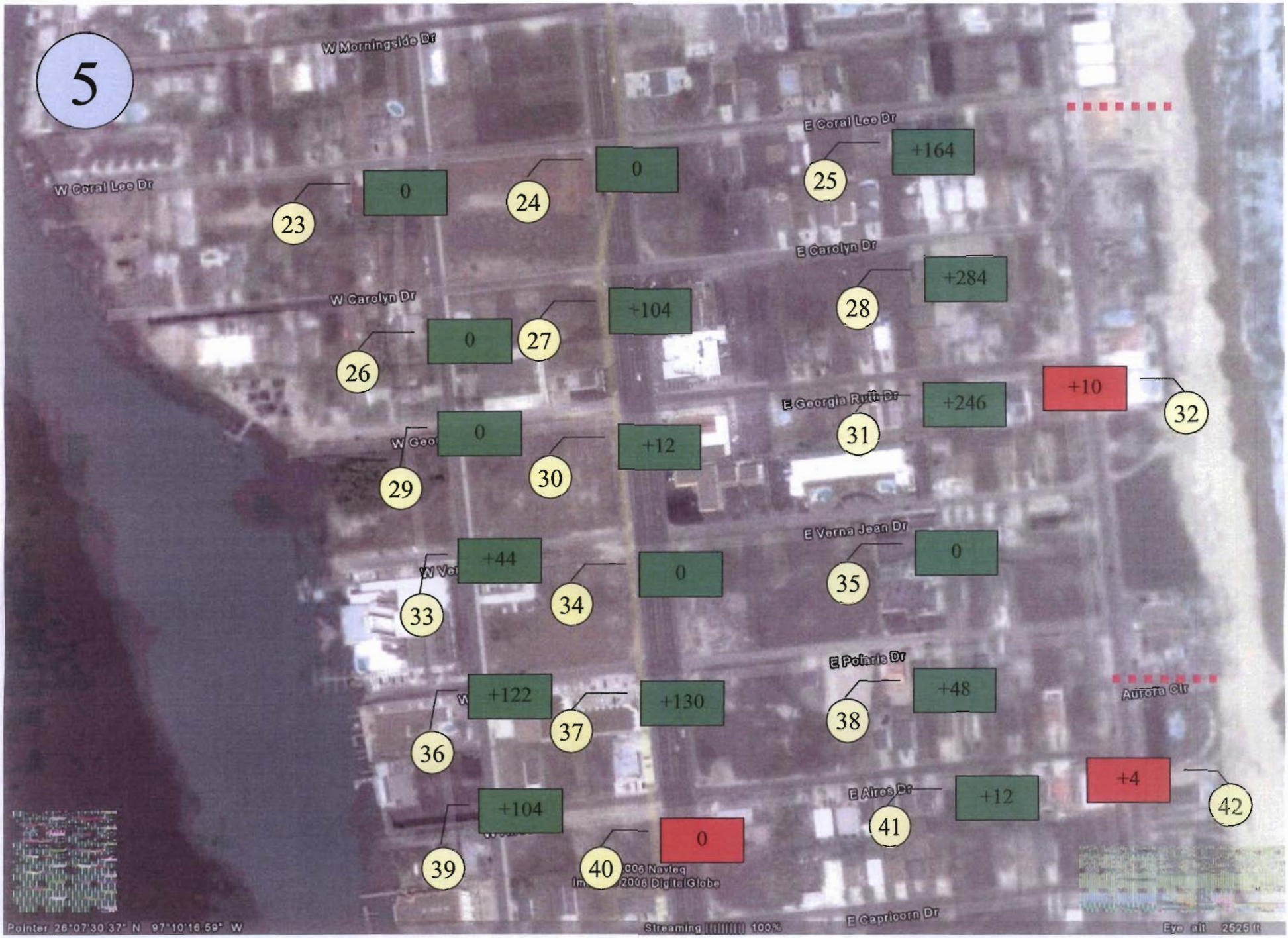
Parking Surplus/Deficit maps - data by block

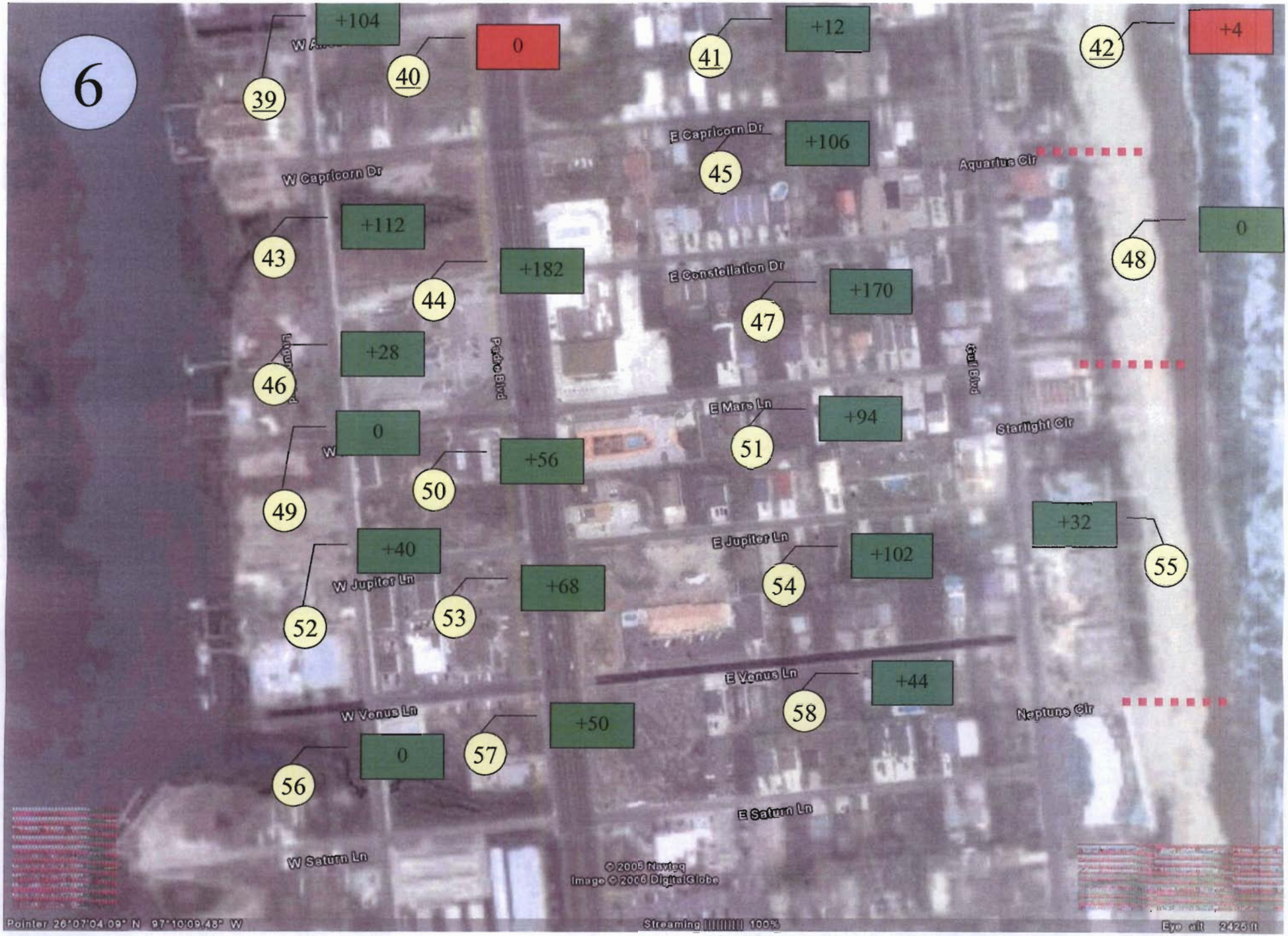

1
Padre Blvd
+1144
1
Orca Cir
+190
2
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°08'27.31" N 97°10'18.14" W
Streaming 100%
Eye alt 2425 ft

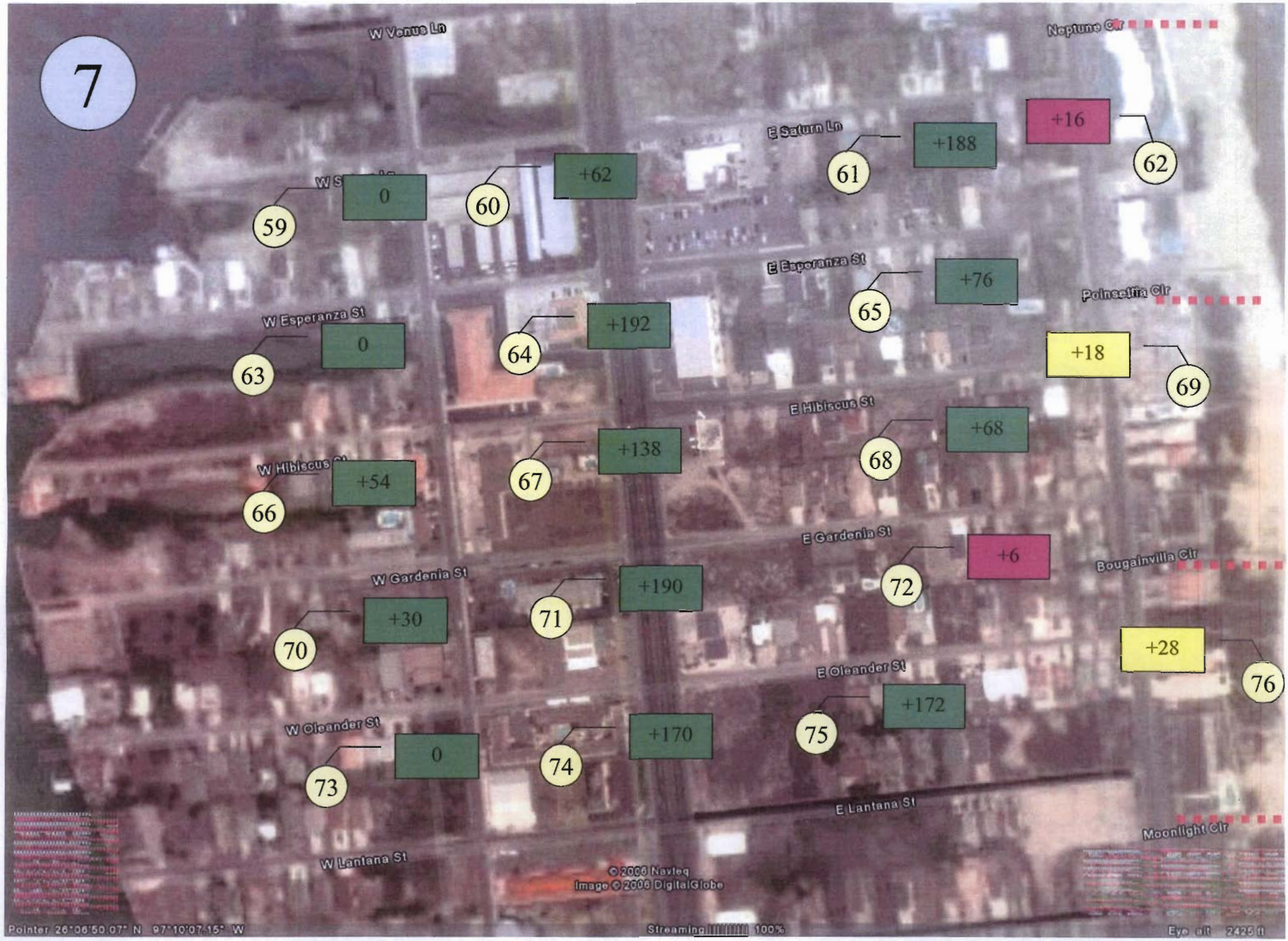

2
Orca Ct
+1144
1
Padre Blvd
+190
2
White Sands Dr
+52
3
© 2005 Navteq
Image © 2006 DigitalGlobe
Pointer 26°08'08.67" N 97°10'18.33" W
Streaming 100%
Eye alt 2425 ft

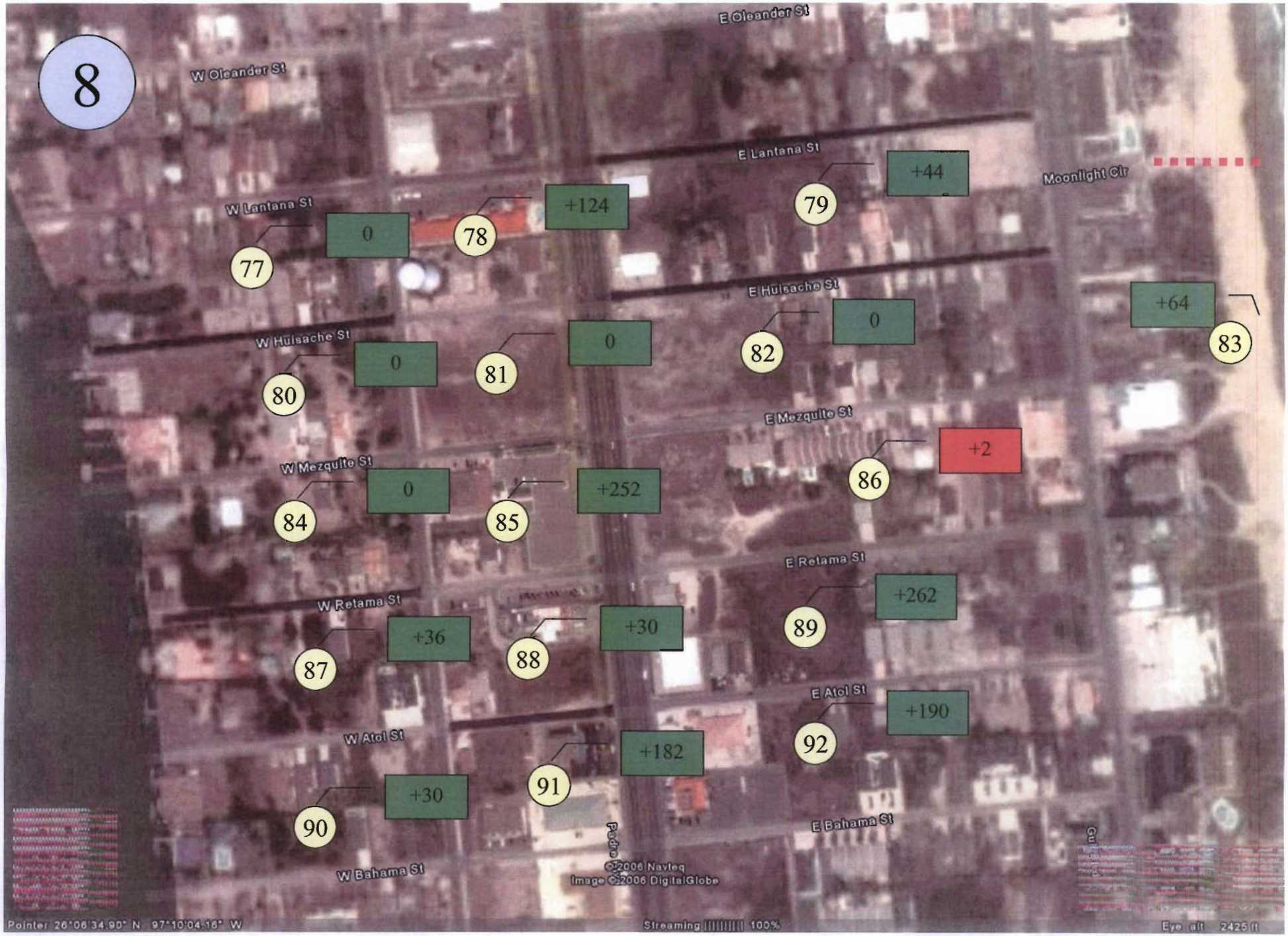

3
1
+1144
4
+22
Villas Haciendas
5
+114
6
+174
7
+142
King's Ct
Villa Doce
8
+18
9
+96
W Sunset Dr
E Sunset Dr
Padre Blvd
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°07'51.92" N 97°10'16.62" W
Streaming 100%
Eye alt 2425 ft

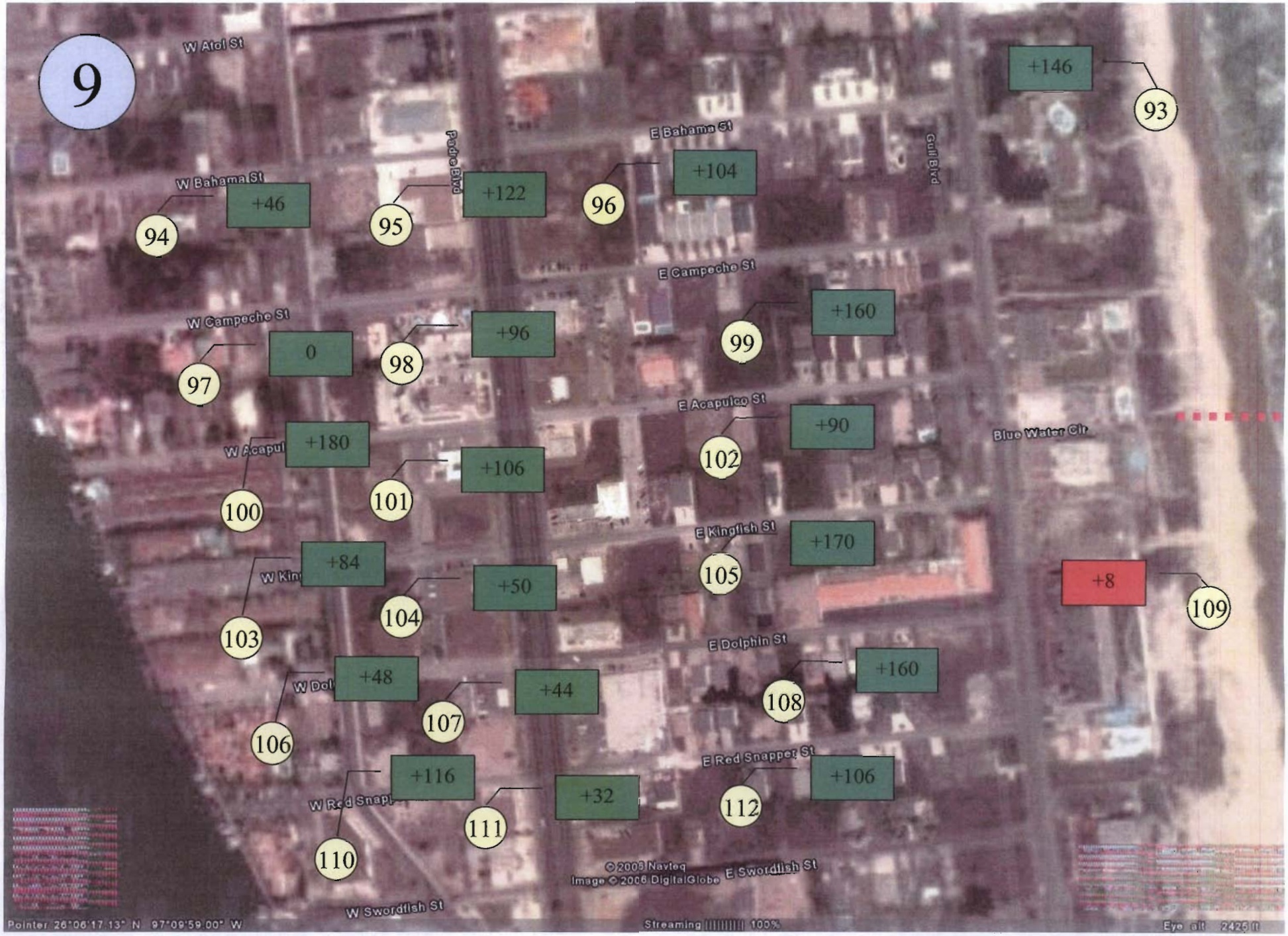

4
Sunset Dr
E Sunset Dr
Padre Blvd
Yucca Cir
Havana Dr
Tropical Dr
Palmetto Dr
Parade Dr
Gulf Blvd
Laguna Cir S
Circe Cir
Lynda
E Morningside Dr
W Morningside Dr
E Coral Lee Dr
W Coral Lee Dr
0
+206
11
12
0
13
+196
10
0
+160
14
19
+14
16
0
15
+38
18
17
+10
+132
22
0
21
+234
20
© 2008 Navteq
Image © 2008 DigitalGlobe
Pointer 26°07'35.83" N 97°10'12.99" W
Streaming 100%
Eye alt 2425 ft

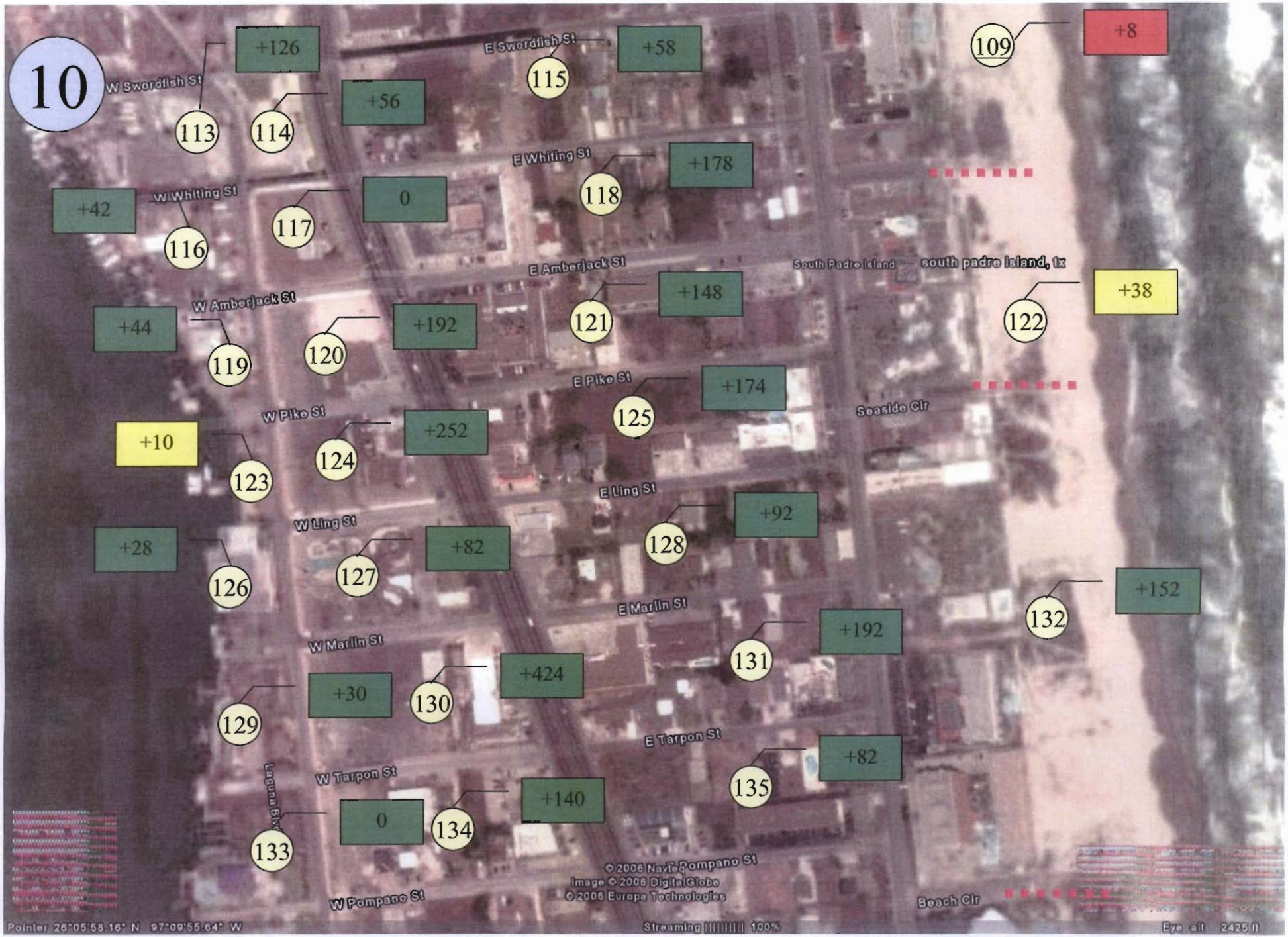

5
W Morningside Dr
W Coral Lee Dr
E Coral Lee Dr
E Carolyn Dr
W Carolyn Dr
E Georgia Ryan Dr
E Verna Jean Dr
E Polaris Dr
E Aires Dr
E Capricorn Dr
Aurora Cir
23
0
24
0
25
+164
26
0
27
+104
28
+284
29
0
30
+12
31
+246
32
+10
33
+44
34
0
35
0
36
+122
37
+130
38
+48
39
+104
40
0
41
+12
42
+4
2006 NavteqImage 2006 DigitalGlobe
Pointer 26°07'30.37" N 97°10'16.59" W
Streaming 100%
Eye alt 2525 ft

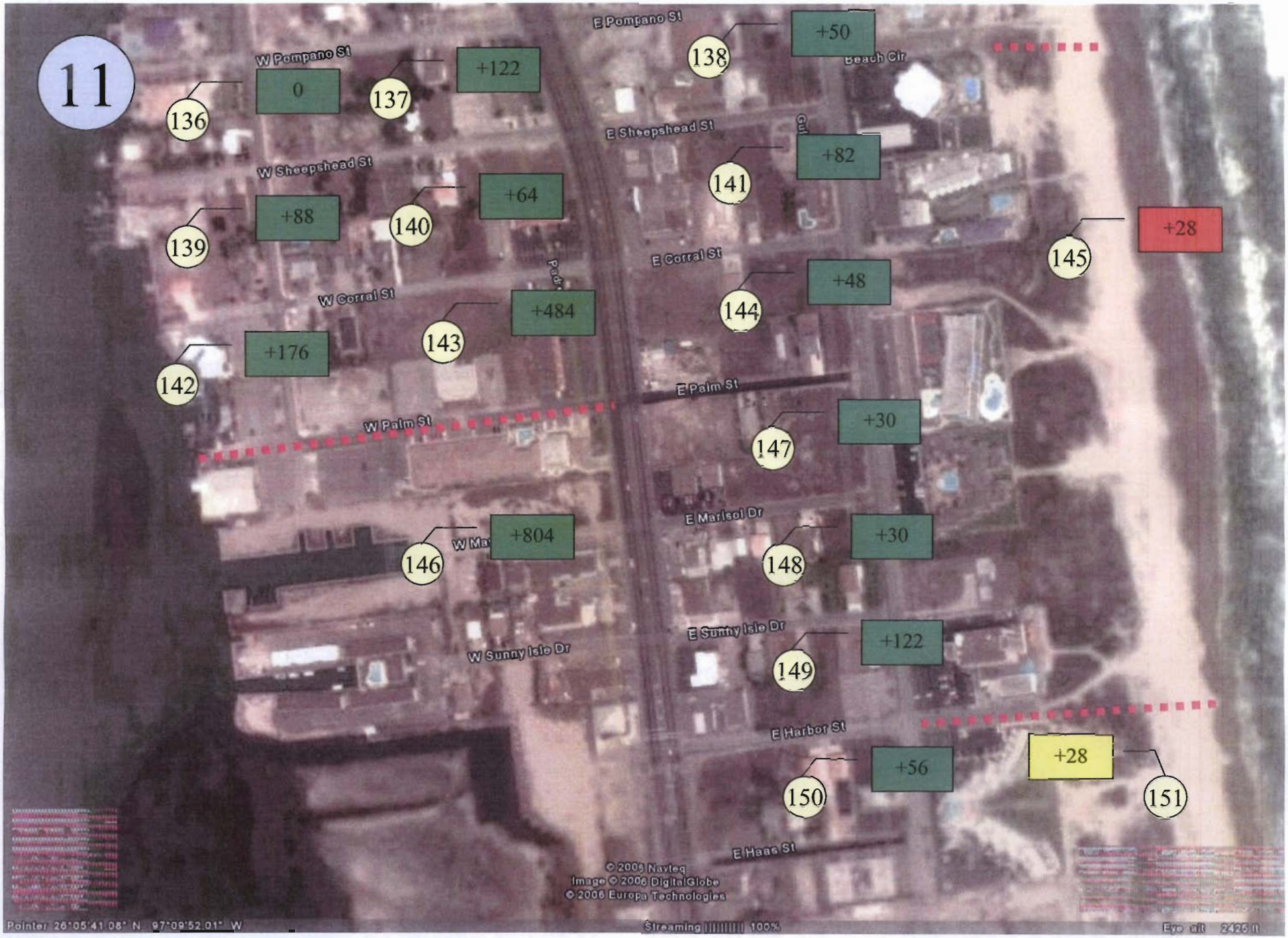

6
+104
0
+12
+4
39
40
41
42
E Capricorn Dr
+106
W Capricorn Dr
Aquarius Cir
45
+112
0
43
48
+182
E Constellation Dr
+170
44
47
+28
Pecos Blvd
Pecos Blvd
46
E Mars Ln
+94
0
Starlight Cir
51
+56
49
50
+32
+40
E Jupiter Ln
+102
55
W Jupiter Ln
+68
54
52
53
E Venus Ln
+44
W Venus Ln
58
+50
Neptune Cir
0
57
56
E Saturn Ln
W Saturn Ln
© 2005 Navteq
Image © 2006 DigitalGlobe
Pointer 26°07'04.09" N 97°10'09.48" W
Streaming 100%
Eye alt 2425 ft


7
W Venus Ln
Neptune Cir
E Saturn Ln
+16
+188
62
61
+62
60
0
59
E Esperanza St
+76
65
Poinsettia Cir
W Esperanza St
+192
64
0
63
+18
69
E Hibiscus St
+68
68
+138
67
W Hibiscus St
+54
66
E Gardenia St
+6
72
Bougainvilla Cir
W Gardenia St
+190
71
+30
70
+28
76
E Oleander St
+172
75
+170
74
W Oleander St
0
73
E Lantana St
Moonlight Cir
W Lantana St
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°06'50.07" N 97°10'07.15" W
Streaming 100%
Eye alt 2425 ft


8
E Oleander St
W Oleander St
E Lantana St
Moonlight Cir
W Lantana St
+124
+44
79
78
77
0
E Huisache St
W Huisache St
+64
83
82
0
81
80
0
0
E Mezquite St
+2
86
W Mezquite St
84
0
85
+252
E Retama St
+262
89
W Retama St
+36
87
88
+30
E Atol St
+190
92
W Atol St
+182
91
90
+30
E Bahama St
W Bahama St
Padre
©2006 Navteq
Image ©2006 DigitalGlobe
Pointer 26°06'34.90" N 97°10'04.16" W
Streaming 100%
Eye alt 2425 ft


9
W Atol St
+146
93
E Bahama St
Padre Blvd
Gulf Blvd
W Bahama St
+46
+122
+104
94
95
96
E Campeche St
W Campeche St
+160
99
0
+96
97
98
E Acapulco St
+90
102
W Acapul
+180
+106
100
101
Blue Water Cir
E Kingfish St
+170
105
W Kin
+84
+50
103
104
+8
109
E Dolphin St
+160
108
W Dol
+48
+44
106
107
E Red Snapper St
+106
112
W Red Snapp
+116
+32
110
111
© 2008 Navteq
Image © 2008 DigitalGlobe
E Swordfish St
W Swordfish St
Pointer 26°06'17.13" N 97°09'59.00" W
Streaming 100%
Eye alt 2425 ft


10
W Swordfish St
E Swordfish St
E Whiting St
W Whiting St
E Amberjack St
W Amberjack St
South Padre Island
south padre island, tx
E Pike St
W Pike St
Seaside Cir
E Ling St
W Ling St
E Marlin St
W Marlin St
E Tarpon St
W Tarpon St
Laguna Blvd
W Pompano St
Beach Cir
+126
+58
+8
109
115
113
114
+56
+178
118
+42
0
117
116
+148
121
+38
122
+44
+192
120
119
+174
125
+10
+252
124
123
+92
128
+28
+82
127
126
+152
132
+192
131
+424
+30
130
129
+82
135
+140
0
134
133
© 2006 NavTeq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°05'58.16" N 97°09'55.64" W
Streaming 100%
Eye alt 2425 ft


11
W Pompano St
E Pompano St
Beach Cir
E Sheepshead St
W Sheepshead St
E Corral St
W Corral St
E Palm St
W Palm St
E Marisol Dr
W Sunny Isle Dr
E Sunny Isle Dr
E Harbor St
E Haas St
136
0
137
+122
138
+50
139
+88
140
+64
141
+82
142
+176
143
+484
144
+48
145
+28
146
+804
147
+30
148
+30
149
+122
150
+56
151
+28
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°05'41.08" N 97°09'52.01" W
Streaming 100%
Eye alt 2426 ft


12
E Haas St
+804
146
+576
152
+580
154
+648
153
© 2006 Navteq
Image © 2005 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°05'23.25" N 97°09'51.53" W
Eye alt 2425 ft


13
+580
154
+324
155
+270
156
+384
157
100
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Streaming 100%
Eye alt 2425 ft


14
100
Padre Blvd
+384
157
+772
158
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°04'58.63" N 97°09'47.01" W
Streaming 100%
Eye alt 2425 ft


15
Padre Blvd
+1024
159
+84
160
White Sea
Arabian Sea
Bering Sea
S China Sea
Tasman Sea
Charter Row
Marina Dr
Caspian Sea
Red Sea
© 2006 Navteq
Image © 2006 DigitalGlobe
© 2006 Europa Technologies
Pointer 26°04'43.33" N 97°09'48.27" W
Streaming 100%
Eye alt 3312 ft


16
Marina Dr
Caspian Sea
Red Sea
Kara Sea
Beaufort Sea
Saltan Sea
Wallace L Reed Dr
Pacific Ocean
Atlantic Ocean
Arctic Ocean
Indian Ocean
Aegean Sea
Caribbean Sea
Timor Sea
Marine Lab Dr
Gulf Side Loop
+414
161
Park Rd 100
Channel View Loop
Baltic Sea
Coral Sea
Irish Sea
Bucker St
Carizales St
Turner St
Dodson St
Emerald Sea
Channel View Rd
© 2006 Navteq
Image © 2006 DigitalGlobe
Pointer 26°04'32.22" N 97°09'44.63" W
Streaming 100%
Eye alt 3312 ft

Appendix D

Turnover Analysis

LPI COMPILATION & DISTRIBUTION ANALYSIS

0	=	NO CAR
1090		*Check Total*

Total Vehicles: 1090

Sheet	Location		#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	
1	Sangria Condo	O	01	0	0	0	0	0	0	0	0	1	1	1	1		
1	Sangria Condo	O	02	0	0	0	0	0	1	1	1	1	1	1	1		
1	Sangria Condo	O	03	0	0	0	0	0	1	2	2	2	2	2	2		
1	Sangria Condo	O	04	0	0	0	0	0	0	1	1	1	0	0	0		
1	Sangria Condo	O	05	0	0	0	0	0	1	1	1	1	1	1	1		
1	Sangria Condo	O	06	0	0	0	0	0	1	1	1	1	0	2	2		
1	Sangria Condo	O	07	0	0	0	0	0	0	1	1	0	0	2	2		
1	Sangria Condo	O	08	0	0	0	0	0	1	1	1	1	1	1	1		
1	Sangria Condo	O	09	0	0	0	0	0	1	1	1	1	1	1	1		
1	Sangria Condo	O	10	0	0	0	0	0	1	1	2	2	0	0	3		
1	Sangria Condo	O	11	0	0	0	0	0	0	0	1	1	1	1	1		
1	Sangria Condo	O	12	0	0	0	0	0	1	0	2	2	2	2	2		
2	On-Street		21	0	0	0	0	0	1	1	0	0	0	0	0		
2	On-Street		22	0	0	0	0	0	1	1	1	1	1	1	2		
2	On-Street		23	0	0	0	0	0	1	1	2	2	2	2	2		
2	On-Street		24	0	0	0	0	0	1	0	2	2	2	2	3		
2	On-Street		25	0	0	0	0	0	1	0	2	2	2	2	2		
2	On-Street		26	0	0	0	0	0	1	0	2	2	0	3	4		
2	On-Street		27	0	0	0	0	0	1	2	3	4	0	5	6		
2	On-Street		28	0	0	0	0	0	0	1	2	0	0	3	3		
2	On-Street		29	0	0	0	0	0	1	2	3	3	0	4	5		
2	On-Street		30	0	0	0	0	0	1	0	2	2	2	2	2		
2	On-Street		31	0	0	0	0	0	0	1	1	1	1	1	2		
2	On-Street		32	0	0	0	0	0	1	1	1	1	0	2	2		
2	On-Street		33	0	0	0	0	0	1	0	2	3	0	4	4		
2	On-Street		34	0	0	0	0	0	1	1	0	2	0	3	3		
2	On-Street		35	0	0	0	0	0	1	1	1	0	0	2	3		
2	On-Street		36	0	0	0	0	0	1	1	2	0	0	3	3		
2	On-Street		37	0	0	0	0	0	1	0	0	0	0	2	2		
2	On-Street		38	0	0	0	0	0	0	1	0	2	2	2	2		
2	On-Street		39	0	0	0	0	0	1	1	2	2	0	3	3		
2	On-Street		40	0	0	0	0	0	0	1	1	1	1	1	1		
2	On-Street		41	0	0	0	0	0	0	0	0	0	0	1	2		
2	On-Street		42	0	0	0	0	0	0	0	0	0	0	0	1		
3	On-Street		51	0	0	0	0	0	1	0	0	0	0	0	0		
3	On-Street		52	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		53	0	0	0	0	0	1	1	1	1	1	1	1		
3	On-Street		54	0	0	0	0	0	0	0	0	0	0	1	1		
3	On-Street		55	0	0	0	0	0	0	0	0	1	0	2	2		
3	On-Street		56	0	0	0	0	0	1	0	0	2	0	0	3		
3	On-Street		57	0	0	0	0	0	1	1	1	1	0	2	2		
3	On-Street		58	0	0	0	0	0	1	1	1	1	0	2	2		
3	On-Street		59	0	0	0	0	0	1	1	0	2	2	2	2		
3	On-Street		60	0	0	0	0	0	1	0	0	0	0	0	2		
3	On-Street		61	0	0	0	0	0	1	0	0	2	0	3	3		
3	On-Street		62	0	0	0	0	0	1	1	1	1	1	1	0		
3	On-Street		63	0	0	0	0	0	1	1	0	0	0	0	2		
3	On-Street		64	0	0	0	0	0	1	0	0	2	2	2	0		
3	On-Street		65	0	0	0	0	0	1	0	0	2	2	2	2		
3	On-Street		66	0	0	0	0	0	1	1	0	0	0	0	0		
3	On-Street		67	0	0	0	0	0	1	0	0	0	0	2	3		
3	On-Street		68	0	0	0	0	0	1	0	2	2	0	3	4		
3	On-Street		69	0	0	0	0	0	1	1	1	0	0	0	0		
3	On-Street		70	0	0	0	0	0	1	0	0	0	0	0	2		
3	On-Street		71	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		72	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		73	0	0	0	0	0	1	0	0	0	0	0	0		
3	On-Street		74	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		75	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		76	0	0	0	0	0	1	1	1	1	0	0	2		
3	On-Street		77	0	0	0	0	0	1	1	1	1	0	0	0		
3	On-Street		78	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		79	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		80	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		81	0	0	0	0	0	1	1	0	0	0	0	0		
3	On-Street		82	0	0	0	0	0	1	1	1	1	1	1	0		
3	On-Street		83	0	0	0	0	0	0	1	0	0	0	0	2		
3	On-Street		84	0	0	0	0	0	1	0	0	0	0	0	0		
3	On-Street		85	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		86	0	0	0	0	0	0	0	0	0	0	0	0		
3	On-Street		87	0	0	0	0	0	1	0	0	0	0	0	0		

LPI COMPILATION & DISTRIBUTION ANALYSIS

0	=	NO CAR
1090		*Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
3	On-Street	88	0	0	0	0	0	0	0	0	0	0	0	1	
3	On-Street	89	0	0	0	0	0	1	0	0	0	0	0	0	
4	Surf Circle #3	101	0	0	0	0	0	0	1	1	1	1	1	2	
4	Surf Circle #3	102	0	0	0	0	0	0	1	1	1	0	2	2	
4	Surf Circle #3	103	0	0	0	0	0	0	1	1	1	1	1	2	
4	Surf Circle #3	104	0	0	0	0	0	0	1	1	0	0	2	3	
4	Surf Circle #3	105	0	0	0	0	0	0	1	1	1	0	2	3	
4	Surf Circle #3	106	0	0	0	0	0	0	1	1	1	0	2	2	
4	Surf Circle #3	107	0	0	0	0	0	0	1	1	1	1	1	2	
4	Surf Circle #3	108	0	0	0	0	0	1	2	2	3	0	4	4	
4	Surf Circle #3	109	0	0	0	0	0	0	1	1	1	0	2	3	
4	Surf Circle #3	110	0	0	0	0	0	1	1	1	2	0	3	4	
4	Surf Circle #3	111	0	0	0	0	0	0	1	2	2	2	2	3	
4	Surf Circle #3	112	0	0	0	0	0	0	1	1	0	0	2	2	
4	Surf Circle #3	113	0	0	0	0	0	1	2	2	3	3	3	4	
4	Surf Circle #3	114	0	0	0	0	0	1	1	1	2	2	2	2	
4	Surf Circle #3	115	0	0	0	0	0	1	1	2	2	0	3	3	
4	Surf Circle #3	116	0	0	0	0	0	0	1	1	1	0	2	3	
4	Surf Circle #3	117	0	0	0	0	0	1	1	2	2	0	3	3	
4	Surf Circle #3	118	0	0	0	0	0	1	1	1	0	0	2	3	
4	Surf Circle #3	119	0	0	0	0	0	1	1	1	2	2	2	3	
4	Surf Circle #3	120	0	0	0	0	0	0	0	1	22	0	3	0	
4	off Surf Circle #3	121	0	0	0	0	0	0	1	1	1	1	1	0	
4	off Surf Circle #3	122	0	0	0	0	0	0	1	2	2	2	2	2	
4	off Surf Circle #3	123	0	0	0	0	0	0	0	1	2	2	2	3	
4	off Surf Circle #3	124	0	0	0	0	0	0	0	1	2	2	2	3	
4	off Surf Circle #3	125	0	0	0	0	0	0	0	1	2	2	2	3	
4	off Surf Circle #3	126	0	0	0	0	0	0	0	1	2	2	2	3	
4	off Surf Circle #3	127	0	0	0	0	0	0	0	1	2	0	3	3	
4	off Surf Circle #3	128	0	0	0	0	0	0	0	1	1	0	2	2	
4	off Surf Circle #3	129	0	0	0	0	0	0	0	1	1	0	2	2	
4	off Surf Circle #3	130	0	0	0	0	0	0	0	0	1	0	2	3	
4	off Surf Circle #3	131	0	0	0	0	0	0	0	0	0	0	1	1	
4	off Surf Circle #3	132	0	0	0	0	0	0	0	0	0	0	1	2	
5	On-Street	151	0	0	0	0	0	0	1	1	1	0	0	2	
5	On-Street	152	0	0	0	0	0	1	1	1	1	1	1	1	
5	On-Street	153	0	0	0	0	0	1	1	1	1	1	1	1	
5	On-Street	154	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	155	0	0	0	0	0	0	0	0	1	0	0	0	
5	On-Street	156	0	0	0	0	0	1	1	1	1	1	1	1	
5	On-Street	157	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	158	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	159	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	160	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	161	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	162	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	163	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	164	0	0	0	0	0	0	0	0	0	0	1	2	
5	On-Street	165	0	0	0	0	0	1	1	1	1	1	1	1	
5	On-Street	166	0	0	0	0	0	1	1	1	1	0	0	2	
5	On-Street	167	0	0	0	0	0	0	0	0	0	0	1	0	
5	On-Street	168	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	169	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	170	0	0	0	0	0	0	0	0	0	0	1	1	
5	On-Street	171	0	0	0	0	0	0	0	0	0	0	0	0	
5	On-Street	172	0	0	0	0	0	0	0	0	1	0	0	0	
5	On-Street	173	0	0	0	0	0	0	0	0	0	0	0	1	
5	On-Street	174	0	0	0	0	0	0	0	0	0	0	0	1	
6	Beach Circle #4	201	0	0	0	0	0	0	0	0	0	0	0	1	
6	Beach Circle #4	202	0	0	0	0	0	0	0	0	1	0	0	2	
6	Beach Circle #4	203	0	0	0	0	0	0	0	0	1	1	1	2	
6	Beach Circle #4	204	0	0	0	0	0	0	1	1	1	1	1	1	
6	Beach Circle #4	205	0	0	0	0	0	1	2	2	2	0	3	3	
6	Beach Circle #4	206	0	0	0	0	0	1	1	1	1	0	2	2	
6	Beach Circle #4	207	0	0	0	0	0	0	0	1	1	0	2	3	
6	Beach Circle #4	208	0	0	0	0	0	1	1	1	1	1	1	1	
6	Beach Circle #4	209	0	0	0	0	0	0	0	0	1	1	1	2	
6	Beach Circle #4	210	0	0	0	0	0	0	1	1	2	2	2	3	
6	Beach Circle #4	211	0	0	0	0	0	1	1	1	2	2	2	3	
6	Beach Circle #4	212	0	0	0	0	0	1	1	1	1	1	1	1	
6	Beach Circle #4	213	0	0	0	0	0	0	1	2	2	2	2	3	

LPI COMPILATION & DISTRIBUTION ANALYSIS

0	=	NO CAR
1090		*Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
6	Beach Circle #4	214	0	0	0	0	0	1	1	1	1	0	2	3	
6	Beach Circle #4	215	0	0	0	0	0	1	1	2	2	2	2	3	
6	Beach Circle #4	216	0	0	0	0	0	1	1	2	0	0	0	3	
6	Beach Circle #4	217	0	0	0	0	0	1	1	1	1	1	1	2	
6	Beach Circle #4	218	0	0	0	0	0	1	1	2	2	2	2	3	
6	Beach Circle #4	219	0	0	0	0	0	0	1	1	1	0	2	3	
6	Beach Circle #4	220	0	0	0	0	0	0	1	1	1	0	2	3	
6	Beach Circle #4	221	0	0	0	0	0	1	1	1	1	1	1	2	
6	Beach Circle #4	222	0	0	0	0	0	1	1	1	1	0	2	3	
6	Beach Circle #4	223	0	0	0	0	0	1	1	1	1	0	2	3	
6	Beach Circle #4	224	0	0	0	0	0	1	0	2	2	0	0	3	
6	Beach Circle #4	225	0	0	0	0	0	0	0	0	0	0	0	1	
7	On-Street	251	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	252	0	0	0	0	0	1	1	1	1	0	0	0	
7	On-Street	253	0	0	0	0	0	1	1	0	0	0	2	3	
7	On-Street	254	0	0	0	0	0	1	1	1	1	0	3	3	
7	On-Street	255	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	256	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	257	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	258	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	259	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	260	0	0	0	0	0	1	1	1	2	2	2	3	
7	On-Street	261	0	0	0	0	0	1	0	2	3	3	3	0	
7	On-Street	262	0	0	0	0	0	0	0	1	1	1	1	1	
7	On-Street	263	0	0	0	0	0	1	1	1	1	1	1	2	
7	On-Street	264	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	265	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	266	0	0	0	0	0	1	1	1	1	1	1	0	
7	On-Street	267	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	268	0	0	0	0	0	1	1	1	1	1	1	2	
7	On-Street	269	0	0	0	0	0	0	0	1	1	1	1	1	
7	On-Street	270	0	0	0	0	0	1	2	3	3	0	4	4	
7	On-Street	271	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	272	0	0	0	0	0	1	1	1	1	1	1	2	
7	On-Street	273	0	0	0	0	0	1	1	1	1	0	2	2	
7	On-Street	274	0	0	0	0	0	0	0	0	1	1	1	1	
7	On-Street	275	0	0	0	0	0	0	0	1	1	1	1	1	
7	On-Street	276	0	0	0	0	0	0	0	1	0	0	2	2	
7	On-Street	277	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	278	0	0	0	0	0	1	1	1	1	1	1	1	
7	On-Street	279	0	0	0	0	0	1	1	1	1	1	1	1	
8	Sea Island Circle #5	281	0	0	0	0	0	0	1	1	1	0	2	2	
8	Sea Island Circle #5	282	0	0	0	0	0	0	0	0	1	1	1	1	
8	Sea Island Circle #5	283	0	0	0	0	0	0	1	1	1	0	2	2	
8	Sea Island Circle #5	284	0	0	0	0	0	0	1	1	1	0	2	2	
8	Sea Island Circle #5	285	0	0	0	0	0	0	1	2	2	0	3	4	
8	Sea Island Circle #5	286	0	0	0	0	0	0	0	1	1	1	1	2	
8	Sea Island Circle #5	287	0	0	0	0	0	0	1	1	1	0	0	2	
8	Sea Island Circle #5	288	0	0	0	0	0	0	0	0	1	0	2	2	
8	Sea Island Circle #5	289	0	0	0	0	0	0	0	1	1	0	2	2	
9	On-Street	291	0	0	0	0	0	0	0	0	0	0	0	0	
9	On-Street	292	0	0	0	0	0	1	1	0	2	0	0	3	
9	On-Street	293	0	0	0	0	0	1	1	1	1	1	1	1	
9	On-Street	294	0	0	0	0	0	0	0	0	1	1	1	0	
9	On-Street	295	0	0	0	0	0	0	0	0	1	0	2	2	
9	On-Street	296	0	0	0	0	0	0	0	0	1	0	2	2	
9	On-Street	297	0	0	0	0	0	0	0	0	0	0	1	1	
9	On-Street	298	0	0	0	0	0	1	1	1	1	1	1	1	
9	On-Street	299	0	0	0	0	0	0	0	1	1	1	1	2	
9	On-Street	300	0	0	0	0	0	0	0	1	1	0	2	2	
10	Seaside Circle #6	301	0	0	0	0	0	0	0	0	0	0	0	1	
10	Seaside Circle #6	302	0	0	0	0	0	0	0	0	0	0	0	0	
10	Seaside Circle #6	303	0	0	0	0	0	1	1	1	2	0	3	0	
10	Seaside Circle #6	304	0	0	0	0	0	1	1	0	2	2	2	3	
10	Seaside Circle #6	305	0	0	0	0	0	0	1	1	1	0	2	2	
10	Seaside Circle #6	306	0	0	0	0	0	0	1	1	2	2	2	3	
10	Seaside Circle #6	307	0	0	0	0	0	1	1	2	2	0	3	3	
10	Seaside Circle #6	308	0	0	0	0	0	0	0	1	1	0	2	2	
10	Seaside Circle #6	309	0	0	0	0	0	0	0	1	1	1	1	2	
10	Seaside Circle #6	310	0	0	0	0	0	0	1	2	2	2	2	3	
10	Seaside Circle #6	311	0	0	0	0	0	0	0	1	1	0	2	3	

LPI COMPILATION & DISTRIBUTION ANALYSIS

0 = NO CAR

1090 *Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
10	Seaside Circle #6	312	0	0	0	0	0	0	0	1	1	0	2	2	
10	Seaside Circle #6	313	0	0	0	0	0	0	0	0	0	0	0	0	
10	Seaside Circle #6	314	0	0	0	0	0	0	1	1	1	1	1	2	
11	On-Street	321	0	0	0	0	0	1	1	1	1	1	1	1	
11	On-Street	322	0	0	0	0	0	1	1	1	1	1	1	2	
11	On-Street	323	0	0	0	0	0	1	1	1	1	1	1	1	
11	On-Street	324	0	0	0	0	0	0	1	1	2	2	2	3	
11	On-Street	325	0	0	0	0	0	1	0	2	2	0	3	3	
11	On-Street	326	0	0	0	0	0	0	0	1	1	1	1	0	
11	On-Street	327	0	0	0	0	0	1	0	0	2	2	2	2	
11	On-Street	328	0	0	0	0	0	0	0	0	0	0	1	0	
12	Surf Circle #7	331	0	0	0	0	0	0	0	1	1	1	1	1	
12	Surf Circle #7	332	0	0	0	0	0	1	1	1	1	1	1	2	
12	Surf Circle #7	333	0	0	0	0	0	1	1	1	1	1	1	2	
12	Surf Circle #7	334	0	0	0	0	0	0	1	1	1	1	1	1	
12	Surf Circle #7	335	0	0	0	0	0	1	1	1	2	2	2	43	
12	Surf Circle #7	336	0	0	0	0	0	0	1	2	2	0	3	4	
12	Surf Circle #7	337	0	0	0	0	0	1	1	1	1	1	1	1	
12	Surf Circle #7	338	0	0	0	0	0	1	2	3	3	3	3	4	
12	Surf Circle #7	339	0	0	0	0	0	1	0	2	2	2	2	3	
12	Surf Circle #7	340	0	0	0	0	0	0	1	1	2	2	2	3	
12	Surf Circle #7	341	0	0	0	0	0	0	1	1	2	2	2	2	
12	Surf Circle #7	342	0	0	0	0	0	1	2	2	2	2	2	3	
12	Surf Circle #7	343	0	0	0	0	0	1	1	1	1	1	1	1	
12	Surf Circle #7	344	0	0	0	0	0	0	1	1	2	2	2	3	
12	Surf Circle #7	345	0	0	0	0	0	0	0	0	1	1	1	1	
12	Surf Circle #7	346	0	0	0	0	0	1	2	2	2	2	2	2	
12	Surf Circle #7	347	0	0	0	0	0	1	1	2	3	3	3	3	
12	Surf Circle #7	348	0	0	0	0	0	1	1	2	3	3	3	3	
12	Surf Circle #7	349	0	0	0	0	0	1	1	1	2	0	3	3	
12	Surf Circle #7	350	0	0	0	0	0	1	1	2	2	0	3	3	
12	Surf Circle #7	351	0	0	0	0	0	0	0	1	1	1	1	1	
12	Surf Circle #7	352	0	0	0	0	0	0	1	1	1	0	2	3	
12	Surf Circle #7	353	0	0	0	0	0	1	0	2	2	0	3	3	
12	Surf Circle #7	354	0	0	0	0	0	1	1	1	1	0	2	3	
12	Surf Circle #7	355	0	0	0	0	0	0	0	1	1	0	2	3	
12	Surf Circle #7	356	0	0	0	0	0	0	0	0	1	1	1	2	
13	On-Street	361	0	0	0	0	0	0	0	1	1	1	1	1	
13	On-Street	362	0	0	0	0	0	0	0	0	1	1	1	2	
13	On-Street	363	0	0	0	0	0	0	0	1	1	1	1	2	
13	On-Street	364	0	0	0	0	0	0	0	1	1	1	1	2	
13	On-Street	365	0	0	0	0	0	0	0	0	1	1	1	2	
13	On-Street	366	0	0	0	0	0	0	0	0	0	0	1	2	
13	On-Street	367	0	0	0	0	0	0	0	0	1	1	1	2	
13	On-Street	368	0	0	0	0	0	0	0	0	1	1	1	2	
13	On-Street	369	0	0	0	0	0	0	0	0	1	1	1	2	
13	On-Street	370	0	0	0	0	0	0	0	0	0	0	1	1	
13	On-Street	371	0	0	0	0	0	0	0	0	0	0	1	2	
13	On-Street	372	0	0	0	0	0	0	0	0	0	0	1	2	
13	On-Street	373	0	0	0	0	0	0	0	0	0	0	1	1	
13	On-Street	374	0	0	0	0	0	1	1	0	0	0	2	2	
13	On-Street	375	0	0	0	0	0	0	0	0	0	0	1	1	
13	On-Street	376	0	0	0	0	0	0	0	0	0	0	1	2	
13	On-Street	377	0	0	0	0	0	1	1	1	0	0	2	3	
13	On-Street	378	0	0	0	0	0	1	1	1	1	0	2	2	
13	On-Street	379	0	0	0	0	0	1	1	2	2	0	3	4	
13	On-Street	380	0	0	0	0	0	0	0	0	1	0	2	2	
13	On-Street	381	0	0	0	0	0	1	1	1	1	0	2	2	
13	On-Street	382	0	0	0	0	0	1	1	0	2	0	3	4	
13	On-Street	383	0	0	0	0	0	1	1	1	1	1	1	1	
13	On-Street	384	0	0	0	0	0	1	1	1	1	1	1	1	
13	On-Street	385	0	0	0	0	0	1	1	1	1	1	1	1	
13	On-Street	386	0	0	0	0	0	1	1	1	1	1	1	1	
13	On-Street	387	0	0	0	0	0	1	1	1	1	1	1	1	
13	On-Street	388	0	0	0	0	0	1	1	2	0	0	3	3	
13	On-Street	389	0	0	0	0	0	1	1	1	1	1	1	2	
13	On-Street	390	0	0	0	0	0	1	1	1	0	0	0	2	
13	On-Street	391	0	0	0	0	0	0	0	0	0	0	0	1	
14	Misc.	401	0	0	0	0	0	1	1	0	0	0	0	0	
14	Misc.	402	0	0	0	0	0	0	0	1	1	0	2	3	
14	Blue Water Circle #9	403	0	0	0	0	0	0	0	0	0	0	1	0	

LPI COMPILATION & DISTRIBUTION ANALYSIS

0	=	NO CAR
1090		*Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
14	Blue Water Circle #9	404	0	0	0	0	0	0	0	0	0	0	1	0	
14	Blue Water Circle #9	405	0	0	0	0	0	1	1	1	1	0	2	2	
14	Blue Water Circle #9	406	0	0	0	0	0	1	2	3	3	0	4	0	
14	Blue Water Circle #9	407	0	0	0	0	0	1	1	2	3	3	3	3	
14	Blue Water Circle #9	408	0	0	0	0	0	1	1	1	1	0	2	2	
14	Blue Water Circle #9	409	0	0	0	0	0	1	1	2	2	0	3	3	
14	Blue Water Circle #9	410	0	0	0	0	0	1	1	1	1	0	2	2	
14	Blue Water Circle #9	411	0	0	0	0	0	1	1	1	1	1	1	1	
14	Blue Water Circle #9	412	0	0	0	0	0	1	1	1	1	1	1	2	
14	Blue Water Circle #9	413	0	0	0	0	0	1	1	2	2	2	2	2	
14	Blue Water Circle #9	414	0	0	0	0	0	1	1	1	1	1	1	1	
14	Blue Water Circle #9	415	0	0	0	0	0	1	1	1	2	0	3	3	
14	Blue Water Circle #9	416	0	0	0	0	0	1	1	1	1	1	1	1	
14	Blue Water Circle #9	417	0	0	0	0	0	1	1	2	3	0	4	4	
14	Blue Water Circle #9	418	0	0	0	0	0	1	0	2	2	0	3	3	
14	Blue Water Circle #9	419	0	0	0	0	0	1	1	2	3	0	4	4	
14	Blue Water Circle #9	420	0	0	0	0	0	0	0	1	1	1	1	2	
14	Blue Water Circle #9	421	0	0	0	0	0	1	0	2	2	0	3	3	
14	Blue Water Circle #9	422	0	0	0	0	0	1	1	1	1	0	2	2	
14	Blue Water Circle #9	423	0	0	0	0	0	0	1	1	2	2	2	2	
14	Blue Water Circle #9	424	0	0	0	0	0	1	0	2	2	0	3	3	
14	Blue Water Circle #9	425	0	0	0	0	0	0	1	2	2	0	3	3	
14	Blue Water Circle #9	426	0	0	0	0	0	0	0	1	1	0	2	2	
14	Blue Water Circle #9	427	0	0	0	0	0	0	0	1	1	0	2	2	
14	On-Street	428	0	0	0	0	0	1	1	1	1	1	1	2	
14	On-Street	429	0	0	0	0	0	0	0	1	1	1	1	2	
14	On-Street	430	0	0	0	0	0	0	0	0	0	0	1	2	
15	On-Street	431	0	0	0	0	0	0	1	1	1	0	2	0	
15	On-Street	432	0	0	0	0	0	0	1	1	2	0	3	4	
15	On-Street	433	0	0	0	0	0	0	1	1	1	0	2	3	
15	On-Street	434	0	0	0	0	0	0	0	0	1	0	2	0	
15	On-Street	435	0	0	0	0	0	0	1	1	1	0	0	0	
15	On-Street	436	0	0	0	0	0	0	1	2	3	0	0	0	
15	On-Street	437	0	0	0	0	0	0	1	2	2	0	0	0	
15	On-Street	438	0	0	0	0	0	0	1	0	2	0	0	0	
15	On-Street	439	0	0	0	0	0	0	1	2	2	0	0	0	
15	On-Street	440	0	0	0	0	0	0	1	1	2	0	0	0	
15	On-Street	441	0	0	0	0	0	0	0	1	1	0	2	0	
15	On-Street	442	0	0	0	0	0	0	0	1	1	1	1	0	
15	On-Street	443	0	0	0	0	0	0	0	0	1	1	1	1	
15	On-Street	444	0	0	0	0	0	0	0	0	1	0	2	2	
15	On-Street	445	0	0	0	0	0	0	0	0	1	1	1	1	
15	On-Street	446	0	0	0	0	0	0	0	0	1	1	1	0	
15	On-Street	447	0	0	0	0	0	0	1	1	2	2	2	2	
15	On-Street	448	0	0	0	0	0	0	0	1	1	1	1	1	
15	On-Street	449	0	0	0	0	0	0	1	1	1	1	1	1	
15	On-Street	450	0	0	0	0	0	0	1	1	2	2	2	0	
15	On-Street	451	0	0	0	0	0	0	1	1	1	1	1	1	
15	On-Street	452	0	0	0	0	0	0	0	1	2	2	2	0	
15	On-Street	453	0	0	0	0	0	0	1	1	2	2	2	3	
15	On-Street	454	0	0	0	0	0	0	0	1	0	0	2	2	
15	On-Street	455	0	0	0	0	0	0	1	2	2	0	3	3	
15	On-Street	456	0	0	0	0	0	0	1	1	1	1	1	1	
16	Treasure Island Acccess	461	0	0	0	0	0	0	1	0	2	2	2	2	
16	Treasure Island Acccess	462	0	0	0	0	0	0	1	1	1	1	1	1	
16	Treasure Island Acccess	463	0	0	0	0	0	0	1	1	2	2	2	2	
16	Treasure Island Acccess	464	0	0	0	0	0	0	1	1	2	2	2	2	
16	Treasure Island Acccess	465	0	0	0	0	0	0	1	2	2	2	2	2	
16	Treasure Island Acccess	466	0	0	0	0	0	0	1	2	2	0	3	4	
16	Treasure Island Acccess	467	0	0	0	0	0	0	1	1	2	0	3	3	
16	Treasure Island Acccess	468	0	0	0	0	0	0	1	1	2	2	2	3	
17	On-Street	471	0	0	0	0	0	0	1	1	2	0	3	4	
17	On-Street	472	0	0	0	0	0	0	1	2	3	3	3	3	
17	On-Street	473	0	0	0	0	0	0	1	2	2	0	3	3	
17	On-Street	474	0	0	0	0	0	0	1	1	1	0	2	0	
17	On-Street	475	0	0	0	0	0	0	1	1	2	2	2	3	
17	On-Street	476	0	0	0	0	0	0	1	1	1	1	1	1	
17	On-Street	477	0	0	0	0	0	0	0	1	1	1	1	0	
17	On-Street	478	0	0	0	0	0	0	0	0	1	1	1	0	
17	On-Street	479	0	0	0	0	0	0	0	1	1	1	1	0	
17	On-Street	480	0	0	0	0	0	0	1	1	1	0	2	0	

LPI COMPILATION & DISTRIBUTION ANALYSIS

0	=	NO CAR
1090		*Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
17	On-Street	481	0	0	0	0	0	0	1	2	2	2	2	2	
17	On-Street	482	0	0	0	0	0	0	1	1	2	2	2	2	
17	On-Street	483	0	0	0	0	0	0	0	1	0	0	2	3	
17	On-Street	484	0	0	0	0	0	0	1	1	1	1	1	1	
17	On-Street	485	0	0	0	0	0	0	1	1	1	1	1	1	
17	On-Street	486	0	0	0	0	0	0	0	0	0	0	1	1	
17	On-Street	487	0	0	0	0	0	0	0	0	0	0	1	1	
17	On-Street	488	0	0	0	0	0	0	1	1	1	1	1	1	
17	On-Street	489	0	0	0	0	0	0	0	0	0	0	1	1	
17	On-Street	490	0	0	0	0	0	0	1	1	1	1	1	1	
18	Moonlite #13	491	0	0	0	0	0	0	1	1	1	1	1	2	
18	Moonlite #13	492	0	0	0	0	0	0	1	1	1	1	1	2	
18	Moonlite #13	493	0	0	0	0	0	0	1	1	1	1	1	2	
19	On-Street	494	0	0	0	0	0	0	0	0	0	0	0	0	
19	On-Street	495	0	0	0	0	0	0	0	0	0	0	0	0	
19	On-Street	496	0	0	0	0	0	0	0	0	0	0	0	0	
19	On-Street	497	0	0	0	0	0	0	1	0	0	0	0	2	
19	On-Street	498	0	0	0	0	0	0	1	1	1	1	1	1	
20	Bougainvillea #14	501	0	0	0	0	0	0	1	2	2	2	2	2	
20	Bougainvillea #14	502	0	0	0	0	0	0	1	0	2	0	3	4	
20	Bougainvillea #14	503	0	0	0	0	0	0	1	2	2	2	2	3	
20	Bougainvillea #14	504	0	0	0	0	0	0	1	0	0	0	2	3	
20	Bougainvillea #14	505	0	0	0	0	0	0	1	2	0	0	3	4	
20	Bougainvillea #14	506	0	0	0	0	0	0	1	0	2	0	3	4	
20	Bougainvillea #14	507	0	0	0	0	0	0	1	1	1	1	1	1	
20	Bougainvillea #14	508	0	0	0	0	0	0	1	1	2	2	2	2	
20	Bougainvillea #14	509	0	0	0	0	0	0	1	1	1	1	1	1	
20	Bougainvillea #14	510	0	0	0	0	0	0	1	1	1	1	1	1	
20	Bougainvillea #14	511	0	0	0	0	0	0	1	2	3	3	3	3	
20	Bougainvillea #14	512	0	0	0	0	0	0	1	1	1	1	1	1	
20	Bougainvillea #14	513	0	0	0	0	0	0	1	1	2	0	3	3	
20	Bougainvillea #14	514	0	0	0	0	0	0	1	1	2	2	2	2	
21	On-Street	521	0	0	0	0	0	0	1	0	0	0	2	0	
21	On-Street	522	0	0	0	0	0	0	1	0	0	0	2	2	
21	On-Street	523	0	0	0	0	0	0	1	1	1	1	1	1	
21	On-Street	524	0	0	0	0	0	0	0	0	1	0	2	3	
21	On-Street	525	0	0	0	0	0	0	0	0	1	1	1	1	
21	On-Street	526	0	0	0	0	0	0	0	0	1	1	1	1	
21	On-Street	527	0	0	0	0	0	0	0	0	1	1	1	1	
21	On-Street	528	0	0	0	0	0	0	0	0	1	1	1	1	
22	Poinsettia Circle #15	531	0	0	0	0	0	0	1	1	1	0	2	2	
22	Poinsettia Circle #15	532	0	0	0	0	0	0	1	2	3	0	0	4	
22	Poinsettia Circle #15	533	0	0	0	0	0	0	0	0	1	1	1	2	
22	Poinsettia Circle #15	534	0	0	0	0	0	0	1	1	1	1	1	1	
22	Poinsettia Circle #15	535	0	0	0	0	0	0	1	0	2	0	3	4	
22	Poinsettia Circle #15	536	0	0	0	0	0	0	0	1	2	2	2	2	
22	Poinsettia Circle #15	537	0	0	0	0	0	0	1	1	1	0	0	2	
22	Poinsettia Circle #15	538	0	0	0	0	0	0	1	1	1	1	1	1	
22	Poinsettia Circle #15	539	0	0	0	0	0	0	1	2	2	2	2	2	
22	Poinsettia Circle #15	540	0	0	0	0	0	0	1	0	2	0	3	3	
23	On-Street	541	0	0	0	0	0	0	1	0	2	0	0	3	
23	On-Street	542	0	0	0	0	0	0	0	0	0	0	0	1	
23	On-Street	543	0	0	0	0	0	0	1	1	1	1	1	1	
23	On-Street	544	0	0	0	0	0	0	1	1	1	0	2	2	
23	On-Street	545	0	0	0	0	0	0	0	0	0	0	0	0	
23	On-Street	546	0	0	0	0	0	0	0	1	1	0	2	2	
23	On-Street	547	0	0	0	0	0	0	1	1	1	1	1	0	
23	On-Street	548	0	0	0	0	0	0	0	0	0	0	1	1	
23	On-Street	549	0	0	0	0	0	0	1	0	0	0	0	2	
23	On-Street	550	0	0	0	0	0	0	0	1	0	0	0	0	
23	On-Street	551	0	0	0	0	0	0	1	1	0	0	0	0	
23	On-Street	552	0	0	0	0	0	0	0	0	0	0	0	0	
23	On-Street	553	0	0	0	0	0	0	0	0	0	0	0	0	
23	On-Street	554	0	0	0	0	0	0	0	0	0	0	1	0	
23	On-Street	555	0	0	0	0	0	0	0	0	0	0	0	1	
23	On-Street	556	0	0	0	0	0	0	1	0	0	0	0	0	
23	On-Street	557	0	0	0	0	0	0	0	0	0	0	0	0	
23	On-Street	558	0	0	0	0	0	0	0	0	0	0	0	0	
23	On-Street	559	0	0	0	0	0	0	1	1	0	0	0	2	
23	On-Street	560	0	0	0	0	0	0	0	0	0	0	0	0	
24	Neptune #16	561	0	0	0	0	0	0	1	1	1	1	1	2	

LPI COMPILATION & DISTRIBUTION ANALYSIS

0 = NO CAR

1090 *Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
24	Neptune #16	562	0	0	0	0	0	0	1	1	2	2	2	3	
24	Neptune #16	563	0	0	0	0	0	0	1	1	2	2	2	3	
24	Neptune #16	564	0	0	0	0	0	0	1	2	2	0	3	4	
24	Neptune #16	565	0	0	0	0	0	0	1	1	1	1	1	2	
24	Neptune #16	566	0	0	0	0	0	0	1	1	1	1	1	2	
24	Neptune #16	567	0	0	0	0	0	0	1	1	2	2	2	3	
24	Neptune #16	568	0	0	0	0	0	0	1	1	2	2	2	3	
24	Neptune #16	569	0	0	0	0	0	0	1	1	1	0	2	3	
24	Neptune #16	570	0	0	0	0	0	0	1	1	1	0	2	3	
25	On-Street	571	0	0	0	0	0	0	0	1	1	1	1	1	
25	On-Street	572	0	0	0	0	0	0	0	0	0	0	1	1	
25	On-Street	573	0	0	0	0	0	0	0	0	0	0	1	1	
25	On-Street	574	0	0	0	0	0	0	1	1	0	0	0	0	
25	On-Street	575	0	0	0	0	0	0	1	1	1	1	1	1	
25	On-Street	576	0	0	0	0	0	0	0	0	0	0	1	2	
25	On-Street	577	0	0	0	0	0	0	1	1	1	0	2	2	
25	On-Street	578	0	0	0	0	0	0	0	0	0	0	0	0	
25	On-Street	579	0	0	0	0	0	0	0	0	0	0	0	0	
25	On-Street	580	0	0	0	0	0	0	0	0	0	0	0	0	
25	On-Street	581	0	0	0	0	0	0	0	0	0	0	0	0	
25	On-Street	582	0	0	0	0	0	0	1	1	1	1	1	1	
25	On-Street	583	0	0	0	0	0	0	1	1	1	1	1	1	
26	Starlight Circle #17	591	0	0	0	0	0	0	0	0	0	0	1	2	
26	Starlight Circle #17	592	0	0	0	0	0	0	0	0	0	0	0	0	
26	Starlight Circle #17	593	0	0	0	0	0	0	0	1	2	0	3	4	
26	Starlight Circle #17	594	0	0	0	0	0	0	0	1	1	0	2	0	
26	Starlight Circle #17	595	0	0	0	0	0	0	0	1	2	0	3	4	
26	Starlight Circle #17	596	0	0	0	0	0	0	0	1	2	0	3	4	
26	Starlight Circle #17	597	0	0	0	0	0	0	0	0	1	1	1	2	
26	Starlight Circle #17	598	0	0	0	0	0	0	0	1	2	0	3	4	
26	Starlight Circle #17	599	0	0	0	0	0	0	1	0	2	0	3	4	
26	Starlight Circle #17	600	0	0	0	0	0	0	1	0	2	0	3	4	
26	Starlight Circle #17	601	0	0	0	0	0	0	0	0	1	0	2	3	
26	Starlight Circle #17	602	0	0	0	0	0	0	0	0	1	0	2	3	
26	Starlight Circle #17	603	0	0	0	0	0	0	0	0	0	0	1	2	
26	Starlight Circle #17	604	0	0	0	0	0	0	0	0	0	0	1	0	
27	On-Street	611	0	0	0	0	0	0	0	1	1	0	2	0	
27	On-Street	612	0	0	0	0	0	0	0	0	0	0	1	1	
27	On-Street	613	0	0	0	0	0	0	0	1	2	0	3	3	
27	On-Street	614	0	0	0	0	0	0	1	1	1	1	1	1	
27	On-Street	615	0	0	0	0	0	0	1	1	1	1	1	1	
27	On-Street	616	0	0	0	0	0	0	0	0	0	0	0	0	
27	On-Street	617	0	0	0	0	0	0	1	1	1	1	1	1	
27	On-Street	618	0	0	0	0	0	0	0	1	0	0	2	0	
27	On-Street	619	0	0	0	0	0	0	0	0	0	0	0	0	
27	On-Street	620	0	0	0	0	0	0	0	0	0	0	0	0	
28	Aquarius #18	621	0	0	0	0	0	0	0	0	0	0	1	2	
28	Aquarius #18	622	0	0	0	0	0	0	0	0	1	1	1	1	
28	Aquarius #18	623	0	0	0	0	0	0	1	0	2	0	0	3	
28	Aquarius #18	624	0	0	0	0	0	0	1	1	2	0	3	4	
29	On-Street	631	0	0	0	0	0	0	1	1	2	2	2	2	
29	On-Street	632	0	0	0	0	0	0	0	0	1	1	1	0	
29	On-Street	633	0	0	0	0	0	0	1	1	1	1	1	1	
29	On-Street	634	0	0	0	0	0	0	1	1	1	1	1	1	
29	On-Street	635	0	0	0	0	0	0	1	0	0	0	2	2	
29	On-Street	636	0	0	0	0	0	0	1	1	1	0	0	0	
29	On-Street	637	0	0	0	0	0	0	1	0	2	2	2	3	
29	On-Street	638	0	0	0	0	0	0	1	2	2	0	3	3	
29	On-Street	639	0	0	0	0	0	0	1	1	1	1	1	1	
29	On-Street	640	0	0	0	0	0	0	1	1	2	2	2	2	
29	On-Street	641	0	0	0	0	0	0	0	1	2	2	2	2	
29	On-Street	642	0	0	0	0	0	0	1	1	2	2	2	2	
29	On-Street	643	0	0	0	0	0	0	1	2	3	0	4	4	
29	On-Street	644	0	0	0	0	0	0	0	0	1	0	2	3	
29	On-Street	645	0	0	0	0	0	0	0	0	1	1	1	1	
29	On-Street	646	0	0	0	0	0	0	0	0	0	0	0	1	
30	Aurora Circle #19	651	0	0	0	0	0	0	0	1	1	0	2	0	
30	Aurora Circle #19	652	0	0	0	0	0	0	1	2	2	2	2	3	
30	Aurora Circle #19	653	0	0	0	0	0	0	1	2	2	0	3	4	
30	Aurora Circle #19	654	0	0	0	0	0	0	1	1	2	2	2	3	
30	Aurora Circle #19	655	0	0	0	0	0	0	0	1	2	2	2	3	

LPI COMPILATION & DISTRIBUTION ANALYSIS

0	=	NO CAR
1090		*Check Total*

Total Vehicles: 1090

Sheet	Location	#	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
30	Aurora Circle #19	656	0	0	0	0	0	0	1	2	2	2	2	3	
30	Aurora Circle #19	657	0	0	0	0	0	0	1	2	3	3	3	3	
30	Aurora Circle #19	658	0	0	0	0	0	0	1	1	1	0	2	2	
30	Aurora Circle #19	659	0	0	0	0	0	0	1	2	2	2	2	3	
30	Aurora Circle #19	660	0	0	0	0	0	0	1	1	1	0	2	3	
30	Aurora Circle #19	661	0	0	0	0	0	0	0	1	2	0	3	3	
30	Aurora Circle #19	662	0	0	0	0	0	0	1	1	2	2	2	2	
30	Aurora Circle #19	663	0	0	0	0	0	0	1	2	3	3	3	4	
30	Aurora Circle #19	664	0	0	0	0	0	0	1	2	3	3	3	4	
30	Aurora Circle #19	665	0	0	0	0	0	0	1	2	3	3	3	4	
30	Aurora Circle #19	666	0	0	0	0	0	0	1	1	1	1	1	1	
30	Aurora Circle #19	667	0	0	0	0	0	0	1	1	2	0	3	4	
30	Aurora Circle #19	668	0	0	0	0	0	0	1	1	2	0	3	3	
30	Aurora Circle #19	669	0	0	0	0	0	0	1	1	2	0	3	4	
30	Aurora Circle #19	670	0	0	0	0	0	0	1	1	2	0	3	4	
30	Aurora Circle #19	671	0	0	0	0	0	0	1	2	3	3	3	3	
30	Aurora Circle #19	672	0	0	0	0	0	0	1	1	2	2	2	2	
30	Aurora Circle #19	673	0	0	0	0	0	0	1	1	2	0	3	3	
30	Aurora Circle #19	674	0	0	0	0	0	0	1	1	2	0	3	3	
30	Aurora Circle #19	675	0	0	0	0	0	0	1	2	3	0	4	4	
30	Aurora Circle #19	676	0	0	0	0	0	0	1	1	2	0	3	4	
30	Aurora Circle #19	677	0	0	0	0	0	0	1	1	2	0	3	3	
30	Aurora Circle #19	678	0	0	0	0	0	0	1	2	3	0	4	4	
30	Aurora Circle #19	679	0	0	0	0	0	0	0	0	1	0	2	2	
30	Aurora Circle #19	680	0	0	0	0	0	0	0	0	0	0	1	0	
30	Aurora Circle #19	681	0	0	0	0	0	0	0	0	0	0	1	0	
31	On-Street	691	0	0	0	0	0	0	1	1	1	1	1	2	
31	On-Street	692	0	0	0	0	0	0	1	2	3	3	3	4	
31	On-Street	693	0	0	0	0	0	0	1	2	3	3	3	4	
31	On-Street	694	0	0	0	0	0	0	1	1	2	0	3	4	
31	On-Street	695	0	0	0	0	0	0	1	1	2	0	3	4	
31	On-Street	696	0	0	0	0	0	0	0	1	1	1	1	2	
31	On-Street	697	0	0	0	0	0	0	1	1	2	2	2	2	
31	On-Street	698	0	0	0	0	0	0	1	2	2	0	3	3	
31	On-Street	699	0	0	0	0	0	0	1	2	2	2	2	3	
31	On-Street	700	0	0	0	0	0	0	1	2	3	3	3	0	
31	On-Street	701	0	0	0	0	0	0	1	1	2	0	3	3	
31	On-Street	702	0	0	0	0	0	0	1	1	2	0	3	4	
31	On-Street	703	0	0	0	0	0	0	1	1	2	2	2	3	
31	On-Street	704	0	0	0	0	0	0	1	1	2	0	3	4	
31	On-Street	705	0	0	0	0	0	0	1	1	2	0	3	4	
31	On-Street	706	0	0	0	0	0	0	1	1	2	0	0	4	
31	On-Street	707	0	0	0	0	0	0	1	2	3	0	4	5	
31	On-Street	708	0	0	0	0	0	0	0	0	1	0	2	3	
31	On-Street	709	0	0	0	0	0	0	1	2	2	2	2	3	
31	On-Street	710	0	0	0	0	0	0	1	1	2	2	2	3	
31	On-Street	711	0	0	0	0	0	0	1	2	3	0	0	4	
31	On-Street	712	0	0	0	0	0	0	1	2	3	3	3	4	

Appendix E

Beach Survey Results

Beach Survey Questions

SOUTH PADRE ISLAND BEACH SURVEY - 8/5/06

Survey Questions

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many In Group?	How Many Cars?
1	1	A01					1			1													1								1			3	1
2	2	A01					1	1															1						1					8	1
3	3	A01					1		1					Tiki									1									1		4	1
4	4	A01					1		1					Tiki									1									1		5	1
5	5	A01					1			1													1								1			5	1
6	6	A01					1			1													1								1			2	1
7	7	A01					1			1													1								1			6	2
8	8	A01					1	1						Tiki									1								1			4	1
1	9	A02					1			1													1			1					1			4	1
2	10	A02								1													1								1			5	2
3	11	A02						1						Tiki									1						1					4	1
4	12	A02								1													1									1		9	2
5	13	A02					1			1													1								1			2	1
6	14	A02					1			1													1								1			2	1
7	15	A02					1			1													1								1			4	1
8	16	A02					1			1													1								1			2	1
1	17	A03					1			1													1									1		9	2
2	18	A03					1	1															1								1			5	1
3	19	A03	1			1	1			1													1								1			2	1
4	20	A03					1	1									1						1						1					7	2
5	21	A03	1				1	1															1									1		7	1
6	22	A03					1				1												1								1			7	1
7	23	A03									1												1								1			7	1
8	24	A03								1													1								1			5	1
1	25	A04					1			1													1		1	1					1			6	1
2	26	A04						1								1							1		1	1		1						5	1
3	27	A04					1			1													1		1						1			4	1
4	28	A04					1			1							1											1						7	2
5	29	A04					1	1								1												1						6	1
6	30	A04						1								1												1						4	1
7	31	A04								1													1								1			6	2
8	32	A04						1								1												1						13	2
1	33	A05					1			1													1								1			8	3
2	34	A05					1	1															1								1			13	4
3	35	A05					1		1							1									1			1						7	2
4	36	A05					1			1													1											15	4
5	37	A05					1			1						1												1						10	3
6	38	A05					1		1														1									1		5	1
7	39	A05					1		1														1									1		15	4
8	40	A05					1				1					1												1						9	2
1	41	A06					1				1					1												1						5	1
2	42	A06					1		1														1									1		4	1
3	43	A06					1		1							1												1						7	1
4	44	A06					1		1														1								1			3	1
5	45	A06					1			1													1								1			6	3
6	46	A06					1			1													1								1			4	1

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
7	47	A06					1			1													1								1			5	2
8	48	A06					1			1													1								1			6	2
1	49	A07					1			1													1								1			6	1
2	50	A07					1		1														1								1			4	1
3	51	A07					1	1								1												1						5	2
4	52	A07						1								1												1						3	1
5	53	A07					1			1													1								1			4	2
6	54	A07					1		1														1								1			7	1
7	55	A07					1		1														1								1			9	2
8	56	A07					1		1														1								1			5	1
1	57	A08						1								1												1						6	1
2	58	A08					1			1													1		1						1			6	3
3	59	A08					1				1												1		1						1			7	2
4	60	A08					1	1								1									1			1						3	1
5	61	A08					1	1								1												1						6	1
6	62	A08					1	1								1														1				2	1
7	63	A08					1			1													1								1			5	1
8	64	A08					1	1								1												1						9	2
1	65	A09					1			1													1		1	1					1			4	2
2	66	A09						1								1														1				7	2
3	67	A09					1	1															1									1		5	1
4	68	A09					1		1														1		1						1			6	2
5	69	A09					1			1													1								1			11	3
6	70	A09					1			1													1								1			7	2
7	71	A09						1								1														1				5	1
8	72	A09						1								1												1						7	1
1	73	A10						1								1									1					1				5	1
2	74	A10					1	1								1									1			1						4	1
3	75	A10						1								1														1				7	2
4	76	A10					1	1															1									1		3	1
5	77	A10						1								1														1				2	1
6	78	A10					1	1								1													1					7	3
7	79	A10					1	1								1																1		10	2
8	80	A10					1																										1	6	2
1	81	A11					1			1													1		1						1			9	2
2	82	A11					1	1								1																1		6	1
3	83	A11					1		1														1		1						1			6	1
4	84	A11					1			1						1															1				12	4
5	85	A11					1			1													1								1				10	3
6	86	A11					1		1														1									1		4	1
7	87	A11					1		1														1									1		6	3
8	88	A11					1		1														1									1		7	2
1	89	A12					1		1														1		1							1		8	2
2	90	A12					1		1														1									1		3	1
3	91	A12					1			1													1		1						1			5	1
4	92	A12					1			1													1								1			2	1
5	93	A12					1				1												1								1			10	4
6	94	A12					1		1														1									1		4	1
7	95	A12					1		1														1									1		7	2

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
8	96	A12					1		1														1									1		4	1
1	97	A13						1								1									1							1		25	5
2	98	A13					1		1														1		1	1						1		10	3
3	99	A13					1		1														1									1		4	3
4	100	A13					1		1														1									1		4	3
5	101	A13						1								1																1		2	1
6	102	A13						1								1																1		2	1
7	103	A13					1																1									1		5	1
8	104	A13																																	
1	105	R01					1			1													1		1	1					1			6	1
2	106	R01								1						1												1						3	1
3	107	R01														1									1			1						5	1
4	108	R01					1		1							1												1						3	1
5	109	R01						1								1													1					3	1
6	110	R01					1		1														1									1		3	1
7	111	R01					1				1												1								1			4	1
8	112	R01					1			1													1								1			5	1
1	113	R02						1	1							1									1					1				4	1
2	114	R02					1		1														1									1		6	1
3	115	R02					1			1													1		1						1			4	2
4	116	R02					1		1														1									1		4	1
5	117	R02					1				1					1												1						5	1
6	118	R02						1								1												1						6	1
7	119	R02					1		1							1												1						4	1
8	120	R02					1		1							1												1						5	1
1	121	R03						1		1						1												1						7	2
2	122	R03					1									1												1						13	1
3	123	R03						1								1									1	1		1						2	1
4	124	R03														1													1					4	1
5	125	R03					1			1														1							1			5	1
6	126	R03												1		1													1					3	1
7	127	R03					1		1							1																1		7	1
8	128	R03					1			1														1							1			5	1
1	129	R04						1						1		1									1	1				1				5	1
2	130	R04						1								1														1				8	1
3	131	R04					1			1													1		1								1	3	1
4	132	R04					1			1													1										1	4	2
5	133	R04					1			1														1							1			4	2
6	134	R04						1								1												1						5	1
7	135	R04					1		1															1								1		4	1
8	136	R04					1			1														1								1		14	3
1	137	R05					1		1							1												1						5	1
2	138	R05					1			1														1	1						1			4	1
3	139	R05					1		1							1														1				2	1
4	140	R05						1								1									1			1						4	1
5	141	R05					1			1														1							1			6	1
6	142	R05					1		1															1								1		6	2
7	143	R05					1			1														1							1			10	3
8	144	R05						1								1														1				6	1

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
1	145	R06						1								1									1	1		1						2	1
2	146	R06					1			1													1		1							1		5	1
3	147	R06					1		1							1														1				3	1
4	148	R06						1								1									1				1					2	1
5	149	R06						1								1												1						2	1
6	150	R06						1																1						1				2	1
7	151	R06					1		1															1								1		7	2
8	152	R06	1	1			1				1					1														1				4	1
1	153	R07						1								1												1						2	1
2	154	R07						1								1												1						5	1
3	155	R07						1								1														1				6	1
4	156	R07					1		1															1								1		2	1
5	157	R07					1		1							1													1					3	1
6	158	R07					1		1															1								1		6	1
7	159	R07						1								1														1				2	1
8	160	R07					1			1														1							1			7	1
1	161	R08					1			1														1	1	1					1			15	3
2	162	R08					1			1														1							1			6	2
3	163	R08					1			1														1							1			6	2
4	164	R08					1		1															1								1		7	2
5	165	R08					1			1														1							1			4	2
6	166	R08					1			1														1							1			9	2
7	167	R08					1			1														1							1			7	1
8	168	R08					1			1														1							1			18	5
1	169	R09						1								1									1			1						8	1
2	170	R09	1				1			1														1							1			17	3
3	171	R09	1				1			1														1							1			7	3
4	172	R09						1								1														1				5	1
5	173	R09					1		1							1												1						5	1
6	174	R09	1				1			1													1								1			12	3
7	175	R09					1			1													1								1			10	3
8	176	R09					1		1														1									1		2	1
1	177	R10						1								1																1		20	4
2	178	R10					1			1														1	1	1					1			9	2
3	179	R10						1								1												1						5	1
4	180	R10					1				1													1							1			6	3
5	181	R10					1			1													1								1			5	1
6	182	R10					1			1													1								1			7	1
7	183	R10					1		1														1									1		6	2
8	184	R10	1				1			1													1								1			7	2
1	185	R11					1			1														1	1						1			5	1
2	186	R11					1				1													1	1						1			4	1
3	187	R11					1			1														1								1		1	1
4	188	R11					1			1						1												1						10	3
5	189	R11						1								1														1				17	3
6	190	R11					1				1													1							1			9	2
7	191	R11					1		1							1												1						12	3
8	192	R11						1								1												1						5	2
1	193	R12	1				1			1														1								1		15	4

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
2	194	R12						1								1								1						1				3	1
3	195	R12					1			1														1	1								1	8	2
4	196	R12					1	1																1								1		4	1
5	197	R12					1			1						1												1						7	2
6	198	R12					1		1															1								1		10	4
7	199	R12					1		1															1								1		2	1
8	200	R12					1		1															1								1		5	1
1	201	R13	1			1	1				1													1							1			5	2
2	202	R13					1				1													1	1								1	9	3
3	203	R13					1			1														1									1	6	1
4	204	R13					1		1							1												1						7	2
5	205	R13					1		1							1												1						5	1
6	206	R13					1		1															1									1	5	1
7	207	R13						1								1												1						6	1
8	208	R13						1								1														1				3	1
1	209	R14					1		1															1	1							1		13	3
2	210	R14					1			1														1								1		7	2
3	211	R14					1			1														1									1	5	2
4	212	R14					1				1													1							1			10	3
5	213	R14					1			1														1									1	6	2
6	214	R14					1			1														1									1	2	1
7	215	R14					1			1														1									1	10	3
8	216	R14					1			1														1								1		14	4
1	217	R15						1								1									1	1				1				3	1
2	218	R15					1		1							1														1				3	1
3	219	R15					1		1															1								1		6	1
4	220	R15					1		1															1	1	1							1	10	3
5	221	R15						1								1														1				1	1
6	222	R15					1			1														1							1			6	1
7	223	R15	1		1		1			1														1									1	4	1
8	224	R15					1				1													1							1			6	1
1	225	R16					1			1														1	1						1			6	2
2	226	R16					1			1														1	1						1			6	3
3	227	R16					1			1						1									1						1			7	2
4	228	R16					1			1														1	1	1					1			5	2
5	229	R16					1		1															1								1		5	1
6	230	R16					1		1															1								1		2	1
7	231	R16					1		1															1								1		4	1
8	232	R16					1			1														1					1					7	2
1	233	R17					1		1															1								1		5	1
2	234	R17					1			1														1	1								1	9	1
3	235	R17					1		1															1								1		8	2
4	236	R17					1			1														1									1	9	2
5	237	R17					1			1													1										1	12	3
6	238	R17					1			1													1										1	5	2
7	239	R17					1			1													1										1	4	1
8	240	R17					1			1													1										1	6	1
1	241	R18					1			1														1									1	12	3
2	242	R18					1			1														1	1								1	6	1

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
3	243	R18						1								1													1					9	1
4	244	R18					1		1															1								1		4	1
5	245	R18					1		1															1									1	10	2
6	246	R18					1		1							1																1		5	1
7	247	R18					1			1														1									1	10	2
8	248	R18					1			1														1							1			9	2
1	249	R19					1		1															1	1	1						1		9	1
2	250	R19					1			1						1									1							1		10	3
3	251	R19					1			1														1									1	5	2
4	252	R19					1		1															1								1		7	3
5	253	R19					1			1														1								1		13	3
6	254	R19						1								1														1				4	1
7	255	R19					1		1															1								1		20	5
8	256	R19					1			1														1									1	7	2
1	257	W01					1			1						1												1						8	3
2	258	W01						1								1												1						6	1
3	259	W01					1			1						1												1						4	1
4	260	W01	1	1			1				1								1						1			1						1	1
5	261	W01					1					1				1												1						5	1
6	262	W01					1		1							1																1		3	1
7	263	W01						1								1												1						3	1
8	264	W01						1								1												1						3	1
1	265	W02						1																1						1				2	1
2	266	W02					1		1															1							1			5	0
3	267	W02					1			1														1	1						1			6	0
4	268	W02					1		1															1							1			7	2
5	269	W02					1			1													1								1			6	1
6	270	W02					1			1													1						1					6	2
7	271	W02						1									1													1				4	1
8	272	W02					1			1							1														1			5	1
1	273	W03						1								1													1					2	1
2	274	W03					1							1		1									1			1						4	1
3	275	W03					1			1														1	1							1		7	3
4	276	W03					1					1				1									1	1		1						9	2
5	277	W03					1		1							1												1						4	1
6	278	W03					1		1							1												1						4	1
7	279	W03						1								1												1						1	1
8	280	W03					1		1							1																1		2	1
1	281	W04						1								1												1						2	1
2	282	W04					1			1													1		1	1					1			11	1
3	283	W04	1				1			1													1								1			3	1
4	284	W04					1		1							1									1			1						2	1
5	285	W04					1			1													1								1			5	0
6	286	W04					1			1													1								1			5	0
7	287	W04					1			1						1												1						8	0
8	288	W04					1			1						1												1						3	1
1	289	W05					1		1														1									1		7	2
2	290	W05					1		1														1		1							1		7	2
3	291	W05					1			1													1								1			8	0

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
4	292	W05						1								1												1						3	1
5	293	W05						1								1												1						4	1
6	294	W05					1			1						1												1						15	2
7	295	W05					1		1															1							1			4	0
8	296	W05						1								1												1						4	1
1	297	W06					1			1													1								1			13	0
2	298	W06					1			1													1								1			4	1
3	299	W06					1			1													1								1			9	2
4	300	W06	1				1			1						1									1			1						2	1
5	301	W06					1			1						1												1						2	1
6	302	W06						1								1												1						5	1
7	303	W06						1								1												1						9	2
8	304	W06					1			1													1								1			6	2
1	305	W07						1								1									1			1						5	1
2	306	W07					1			1						1												1			1			7	2
3	307	W07					1			1														1	1	1					1			5	1
4	308	W07												1		1														1				5	1
5	309	W07					1			1														1						1				4	1
6	310	W07	1				1			1						1														1				2	1
7	311	W07					1		1															1							1			6	2
8	312	W07					1		1															1							1			7	2
1	313	W08												1		1														1				6	1
2	314	W08					1			1														1							1			4	1
3	315	W08						1								1														1				7	1
4	316	W08					1			1						1														1				5	2
5	317	W08						1								1												1						5	1
6	318	W08					1		1							1												1						21	5
7	319	W08					1			1														1								1		8	2
8	320	W08						1								1												1						8	1
1	321	W09						1								1												1						1	1
2	322	W09					1		1							1									1								1		3	1
3	323	W09												1		1												1						7	1
4	324	W09					1		1															1								1		6	1
5	325	W09					1			1														1							1			8	2
6	326	W09					1			1														1							1			10	3
7	327	W09					1			1														1							1			9	2
8	328	W09					1			1														1							1			7	3
1	329	W10					1			1														1							1			6	1
2	330	W10					1			1														1	1						1			12	2
3	331	W10					1			1														1							1			5	1
4	332	W10					1		1							1									1			1						2	1
5	333	W10					1			1														1							1			4	1
6	334	W10	1				1				1													1							1			4	1
7	335	W10					1		1															1								1		2	1
8	336	W10						1								1															1			10	1
1	337	W11					1			1														1							1			6	1
2	338	W11						1								1												1						5	1
3	339	W11					1			1						1									1					1				4	1
4	340	W11					1			1														1							1			4	1

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
5	341	W11					1			1						1								1							1			6	1
6	342	W11					1			1														1							1			8	2
7	343	W11					1			1														1							1			5	1
8	344	W11					1			1														1							1			14	2
1	345	W12	1					1								1												1						2	1
2	346	W12						1								1												1						4	1
3	347	W12						1								1									1						1			2	1
4	348	W12						1								1															1			4	1
5	349	W12					1			1														1							1			8	2
6	350	W12					1			1														1							1			16	3
7	351	W12					1			1						1														1				3	1
8	352	W12					1			1						1														1				3	1
1	353	W13					1			1														1							1			2	1
2	354	W13					1			1														1							1			7	2
3	355	W13					1			1														1							1			4	1
4	356	W13					1			1														1	1	1					1			5	1
5	357	W13						1								1														1				4	1
6	358	W13					1			1						1												1						6	1
7	359	W13					1			1						1												1						4	1
8	360	W13						1								1												1						3	1
1	361	W14					1			1														1							1			8	2
2	362	W14					1			1							1								1					1				10	4
3	363	W14					1			1														1	1						1			2	1
4	364	W14					1			1														1	1	1					1			5	1
5	365	W14						1								1													1					1	1
6	366	W14						1								1														1				3	1
7	367	W14					1			1														1							1			5	1
8	368	W14					1			1						1															1			5	1
1	369	W15					1			1														1							1			3	1
2	370	W15					1			1														1	1						1			6	1
3	371	W15					1		1															1								1		2	1
4	372	W15					1				1													1							1			5	1
5	373	W15					1			1						1														1				5	1
6	374	W15						1																1								1		2	1
7	375	W15						1																1						1				7	1
8	376	W15					1			1														1							1			5	1
1	377	W16					1			1														1	1	1					1			5	1
2	378	W16					1			1														1	1						1			3	1
3	379	W16					1			1														1	1						1			4	1
4	380	W16					1			1														1							1			6	1
5	381	W16					1				1					1								1								1		14	3
6	382	W16					1				1													1							1			1	1
7	383	W16					1				1													1							1			11	2
8	384	W16					1			1														1							1			5	1
1	385	W17					1			1						1														1				5	1
2	386	W17						1								1									1					1				1	1
3	387	W17						1								1												1						4	1
4	388	W17					1		1							1												1						4	1
5	389	W17					1		1							1												1						3	1

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many In Group?	How Many Cars?
6	390	W17						1								1														1					5	1
7	391	W17					1			1														1								1			2	1
8	392	W17					1			1														1								1			25	3
1	393	W18					1			1						1														1					9	1
2	394	W18					1		1															1	1							1			3	1
3	395	W18					1		1															1	1							1			5	1
4	396	W18					1			1														1								1			5	1
5	397	W18					1		1															1								1			14	4
6	398	W18	1		1		1			1														1							1				6	2
7	399	W18					1		1															1								1			10	2
8	400	W18					1		1															1								1			4	1
1	401	W19					1		1															1								1			4	1
2	402	W19					1		1															1	1							1			20	4
3	403	W19					1		1															1								1			7	1
4	404	W19					1		1															1								1			7	
5	405	W19					1		1															1							1				20	5
6	406	W19					1		1															1					1						10	2
7	407	W19						1								1														1					4	1
8	408	W19					1			1														1				1							6	1
1	409	W20					1			1														1				1							10	1
2	410	W20						1								1												1							3	1
3	411	W20					1			1														1								1			8	2
4	412	W20					1				1													1									1		7	2
5	413	W20					1			1														1							1				7	1
6	414	W20					1				1					1												1							10	1
7	415	W20					1			1														1											4	1
8	416	W20					1			1														1								1			7	2
1	417	W21					1			1														1	1	1					1				5	1
2	418	W21					1			1						1															1				8	1
3	419	W21	1	1			1				1													1	1								1		2	1
4	420	W21					1		1							1														1					4	1
5	421	W21					1			1														1							1				8	2
6	422	W21					1		1															1								1			2	1
7	423	W21					1			1														1							1				5	1
8	424	W21					1		1															1								1			10	2
1	425	G01						1								1																			5	1
2	426	G01					1			1														1											8	1
3	427	G01					1		1															1	1										6	1
4	428	G01																																		
5	429	G01					1		1														1									1			5	1
6	430	G01					1			1													1									1			7	2
7	431	G01					1		1														1									1			11	2
8	432	G01						1															1									1			5	1
1	433	G02					1			1													1								1				8	2
2	434	G02						1															1									1			4	1
3	435	G02					1				1												1		1						1				3	1
4	436	G02					1			1													1								1				6	2
5	437	G02					1			1													1									1			6	2
6	438	G02					1			1						1												1							16	3

Group	SeqNo	Page	Resident?	Year Round	Summer	Winter	Staying on Island?	Day Trip	Hotel	Condo / Apartment	Private Residence	RV Park	Campground	Other	Arrived How?	Auto	Motorcycle	Electric Car	Bicycle	Taxicab	The Wave	Drop-Off	Walk	Other	Do You Know About the Wave?	Ever Used It?	Where Did You Park?	Beach Lot	Public / Business Lot	On Street	Private Residence / Condo	Hotel	Other	How Many in Group?	How Many Cars?
7	439	G02					1			1													1								1			127	30
8	440	G02						1															1							1				5	1
1	441	G03					1		1														1									1		8	3
2	442	G03						1								1															1			4	2
3	443	G03					1				1					1																1		4	1
4	444	G03					1		1							1												1						5	1
5	445	G03					1		1							1												1						5	1
6	446	G03						1								1												1						5	1
7	447	G03						1								1														1				9	2
8	448	G03					1		1							1															1			8	2
1	449	G04					1			1						1															1			30	6
2	450	G04					1		1							1															1			20	4
3	451	G04					1		1							1												1						4	1
4	452	G04						1								1												1						2	1
5	453	G04					1				1					1															1			8	1
6	454	G04					1				1					1															1			8	2
7	455	G04					1				1					1															1			10	2
8	456	G04						1								1												1						4	1
1	457	G05	1		1		1			1						1																1		4	1
2	458	G05	1	1			1		1							1												1						5	1
3	459	G05					1			1													1								1			7	2
4	460	G05	1		1			1								1													1					4	1
5	461	G05					1			1						1															1			4	2
6	462	G05	1		1		1		1							1												1						3	1
7	463	G05	1		1		1			1						1																1		15	3
8	464	G05					1		1							1															1			6	3
1	465	G06						1								1																1		4	1
2	466	G06						1								1																1		4	1
3	467	G06					1				1					1									1							1			4	1
4	468	G06						1																1									1	4	1
5	469	G06					1		1							1																1		6	2
6	470	G06	1	1			1		1							1																1		5	1
7	471	G06	1	1			1		1							1																1		17	2
8	472	G06	1		1		1			1						1															1			5	2
1	473	G07	1		1		1			1						1																	1	9	2
2	474	G07					1									1									1							1		9	2
3	475	G07					1									1																1		9	2
4	476	G07					1			1						1												1						9	2
5	477	G07	1	1			1	1								1																1		15	3
6	478	G07					1		1															1								1		8	2
7	479	G07	1	1			1		1							1																	1	6	2
8	480	G07					1		1																								1	2	1
			29	8	8	2	373	113	120	201	31	2	1	5	0	191	5	0	1	0	0	0	119	162	82	22	0	99	16	48	169	111	30	3111	767

BEACH SURVEY - South Padre Island

Conducted Sunday, 8/6/06

LOCATION _____

	Group #1		Group #2		Group #3		Group #4	
	YES	NO	YES	NO	YES	NO	YES	NO
Are you a resident of the island?								
Year round?								
Summer only?								
Winter only?								
Are you staying somewhere on the island?								
Just a **DAY TRIP**?								
a hotel on the island?								
a leased condo or apartment on the island?								
a private residence as a guest?								
one of the RV parks on the island?								
a campground on the island?								
Other _____								
How did you get to the <u>BEACH</u>?								
Automobile								
Motorcycle								
Electric Car								
Bicycle								
Taxicab								
"The WAVE"								
Drop-off								
Other_____								
Do you know about "THE WAVE"?								
Every used it?								
Where did you park?								
Beach lot								
In some other public or business parking lot								
On the street _____								
At a private residence or condo								
In a hotel parking lot								
Other_____								
How many in your group?								
How many cars did your group drive?								

Appendix F

Potential Parking Structure Sites

1
2
3

4
5
6
7

Appendix G

Funding Strategies White Paper

This information was extracted largely from "The Dimensions of Parking",

a reference work published by the National Parking Association.

White Paper

Parking Financing Options

Extracted largely from "Dimensions of Parking" (National Parking Association)

PART I

WHAT FINANCING STRUCTURES ARE AVAILABLE TO THE PRIVATE SECTOR?

Taxable Financing Structures

The financing options available to private parking operating companies or private developers of parking facilities are more numerous than those available to local governments. Usually, private developers are restricted in their financing options only by the economics of the project and the prevailing appetite of the investor market. In contrast, public developers are constrained by the statutory authorizations that govern various debt instruments.

In the even that a large, creditworthy parking company or development company elects to place its corporate credit behind a standalone parking project, it increases the range of possible financing options. The choice of one option over another depends on a thorough economic analysis of the proposed market, the interest rates charged in the market, and the company's overall fiscal policies.

The ownership of private parking facilities has been characterized as another aspect of the real estate business. Indeed, the acquisition, financing, and ownership considerations of the private parking industry largely mirror those of the real estate business, although parking facility operation is a business unlike any other.

Private Developer Financing

If a proposed parking facility is part of a new development, the level of occupancy by potential tenants will influence the project's financial feasibility. For example, the developer of a project with significant amounts of retail space may seek one or more major anchor tenants that will contribute toward amortizing the project's permanent loan. For large office projects, the developer

may seek one or more major tenants (that will finance a large share of the facility) and then prelease a large portion of the space before seeking project financing. Developers of less speculative developments may already have entered into an operating and/or management agreement or may even have executed a lease with a major tenant that provided the basis for the project concept and that guarantees a minimum level of parking revenues. Regardless of the method of financing selected by a private developer, a well-prepared economic feasibility study is necessary for seeking financing for a proposed facility. In addition, a lender may require a study of the underlying commercial venture. The projected cash flow of the overall private development is significantly affected by the analysis presented in the parking feasibility study.

Conventional Debt/Equity

A distinguishing feature of publicly versus privately financed projects is the need for equity in the transaction. Whereas the public sector may be able to obtain 100 percent debt financing, a private developer most often must provide anywhere from 20 to 40 percent of projects costs in equity. In other words, no more than 60 to 80 percent of a project can be financed. The required debt service coverage ratio is then a function of the equity contribution: the higher the equity, the lower the ratio. Loan terms are usually for seven, ten, 15, or 20 years with 20-, 25-, or 30-year amortizations. The most common private deal is a ten-year loan with a 20-year amortization of the debt. Interest rates are frequently indexed from U.S. Treasuries.

The private developer's choice of financial structure for a new parking facility is an integral part of the development decision-making process and can have a major effect on profitability. Developers may choose among a variety of financing alternatives that differ markedly from both a cash flow and legal perspective. It may be assumed that the developer will seek affordable financing that maximizes the expected rate of return of equity. In the process of obtaining financing, a private developer may also seek equity investors, perhaps through a limited-partnership investment group or through the projects major tenants. The private sector financing instruments for an income property that are available in today's marketplace are commercial mortgage-backed securities (CMBO's); so-called thrift deals that feature negative amortization plus participations; pension participation deals with developer or lender priorities; real estate investment trusts (REIT's); and land sale/leasebacks.

Selecting the Best Alternative

Unfortunately, the process of selecting a financial instrument is more complicated than merely choosing the option that is expected to yield the greatest after-tax cash flow. In particular, cash flow must be adjusted to reflect both timing and relative risk. An investment decision rule that explicitly adjusts for the timing of the expected cash flow is net present value (NPV) in which future payments are discounted to a current value by using an assumed interest rate. Evaluating the risk of a future payment will in fact occur is a more complicated process necessitating the evaluation of the source of the revenue system.

One facet of the risk assessment process is simplified to some extent because operating cash revenues do not vary with the method of debt financing. The method and amount of debt financing do, however, affect both before- and after- tax cash flows as well as their variability (risk). For example, while a higher loan-to-value ratio may increase the expected return on a project, the increased leverage heightens the sensitivity of after-tax returns to variations in expected operating cash flows and potential sales prices. Therefore, what should be the expected return on a more heavily leveraged financing alternative to compensate for the increased risk of the developer's equity position? The answer depends directly on the developer's perception of how likely the project will achieve projected income levels.

Although some methods of financing may appear to be more attractive, no financial structure is invariably the best. Available terms change on a weekly and even daily basis. Furthermore, lenders who prefer a specific financial structure may be available for an office building but not for a parking garage. Thus, the developer may have limited choices for a particular project type or location.

Negotiation Points

The increasing complexity of financing structures means that many different deal points must be negotiated. Figure 19-5 lists the most common negotiation points associated with the financing alternative considered above.

NOGOTIATION POINTS –
PRIVATE SECTOR OFFERINGS

Loan amount
Interest rate
Origination fee
Loan term
Years of interest-only payments
Amortization term
Prepayment penalty
Annual cash flow participation to lender
Annual cash flow threshold priority to borrower (or lender)
Reversion participation to lender
Preferred return to lender (borrowers)
Whether unpaid preferred returns are cumulative
Terms of land sale/leaseback

A developer who is able to estimate the lender's expectation yield can predict which negotiations are most likely to succeed. For instance, under some assumptions, a bullet loan may appear to be the least attractive alternative for both the developer and the lender; thus, it is unlikely that negotiations will produce a bullet loan agreement that is satisfactory to both parties. Which deal is best for the parking developer can best be determined by a competitive analysis of cash flows and careful consideration of the different risks presented under each financing structure.

PART II

WHAT FINANCING STRUCTURES ARE AVAILABLE TO THE PUBLIC SECTOR?

Bond financing of public facilities by local government is governed by state statutes in all states and frequently by charters and/or local laws as well. As an example, some states do not permit local municipalities to issue revenue bonds for parking facilities. Other states are more flexible and permit parking facilities to be financed with revenue bonds, special-district bonds, tax-increment bonds, and a variety of lease-purchase obligations.

It is generally presumed that if a public developer is issuing debt, the bonds are tax-exempt. The public developer must however, meet highly specific tests in order to receive an exemption from federal income taxation. The chief advantage of a tax-exempt designation, other things being equal, is a reduction in interest rates of about 1.5 percent (for example, from a 6.5 to 5 percent interest rate) or, in the language of the industry, a savings of 150 basis points. The amount of the spread varies over time as market conditions and tax laws change.

The financing structures that a public developer may use to fund the capital cost of new parking facilities can be grouped into four categories that relate to the proposed source of debt repayment. The first category is tax-backed obligations, the most common of which are general obligation bonds. The second category is revenue bonds with parking revenue bonds the most common type. The third category is "double-barreled" obligations that are backed by a defined revenue source in the first instance and, in the second instance, an ad valorem or general fund pledge if the revenue source is insufficient to cover debt service. The final category is lease obligations. Finally, there may be selected opportunities for government grants.

Tax-Backed Obligations

In 1812, New York City reportedly became the first U.S. city to issue bonds secured by property taxes. Bonds pledged against property taxes are regarded by many as the more secure investment next to U.S. Treasury bonds. Historically, the sale of general obligation bonds has been the principal method used by localities to fund infrastructure improvements, although the use of such bonds to finance publicly owned parking garages has become increasingly problematic. Competition for scarce property tax dollars coupled with an "anti-property-tax-increase" environment has caused many municipalities to tap other sources of tax (and non-tax) revenue to fund the construction of new parking facilities.

General Obligation Bonds. Statutes in all states govern municipalities' issuance of general obligation bonds for financing parking facilities or any other capital project. Many such statutes govern the specific terms of general obligation bond issues with respect to the bonds' maximum term, annual participation requirements, redemption provisions, and method of sale. In addition, most states authorize municipalities to issue bond anticipation notes in expectation of permanent funding, thus permitting municipalities to ascertain the final costs of construction of a capital project before they issue long-term bonds. Many states require general obligation bonds to be offered

through a competitive public bid process. Some states even mandate a majority vote of the electorate before the affected governing body enacts the required authorizing bond resolution. The laws of the particular state in which the general obligation bonds are to be issued should be reviewed with knowledgeable bond counsel early in the financing process to ensure compliance with all applicable statutes.

For any given municipality, general obligation bonds carry the lowest possible interest rate or cost of borrowing. With the full faith and credit of the municipality pledged to the repayment of bonds, the interest rate reflects the best a municipality has to offer. The only way for a municipality to improve on its own full-faith-and-credit pledge is to purchase a credit enhancement device such as municipal bond insurance. Insurance achieves an AAA credit rating for a given bond issue; few municipalities in the United States possess a comparable rating.

Municipalities must, however, take care when issuing general obligation bonds intended to finance parking facilities. Not only must the issuer adhere to the public-purpose provisions of the 1986 Tax Reform Act and subsequent amendments in order to preserve the tax-exempt status of its issue, but a local government must also consider the implications of adding the new bonded indebtedness to its already outstanding statutory debt. Furthermore, the municipality must comply with its own fiscal policies with respect to other, non-revenue-producing capital improvements.

Special-Assessment Bonds. In some states, municipalities have the ability under some statutes to issue special-assessment obligations; in other states, such obligations bear the full faith and credit of the issuing municipality. A special-assessment bond is payable primarily from a special assessment levied within a specific benefit district. The special assessment is imposed over and above the regular property tax. Special-assessment districts created by a governing body to finance a parking facility usually encompass a downtown area whose property owners will benefit from the presence of the facility. Special-assessment financing is more prevalent in the far western and midwestern states. In the East, for example, the statutory authority to issue special-assessment bonds only recently became available in the states of Maryland and Virginia.

The credit implications of special-assessment financing largely depend on the size and extent of the special-assessment district and the district's ability to levy an unlimited tax assessment on property owners. If, as is the case in some states, the general obligation of the municipality is pledged in

addition to the special assessment, then the credit enhancements mentioned above are moot. Frequently, property owner opposition to the formation of a special-assessment district relegates special-district financing to oblivion.

Tax-Increment Bonds. Tax-increment financing is primarily used in Arizona, California, Florida, Illinois, and Minnesota but, where authorized pursuant to implementing state statutes, may be used in many other states as well. Tax-increment bonds are payable from a highly segregated form of ad valorem property tax usually levied on properties within a specific area of a municipality. The bonds are used in conjunction with major urban renewal or development projects or usually not less than one square city block and frequently much larger.

By ordinance, municipality establishes a base-year property assessment within the tax-increment area. Any increase in the property assessment over the base-year assessment as a result of planned urban development becomes the basis for segregating tax collections (at the regular tax millage) for the payment of tax-increment bonds. In some states, the legislation authorizing tax-increment bonds requires thee full faith and credit of the municipality to be pledged against such bonds in the even that the tax-increment receipts are insufficient to meet bond debt service. Tax-increment bonds secured by a municipality's full faith and credit should carry the same credit rating as the community's general obligation bonds.

Tax-increment bonds not enhanced by the full faith and credit of the municipality may have a distinctly different credit standing. The following problems could arise:
If tax-increment bonds are issued too early in a new property's development schedule, the investor bears the risk that the developer may fail to construct the scheduled development as planned.
If the area designated for imposition of the incremental property tax is limited to a single development project, the security of the tax-increment bonds becomes an obligation of the developer, good or bad, and may jeopardize the tax exemption of such bonds under the 1986 Tax Reform Act as amended.

A new parking facility to be financed by a municipality's tax-increment bonds should of a size and in a location that will serve an area larger than one development project. Before issuing tax-increment bonds, the issuer of the bonds should wait until the primary development project is well under construction, with financing commitments sufficient for project completion.

Other Tax-Backed Obligations. A variety of other tax-backed obligations could be issued to fund the public sector's construction of a public parking facility. Obligations include sales tax bonds, lodger's tax bonds, gross receipts tax bonds, and amusement tax bonds, to name a few. The characteristics of the various obligations' revenue stream make their issuance more analogous to revenue bonds.

Revenue Bonds. Revenue bond financing for public purposes began in the United States in 1897 when Spokane, Washington, issued $350,000 of waterworks revenue bonds. Spokane's motivation for pioneering a new type of public financing was identical to the impetus for the subsequent expansion of revenue bond financing throughout the country, namely, the evasion of legal restrictions governing the issuance of general obligation tax bonds or the necessity of imposing ad valorem property taxes to pay for such bonds. During the 1930's, the Great Depression was instrumental in significantly expanding the use of revenue bond financing. Cities and states with severely depressed tax budgets turned to self-supporting, user-charge methods of financing capital expenditures for public works. Currently, revenue bond financing of all types constitutes about 70 percent of the nation's total annual volume of new tax-exempt bond issues.

Today's market generally does not accept parking revenue bonds secured by the revenues of a single, standalone, publicly owned parking facility. Instead, parking revenue bonds are marketable only if clear, irrefutable evidence indicates the existence of an adjacent traffic generator of such magnitude to produce debt service coverage from net revenues of close to 1.5 times current market rates for parking. Lacking a parking generator, parking revenue bonds require some other form of host public subsidy or guarantee to garner market acceptance.

Parking system revenue bonds (payable solely from parking revenues) are usually secured by a variety of parking facilities within a municipality, including off-street garages and lots and on-street meters. Given a reasonable history of efficient operation, sound enforcement practices, adequate market rate for parking, and reasonably protective covenants in the bond resolution or trust indenture, pure system parking revenue bonds for a system of facilities can be marketed at acceptable rates. A facility's revenue history should show coverage of annual debt service (including debt service for the proposed new financing) from net revenues of at least 1.3 times the debt service in each of the preceding three years. Revenue projections, including projections for the new facility

to be financed, should show annual net revenues of between 1.25 and 1.5 times the annual debt service over the projected life of the new bonds.

In any type of public revenue bond financing for parking projects, a well-prepared economic feasibility study is a prerequisite to the bond sale. The study may be required to prove the economic viability of a parking revenue bond issued for a system of facilities and thereby ensure an investment-grade credit rating.

For public projects with benefits not directly measurable in dollars, a cost-benefit analysis that is part of the feasibility study is essential for evaluating project worth above costs. Certain public-involved parking projects may specifically require a cost-benefit analysis to identify direct benefits to the community in exchange for any public subsidy. Even when a municipality issues general obligation bonds for a new parking facility, it should perform a cost-benefit analysis to demonstrate the extent of likely public benefits.

Double-Barreled Obligations

In several states, state law permits the issuance of bonds backed by a pledge of specific revenues complemented by an issuer's full faith and credit and unlimited taxing power; thus, the bonds are termed double-barreled obligations and are commonly referred to as general obligation revenue bonds. Their interest rate corresponds to an issuer's general obligation credit rating despite the pledge of repayment from a "revenue" stream. Owing to the pledged revenue source, the debt does not affect the issuer's tax rate or its general obligation credit rating unless the pledged revenue stream proves inadequate. In many states, tax-increment bonds often have the double-barreled backing of both revenues and unlimited taxing power.

Lease or Appropriation Obligations

An increasingly popular method of acquiring public parking facilities is through lease agreements, certificates of participation (COP) in a lease, installment purchase contracts, annual appropriation obligations, and, in some cases, lease revenue bonds (hereafter referred to collectively as appropriation obligations). The popularity of appropriation obligations has grown as more public jurisdictions face debt limits or are required by their respective state laws to obtain voter approval of debt issues. The fundamental distinction between a debt and an appropriation obligation is the public body's term of commitment. With a debt issue, the developer enters into an irrevocable

contractual agreement, much like a mortgage, to make debt service payments for the full term of the contract. In contrast, appropriation obligations are often subject to a governing body's annual recommitment to appropriate funds. In the event the governing body fails to appropriate money to make the require payments, the investor can reclaim the leased item or other pledged collateral. Investors earn relatively higher interest as compensation for bearing the additional risk of non-appropriation. To protect themselves against the risk of non-appropriation, some investors invest only in projects that provide an essential public service or are over-collateralize.

PART III

HOW DOES FEDERAL TAX LAW AFFECT MY DECISION-MAKING PROCESS?

The 1986 tax law, its subsequent amendments, and the attendant Internal Revenue Service interpretations have had a major affect on the attractiveness of different methods of financing public and private parking facilities. The revised federal tax code eliminated parking as an activity for which tax-exempt industrial bonds could be issued, placed severe restrictions on what constitutes a public purpose for municipalities, and repealed many of the tax benefits previously available to real estate investors. The tax law's current criteria affecting both tax-exempt and taxable financing are described briefly below. It is advisable to consult an attorney who specializes in federal tax law (referred to as bond counsel).

NOGOTIATION POINTS – PUBLIC SECTOR OFFERINGS

Loan amount
Underwriter's compensation (negotiated sale or private placement only)
Years of interest-only payments and amount of capitalized interest
Amortization schedule
Loan term
Interest rates (negotiated sale or private placement only)
Optional redemption dates and prepayment penalty
Capital replacements
Rate covenant / debt service coverage ratio
Additional bond test
Debt service reserve requirement
Insurance requirements

Maintenance covenant
Operating reserve requirement
Priority of debt
Continuing disclosure requirements (beyond federal mandates)

Tax-exempt financing. With the changes introduced by the 1986 tax law and its subsequent amendments, the determination of a proposed project's tax status must be contemplated early in the financing process. The law clearly distinguishes between what may be financed with tax-exempt bonds or leases and what must be funded with taxable financing. Developer ignorance of the law could affect a project's eligibility for tax-exempt financing. In brief, the criteria for tax exemption from federal income taxes follow:

Public Use. Not less than 90 percent of the available spaces in a financed project must be available to the general public on a daily, monthly, or yearly basis exclusive of government or nonprofit institutional users.

Use of bond proceeds. Not less than 95 percent of the total bond proceeds must be spent solely for the construction of public parking spaces, including soft costs related thereto.

Corporate guarantees. Not more than 10 percent of the annual debt service of the financing may be paid for or guaranteed by a corporate or nonpublic entity on a long-term contractual basis.

Management agreements. Any management agreement for the operation of a parking facility must be of a limited duration, must provide for either a periodic flat fee or fixed percent of gross revenues, and must give the owner of the facility the option to cancel at the end of a specified period depending on the compensation method.

In addition, an issue may qualify for exemption from income taxes imposed by the state in which the investor resides. An attorney knowledgeable of the laws of the particular state should be consulted.

Taxable private financing. The primary effects of the 1986 tax law and its subsequent amendments on the private financing of parking garages follow:

Income tax rates. After December 31, 1987, the tax rate on ordinary income and capital gains for individual taxpayers does not differ. As a result, in terms of tax rate, capital gains from a real estate investment provide no advantage over ordinary income.

Passive loss provisions. Generally, the law disallows both the deduction of passive investment losses against a portfolio income and any type of non-passive investment income (no deduction is allowed against other income of the taxpayer) and the use of credits from passive investments against taxes, other than those allocable to passive investments. Passive investments are defined as those for a trade or business activity in which the taxpayer does not materially participate as well as those for rental all activities. The passive loss provisions generally apply to individuals, estates, trusts, and personal service corporations.

Alternative minimum tax. The law added a new alternative minimum tax (AMT) of 20 percent for corporations and expanded to 21 percent the alternative minimum tax for individuals. Under the law, if AMT income is greater than one and one-thirds times regular taxable income, an individual taxpayer is subject to the AMT. However, the law broadened the scope of the AMT with respect to permissible preferences and adjustment. Some of the more significant changes in the law that affect real estate transactions and investments in real estate limited partnerships include calculation of depreciation on real property on a straight-line basis over as long as 40 years, with varying terms for other types of property and equipment; a prohibition against the use of the installment method for the disposition of rental property where the purchase price exceeds $150,000 (thus, the taxpayer must recognize the entire realized gain on the sale in the same year for purposes of calculating the AMT); and the application of the new passive loss provisions when computing the AMT.

Depreciation. The 1986 Tax Reform Act retains the ACRS (Accelerated Cost Recovery System), but with substantial modifications. First, residential real property must be depreciated on a straight-line basis over 27.5 years and non-residential real property on a straight-line basis over 31.5 years. A taxpayer may elect irrevocably to apply an alternative depreciation system by using a straight-line method over 40 years, in which case the depreciation for regular income tax and the AMT would be the same.

Moreover, a lessee is now required to recover the cost of lessee leasehold improvements over the ACRS recovery period of the improvement rather than over the real property's basic ACRS recovery period or the period remaining on the lease, whichever is shorter. The changes in ACRS depreciation under the 1986 law generally provide more favorable depreciation allowances for certain personal property, but less favorable allowances for real property.