



PROPOSED IMPROVEMENTS TO HARDING AVENUE AT 95TH STREET

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TRAFFIC RELATED ISSUES

General Principles

In general, the ideal configuration for streets and blocks at the neighborhood scale is that of a closely knit network, allowing for a variety of routes between origins and destinations, and diffusing traffic in such a way as to minimize its relative impact on any particular street or thoroughfare. Simultaneously, this pedestrian-scale network permits easy, direct, and convenient access to neighborhood amenities and services. In addition, a hierarchically-scaled regional street network, designed to accommodate multiple transportation modes, can be efficient and attractive. Both local and regional streets should be designed to accommodate walking, bicycling and transit, in addition to automobiles and trucks. Without exception, thoroughfares should be designed for walking as a legitimate transportation function, as well as effectively articulate a well-proportioned and elegantly defined “street room,” from an urban design perspective.

Observation

Surfside’s street and block network exhibit many of the classic characteristic attributes of a compact and walkable neighborhood. However, changes in the larger regional context around Surfside have allowed traffic to overwhelm Surfside’s local street network, relative to what it was originally designed to accommodate and how it was anticipated to function. The result has been a substantial degradation of the quality of life for the residents of Surfside’s neighborhoods.

The current A1A one-way pair is inefficient as a regional thoroughfare and does a poor job handling local traffic effectively, frustrating commuters and residents alike, causing some commuters to use local neighborhood streets as an alternative. Mixing local traffic on the one-way pair disrupts regional traffic flow with unnecessary left turns, trying to access the businesses on Harding Avenue, and residents entering and exiting Surfside neighborhoods. This disruption is most pronounced on Harding Avenue as it has to handle both trip types. Business patrons circling the block and parking interferes with regional trips and inhibits capacity on A1A.

Discussion

Changes in the nature of the traffic affecting Surfside’s residents and businesses fall into several distinct categories: For the residential neighborhoods, the two most significant impacts are cut-through traffic and speeding. The first; “cut-through” traffic, utilizes Surfside’s neighborhood street network as a de facto “by-pass” around nearby traffic-clogged arterial intersections. This encourages the more regionally-oriented traffic to pass through Surfside’s neighborhoods on streets that were originally designed to carry only local traffic. The second; the ambient speed at which both cut-through traffic and local traffic typically traverse the neighborhood, is often a factor of street design attributes, which might include unnecessarily wide travel lanes, and undefined -- and/or non-existent on-street parking areas. And to a lesser extent, an additional concern is the use of neighborhood streets for beach parking, which can put an additional burden on the local streets.

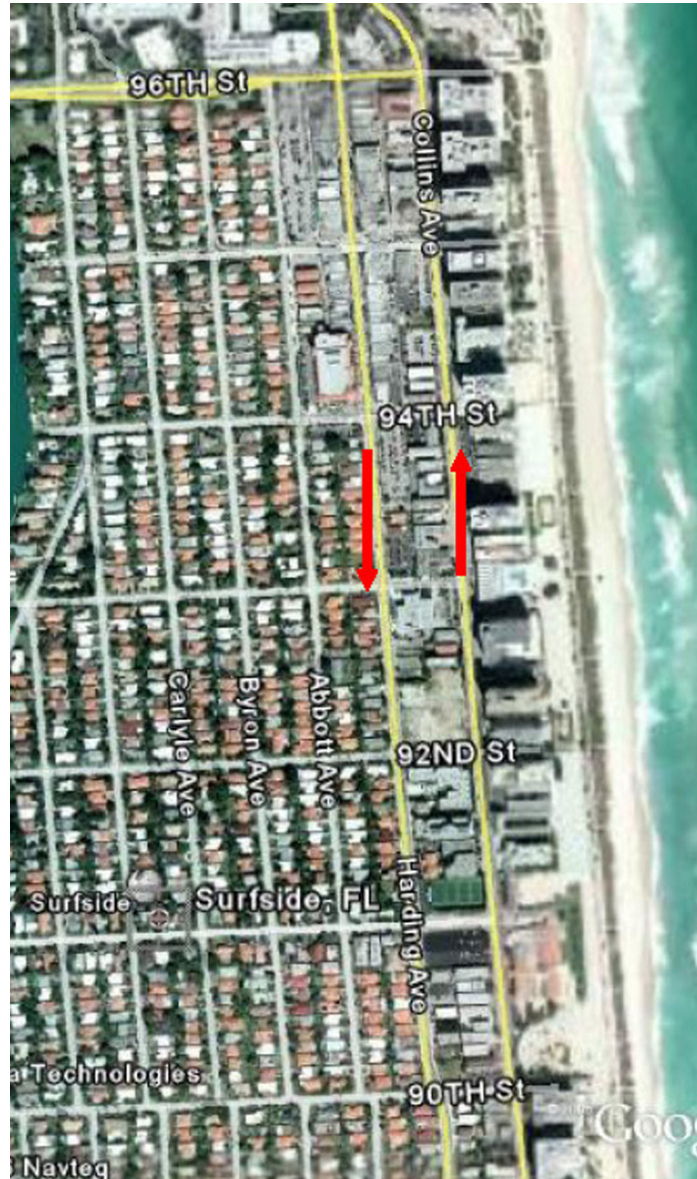


COLLINS AVENUE

In its current configuration, Collins Avenue presents a dangerous pedestrian environment, as there is no buffer between pedestrians and speeding cars on its overly-wide one-way lanes. At present there are no good alternatives for pedestrians as Harding Avenue has the same issues.



Exit only residential streets designed to curtail cut-through regional traffic make access a challenge for residents as well.



SURFSIDE'S ONE-WAY STREETS

Many options and strategies were discussed and presented during the charrette to deal with these issues. While some suggested “gating” the residential areas of Surfside, in an attempt to restrict “outside” traffic, other residents -- mostly those who lived on streets, or in areas of the community where cut-through traffic was less problematic -- voiced concerns about the effect gating might have on the community as a whole, in terms of access and convenience. The potential negative impacts of community-wide gating that were raised in addition to less convenient access to local goods and services, was a possible increase of congestion on the larger arterial thoroughfares passing through the community (i.e., Harding and Collins).

Traffic speed within the neighborhood street network, regardless of the source, was also discussed at length. Strategic solutions focused on street design elements such as carriage way (lane) width, and provisions made (or lack thereof) for pedestrian and bicycle movements, as these components might impact both vehicle speed, and the perceived implications of that speed, from the pedestrian’s or bicyclist’s perspective in terms of the perception of safety.

With regard to the downtown commercial core, there were also two key concerns related to traffic. First, the complications associated with the “one-way pair” configuration of A1A, comprised of two discreet right-of-ways (ROWs) of Collins Avenue and Harding Avenues. These two streets create the equivalent of a six-lane (three lanes northbound, and three lanes southbound) arterial highway traversing the Town of Surfside, from North to South, and vice-versa. This arrangement combines both local and regional traffic flows; travelers with quite different needs. One-ways typically necessitate more turns, and greater trip lengths for both residents and visitors to reach specific destinations within the town center.

Another problem with one-ways is that they tend to “streamline” traffic flow, which -- though that might be considered a positive attribute from a regional perspective -- it has a reverse (or negative) affect in terms of these two thoroughfare’s viability and appeal from a shopping and pedestrian point of view, by encouraging higher vehicular speeds. This has the additional effect of making local access from both Collins and Harding more dangerous and difficult, and generating higher ambient noise levels for residents along those thoroughfares.

An additional issue includes cars and trucks parallel parking and double parking on this high volume one way street, creating a situation where drivers are making multiple lane changes and unexpected stops in the business district, and possibly not paying attention to pedestrians.

Discussion also focused on reducing both travel length and turn movements related to local trips, as well as reducing design speed to help facilitate pedestrian activity and on-street parking within the commercial precinct. A further consideration was how these objectives could also help alleviate some of the larger dynamics generating traffic-related problems within the residential neighborhoods, as well.

Specific Recommendations Residential Neighborhoods

Specific recommendations with regard to reducing the amount of through traffic within the neighborhoods, as well as the ambient speed of that traffic, follow later in this section. However, those two concerns represented a significant amount of the focus and attention given by the team to concerns raised by the community, reinforcing the perception that this issue remains one of primary importance to the residents of Surfside.

Please see section 2.1.3 Incremental Traffic Calming for specific incremental closure and gating recommendations.



HARDING AVENUE, THREE LANES OF ONE-WAY HIGH SPEED TRAFFIC

Commercial Areas

The commercial area of Surfside presents a different set of issues and concerns from the residential neighborhoods, with respect to traffic management, though some of the issues in each area may incidentally impact on the other, and though those impacts may manifest themselves in different ways.

Overall traffic recommendations for the commercial area include facilitating access and parking, reducing ambient traffic speed, enhancing pedestrian safety and the pedestrian experience, and reducing neighborhood cut-through traffic by addressing traffic choke points and congestion, and by reducing turn movements and travel distances associated with local trips.

Specific recommendations are as follows:

- *Revert the existing one-way pairs of A1A (Harding and Collins Avenues) back to their original two-way configuration, without any loss in the number of northbound and southbound lanes (see section 2.1.2 One-Way Pairs for description).*
- *Reconfigure the 96th Street intersections at Harding, and at Collins, consistent with the reinstated two-way operation of Harding and Collins. This facilitates southbound turn movements at Harding and 96th (one of the principle chokepoints). Flow would improve west-bound on 96th from Collins, eastbound at 96th and Harding and northbound turn movements at 96th and Collins (see diagrams).*
- *Reconfigure intersections and retime traffic signals to facilitate smoothly regulated north bound and southbound traffic flows on both Harding and Collins.*
- *Reconfigure intersections and retime traffic signals to facilitate east-west pedestrian and vehicular movements, reducing and/or eliminating extra travel distances and turn movements associated with local trips.*
- *Optimize Harding Avenue's pedestrian functionality and ambiance.*
- *The new section would have no on-street parking in the commercial section of Collins and rationalize local access for enhanced flow, while providing improved pedestrian crossing points at key east-west intersections.*
- *Create a consistent signage plan for the Town (including street signs, stop signs, parking, etc). This could include the possibility of signs designed to represent the style of Surfside.*

One-Way Pairs

Hall Planning & Engineering, Inc. (HPE) recognizes a fundamental tension in the design of Surfside's major arterials, between the need to move large volumes of traffic and the desire to create a walkable environment. The design challenge of the citizen's planning workshop and charrette is to balance this tension by addressing the following issues:

- *Vision for and character of Surfside's urban design*
- *Traffic capacity issues at 96th Street intersections with Collins and Harding Avenues*
- *Response to design vision, capacity issues and pedestrian safety needs – one-way street conversions*
- *Effect of one-way conversion to two-way operation*

Vision for and Character of Surfside Urban Design

Much of America's suburban land development pattern results from street and highway networks dictating its structure. Highways designated as arterials change little as they approach developed areas. Generally speeds drop from 55 mph to 45/35 mph, but on-street parking is usually not allowed in emerging areas and is often removed from older areas. Arterial street designs, by definition, tend to exclude intersections with side streets of limited volume, leading to longer block size (600 to 1,000 feet and higher) and

higher speeds 45 mph or more, both of which cause difficulty for pedestrians. The arterial design concept emerged from a rural heritage and rarely serves urban peak travel demand well due to exclusive reliance on the single facility serving a single mode – the motor vehicle.

Surfside's arterials are designed for lower speeds of 30 mph. The actual average speed is often much lower due to congested peak periods at certain intersections, but speed is much higher in spots, typically south of the business district, due to long blocks (over 600 feet), a wide thoroughfare, the three-lane one-way street, and few traffic lights. This situation, in addition to the 3 lanes without a center resting island, makes pedestrian crossings more difficult and dangerous in most places. Also, to facilitate traffic flow on Harding and Collins at 96th street, some crosswalks have been removed altogether.

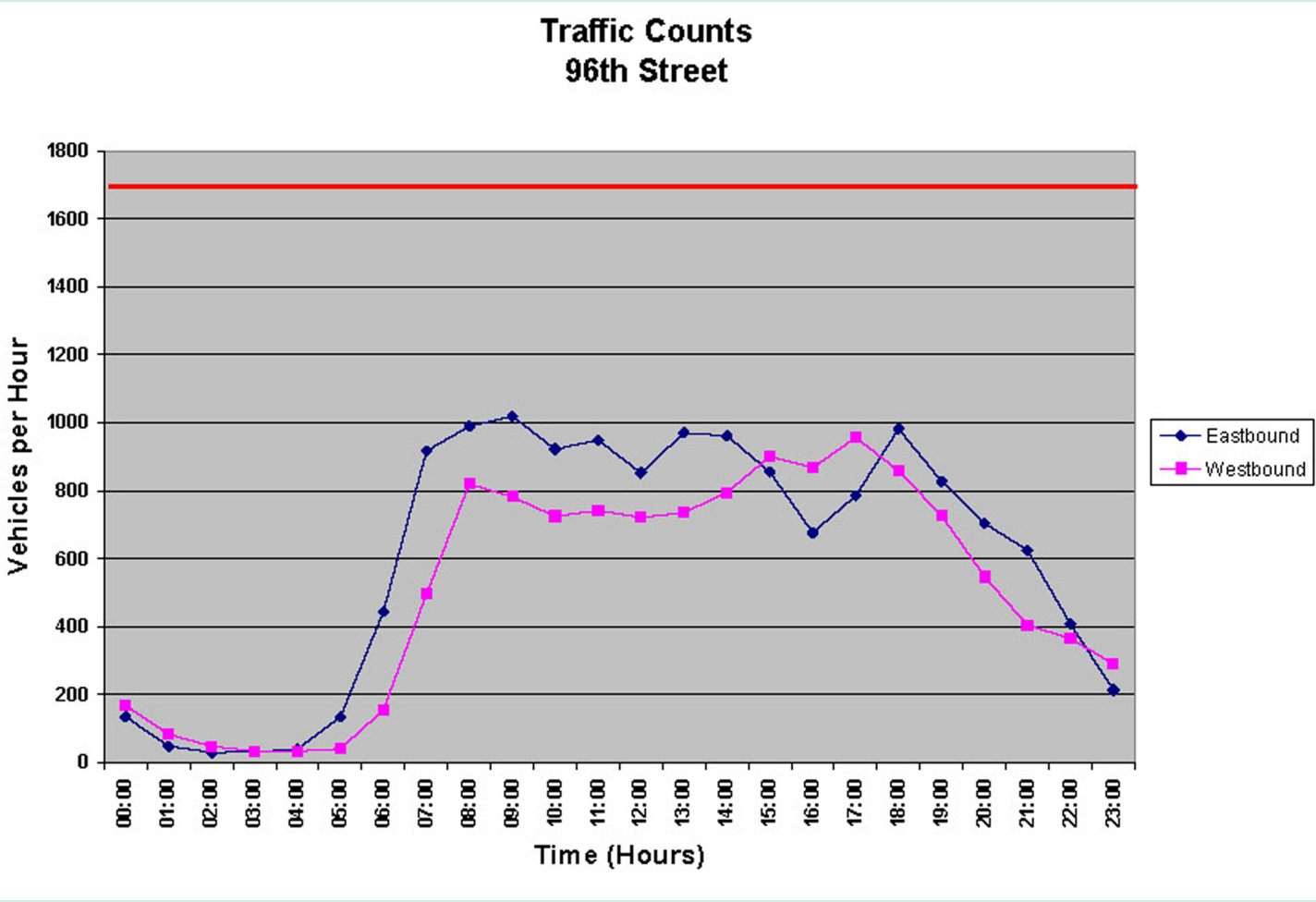
To achieve urban places that encourage (and thrive with) pedestrians, bicycles, and transit vehicles as part of the mobility mix, the patterns of proposed development must be specified first, during a community planning effort. Then, transportation plans for balanced mobility can be crafted with walkability considered first and vehicle mobility second. This is not to imply that motor vehicle mobility will be dramatically reduced, but that pedestrians exposed to the open environment are more vulnerable than when they are drivers, and

“The City of Miami Beach, south of Surfside, has for some time planned a reversion of A1A to two-way operation, the major objective being to enhance the pedestrian environment and encourage managed traffic flow, without excessive speed, as part of a comprehensive effort to improve walkability. This initiative is totally consistent with Surfside's own goals and objectives with regard to this issue, and taken collectively, represents a compelling argument for implementation.”

Rick Hall
Surfside Transportation Consultant



In its current configuration, Collins Avenue more resembles an airport runway than a vital pedestrian-friendly thoroughfare.



96TH AVENUE ENTERING SURFSIDE

solutions for their comfort are more complex. Often, greater walkability yields only small reductions in vehicle capacity, even though vehicle speeds are lower. Generally, more two lane streets per square mile result from a more open network and drivers can avoid the degree of peak hour congestion that occurs when a limited number of large streets break down.

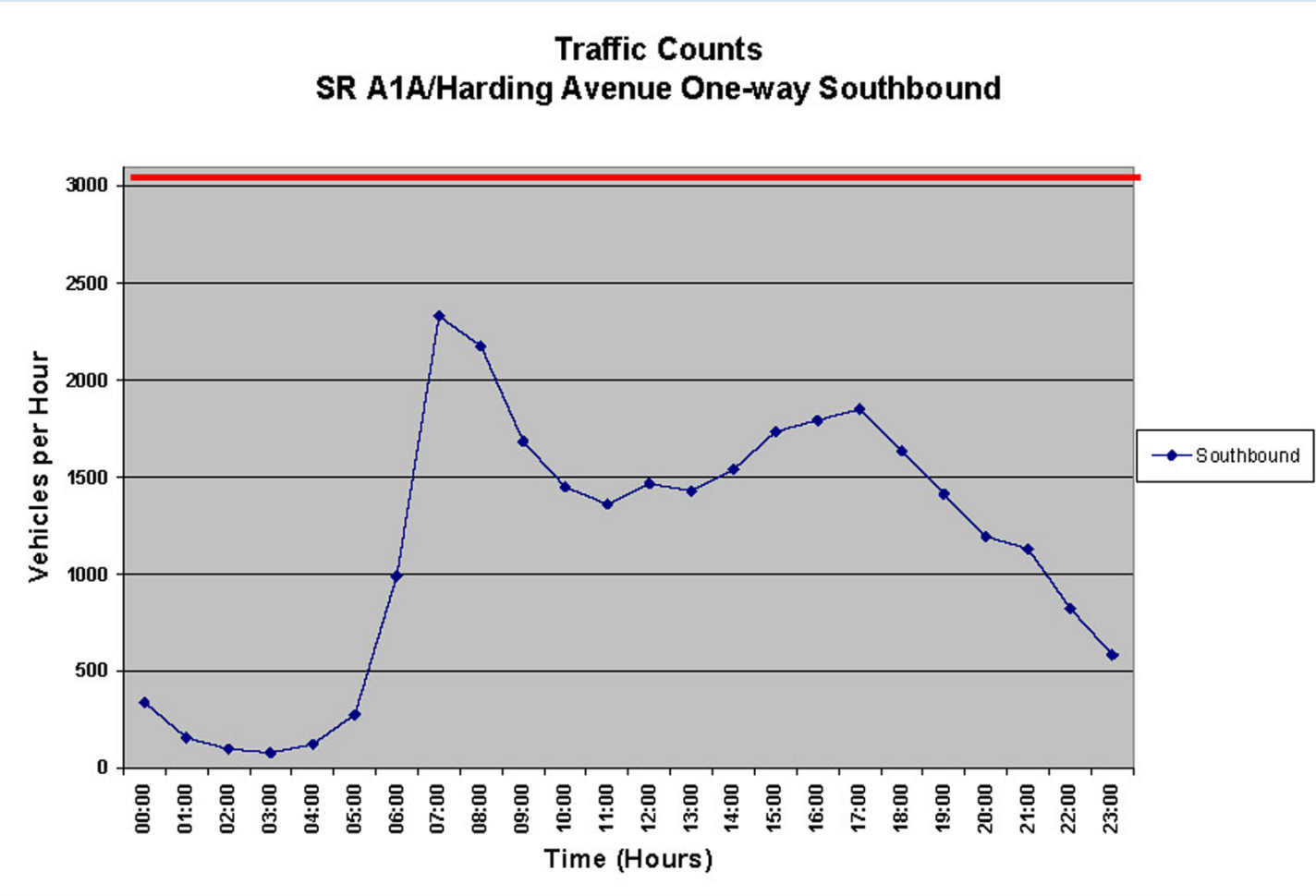
96th Street is a two-way east/west arterial; with two 11' wide lanes in each direction (southern eastbound lane terminates at Harding Avenue). Average east and westbound speeds range from 11 mph to 23 mph west of Harding Avenue, where speeds drop to 2-5 mph. Harding Avenue is a one-way southbound arterial, with three lanes of 11' each. Average speeds on Harding Avenue range from 9-19 mph. Collins Avenue (A1A) is a one-way northbound arterial, with three lanes of 11' each. Average speeds range from 10-27 mph.

*(Though these are average speeds, and include peak time congestion, and typical maneuvering actions (actual vehicular speeds would be higher) these averages suggest that redesigning Surfside's street network for **both** higher efficiency and walkability, may actually result in a greater level of through-capacity than that currently being realized.)*

Land use development along Harding and Collins Avenues consists of multifamily residential, municipal and commercial/tourist, all of which benefit greatly from a healthy pedestrian environment.



PEAK HOUR TRAFFIC QUEUING AT 96TH STREET AND HARDING AVENUE



HARDING AVENUE AND 91ST STREET SOUTHBOUND

Traffic volumes along Surfside’s major arterials are high, but traffic flows during the roadway’s peak periods. Peak hour, peak directional volumes along 96th Street approach 1,000 vehicles in some sections within the roadway’s design capacity of 1,700.

Consequently, Surfside’s major arterials have three major problems:

- 1. They serve double duty as both a through-moving arterial for regional traffic and a locally-circulating street
- 2. They encourage only one travel mode by discouraging walking, cycling, and transit
- 3. They have a high volume of traffic, with often congested conditions.

The urban design vision for Surfside, as described by the community and refined by the design team during the workshop and charrette, is a more walkable environment providing increased business traffic for the commercial district and new civic and recreational amenities, all while providing improved traffic and parking operations.

Transportation facilities and systems provide excellent tools to support the future vision for Surfside, as set by the community. As noted earlier, the Surfside community desires a return to the walkable city structure and a place where pedestrians can live, shop and find entertainment.

What factors contribute to an excellent pedestrian experience? Observations and design know-how suggest the following prioritized features, listed in reverse order.

- 10. Narrower Streets
- 9. Street Trees
- 8. Lower Traffic Volumes
- 7. Sidewalks
- 6. Interconnected Streets
- 5. On-street Parking
- 4. Lower Traffic Speeds
- 3. Mixed Land Use
- 2. Buildings Fronting the Street
- 1. Small Block Size

These parameters have proven themselves in the field. When a majority of these are combined in one location, pedestrians are routinely seen. Surfside’s walkable streets are no exception to this experience.

Traffic Capacity Issues at 96th Street

Currently, congestion is encountered during peak travel periods at the intersections of 96th Street and Collins Avenue and at 96th Street and Harding Avenue. Both intersections experience queuing times particularly during the appropriate peak rush hour.

The worst conditions occur eastbound on 96th Street. The above diagram illustrates traffic queuing times at the intersection of 96th Street and Harding Avenue. The island configuration

makes these levels of delay inevitable. More consideration should be given to the off peak hours when speeds rise to impact pedestrian comfort.

One-way Street Conversions

HPE recommends converting Surfside's one-way pair (Collins and Harding Avenues) to two-way operation. As stated above, managed motor vehicle speeds are essential to pedestrian comfort and safety. Historically, two-way streets have slower speeds than one-way streets and provide nearly the same amount of traffic capacity, while providing a substantially safer and more pleasant pedestrian environment.

One-way streets have limited operational benefits over two-way streets, safety implications, and negative impacts on local commercial business. Operationally, one-way streets:

- *increase number of left turns, increasing circulation traffic*
- *have increased vehicle miles traveled (vmt)*
- *carry 20% more vmt*
- *are especially difficult for visitor travel*
- *require transit stops on two different streets.*

From a safety perspective, one-way streets:

- *produce up to 20% more turns*
- *potentially increase pedestrian crashes because of higher number of turns*
- *yield higher off peak speeds, which lead to more serious injuries.*

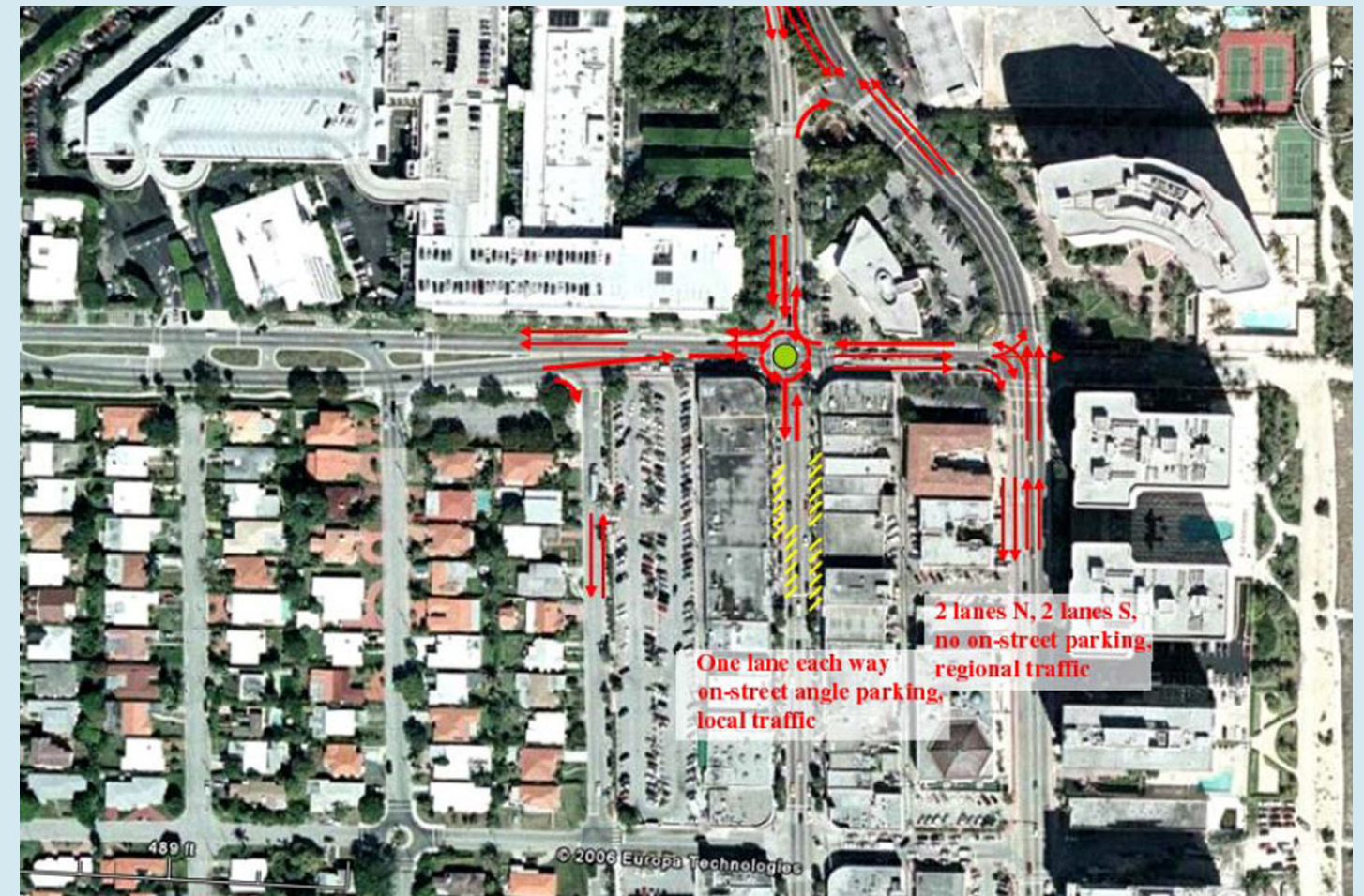
One-way streets also have an undesirable impact on commercial businesses, as they:

- *reduce business access*
- *make way finding and routing more difficult*
- *provide limited commercial exposure for corner businesses on upstream side.*

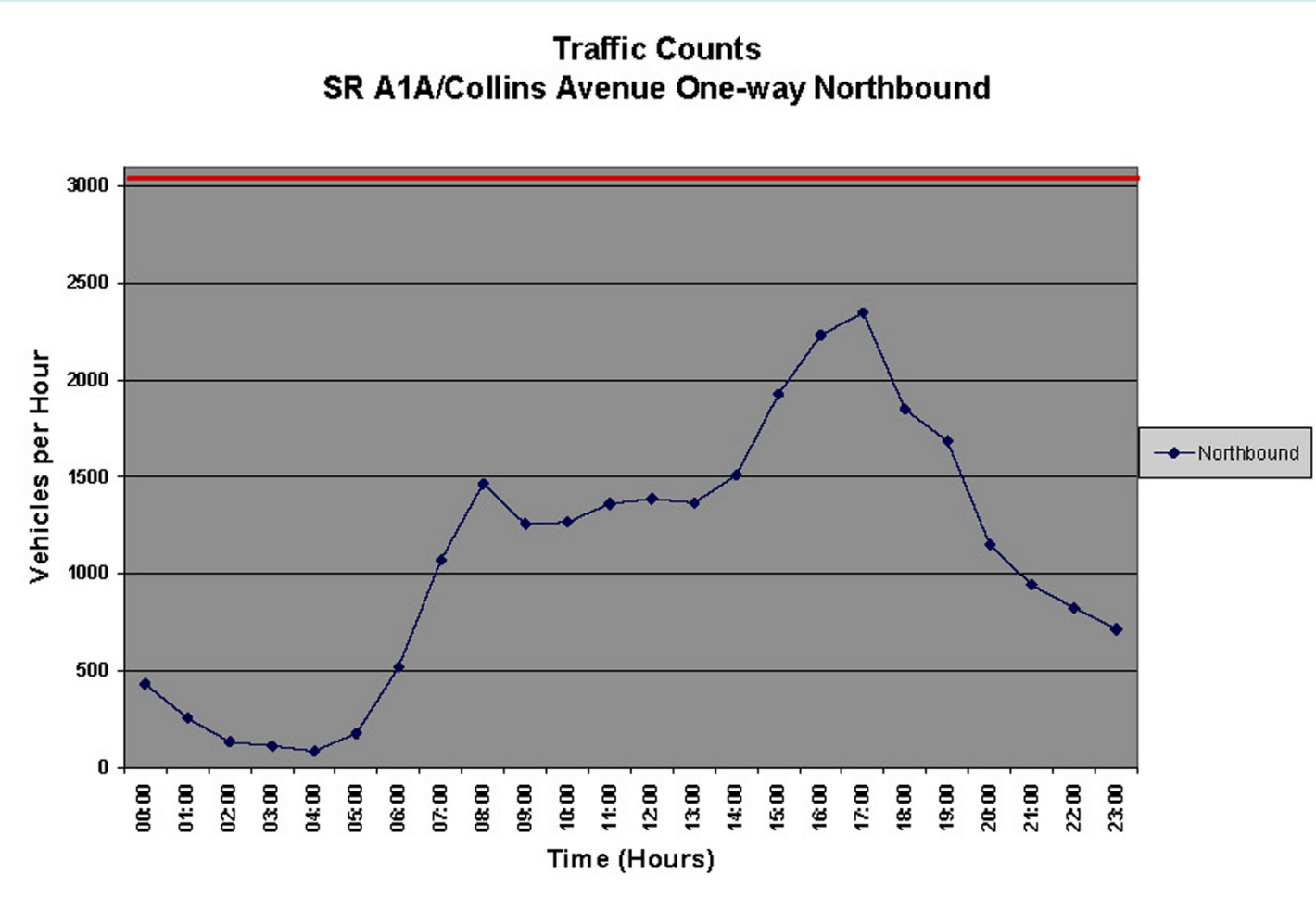
Converting Collins and Harding Avenues to two-way streets will not negatively impact the area's traffic capacity, but will positively increase pedestrian access to the commercial and civic district Surfside desires. It will also significantly improve queuing times at Surfside's major intersections as more options will disperse traffic more equally.

HPE proposes converting Harding Avenue's three southbound lanes into one north and southbound lane and include on-street parallel parking in the business district, to better accommodate pedestrians and local traffic.

Collins Avenue should likewise be converted to two-way operations, by converting its three northbound lanes and wide shoulders into two northbound and two southbound lanes, with no on-street parking, to better accommodate regional traffic traveling through the area.



TWO-WAY OPERATIONS CONVERSION



COLLINS AVENUE AND 95TH STREET NORTHBOUND

The Effect of One-Way Conversion on Two-Way Operation

To identify the effect of converting Harding and Collins Avenues to two-way operations on Surfside, an arterial level of service (LOS)* analysis was performed utilizing Synchro 6.0 (Trafficware, Inc.) software, as follows:

Synchro Procedure

To determine arterial level of service, two Synchro runs were performed for Surfside’s major arterials (96th Street, Harding Avenue and Collins Avenue). These runs were based on the following:

- A “before” run utilizing current vehicle trips and one-way operations; and
- An “after” run utilizing two-way operations.

Synchro Results

Both runs demonstrated that maximum service volume at the adopted level of service will not be exceeded by conversion to two way operation.

The 96th Street, Harding Avenue and Collins Avenue adopted LOS are “D”.

The “after” Synchro runs for 96th Street yielded an overall PM peak hour peak direction eastbound arterial level of service “D”, which is an improvement from the “before” scenario yielding a level of service “E”. Overall westbound level of service “D” remained the same along 96th Street. Only at the intersections with Harding Avenue and Collins Avenues, did the level of service remain the same (“F”). However, overall travel speed increased slightly and signal delay decreased substantially, indicating that movement of traffic has actually improved by the two-way operations, despite a low level of service.

The “after” Synchro runs for Harding Avenue yielded a new overall PM peak hour peak direction northbound arterial level of service “D”, which is concurrent with adopted standards. The Synchro run yielded an overall southbound level of service “E”, slightly lower than the adopted standards. Though this appears to present an operational capacity issue, the character Surfside desires will benefit from these changes, all without impacting the vehicular motorist experience, as arterial speeds and signal delays are nearly the same as those experienced now under one-way operations. The pedestrian benefits far outweigh the slight change in vehicular operations.

The “after” Synchro runs for Collins Avenue yielded an overall PM peak hour peak direction northbound arterial level of service “C”, which is consistent with the “before” scenario, indicating no decrease in operational capacity after the one-way conversion. The Synchro run yielded a new overall southbound level of service “D”, concurrent with adopted standards.

** Level of Service is a term used to indicate the relative level of functionality of any given intersection, and as the letters suggest, is a sort of “report card,” which grades its performance in terms of the number of light cycles necessary to transit the intersection.*

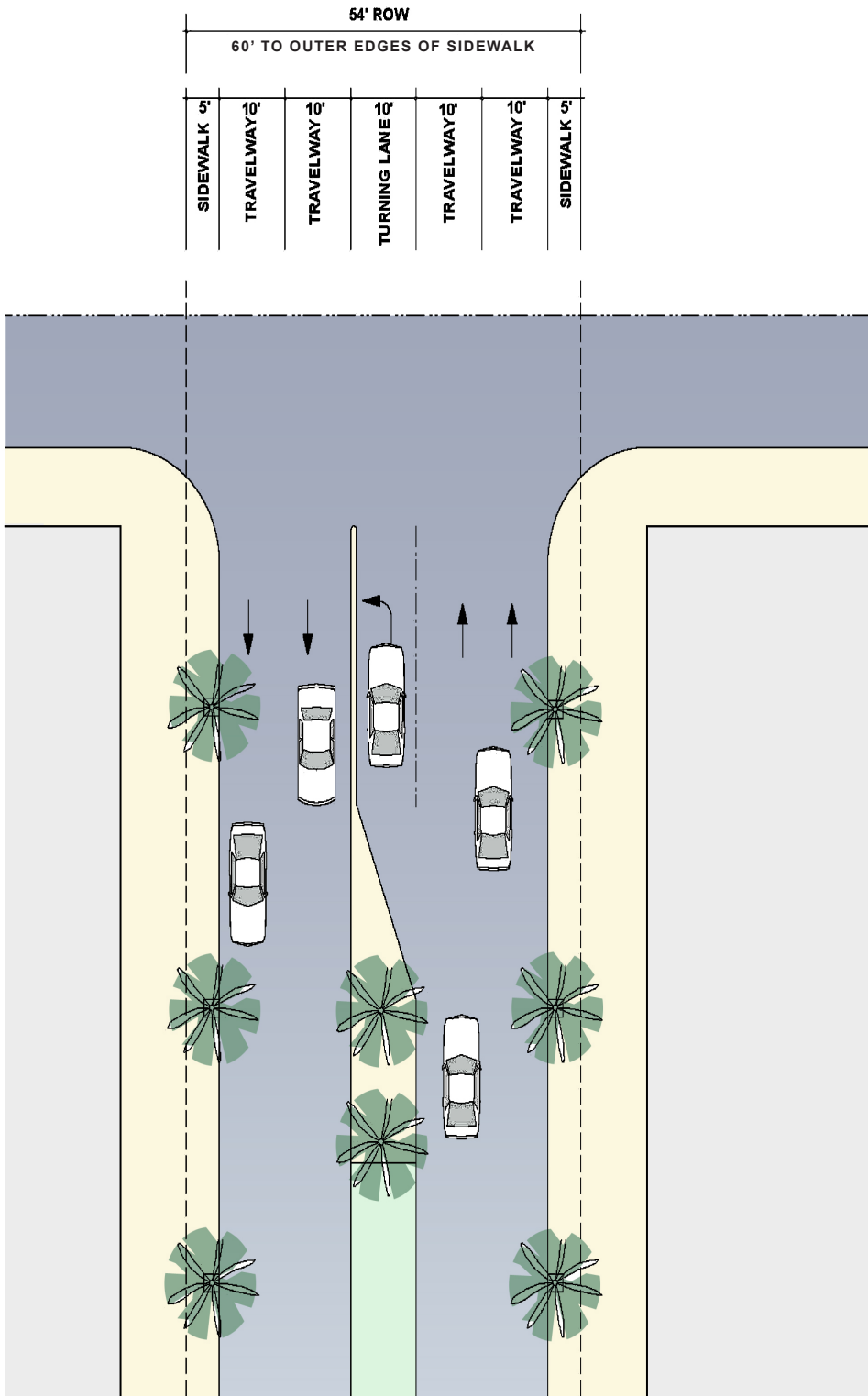
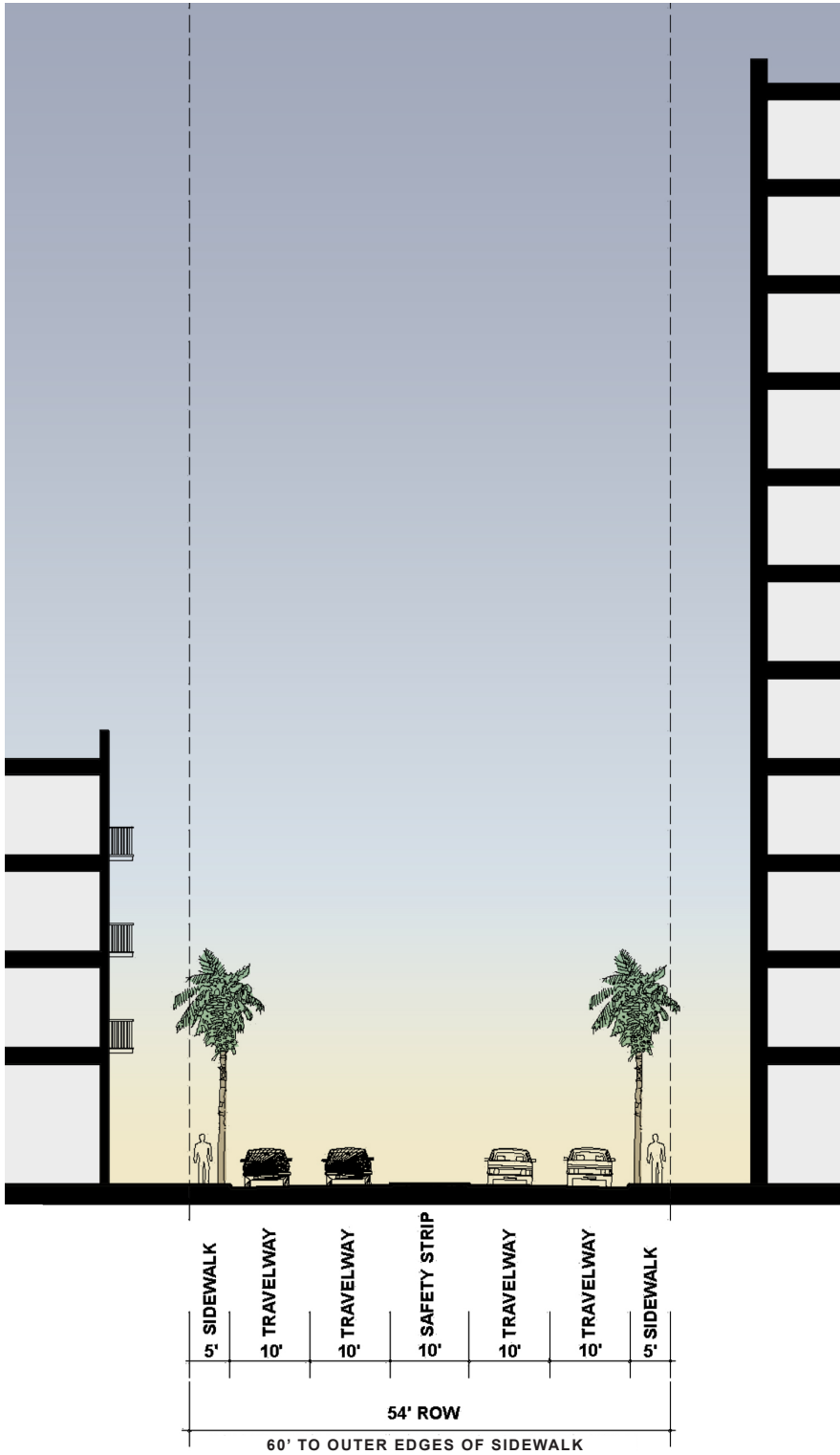
As such, an A through C would be considered a good-to-acceptable level of performance, and a D or E, would indicate a sub-par level of performance, and an F would indicated a failed intersection.

Benefits of Two-Way Pair Configuration Proposal (Harding & Collins)

- Allows Collins to become a beautiful and upscale boulevard with a tree lined landscaped median and turn lanes, more in scale with the multi-story buildings lining the street.
- Allows Harding to become a beautiful tree lined street that’s more in scale with the single family homes and town-homes lining the street.
- Allows for the replacement of cross-walks that were removed at Harding & 96 and Collins & 96 making it easier and safer for people to cross the street to get to the business district and to the beach, completing our “Walking Boulevard” around all of Surfside.
- Allows for north/south bike lanes along Harding leading to the business district.
- Two-way streets with narrower lanes and middle islands are safer for pedestrians to cross, have fewer red-light runners and have slower traffic.
- Reduced off-peak speeds leads to less severe injuries in a crash.
- Reduced Vehicle Miles Traveled (VMT) reduces fuel consumption and global warming, and is safer for drivers and for pedestrians with fewer crashes.
- Reduced turns to get to a destination are safer and more convenient for drivers and for pedestrians.
- Reduction in traffic speed through the business district will improve ambiance and increase the value and usability of the outdoor areas for businesses, which will increase the Town’s tax base.
- Increased efficiency at the Harding & 96th Street Intersection, reducing traffic congestion at that location, and increasing visitor traffic to our business district, as well as making it easier for Surfsiders to get to other business districts.
- A more efficient intersection at Harding & 96th reduces the stress on Abbott Avenue and reduces the need for people to take alternate routes down Abbott or through the neighborhood.
- Allows for more green space, landscaping and an entry feature at Harding & 96th, and other locations along 96th Street.
- Provides a more efficient and easier route for homeowners to travel northbound, without having to go through multiple lights, or drive in front of homes where pedestrians may be walking and children may be playing, making the streets safer.
- Makes it easier for people to turn into the buildings along Collins and to get to their building without having to make additional turns or wait for additional traffic signals.
- Increasing the walk/bike ability of Harding, and the Beach Path, and by providing multiple connections between the two at multiple street ends, without reducing the walk/bike ability of Collins, and tying the entire network into our local walk/bike system, as well as the regional walk/bike system, will benefit the entire



- community, and the environment.
- Will not have a negative impact on current traffic flow and will only have a positive impact on walk-ability and bicycle access.
- Will positively increase pedestrian access to the commercial and civic district.
- It will significantly improve queuing times at major intersections and create more options to disperse traffic efficiently.
- Will increase commercial exposure for north corner businesses on Harding, increasing the value of those properties.
- Increase business access and making wayfinding and routing easier and more convenient.
- Makes it easier for traffic to get to the business district.
- Makes it easier for traffic to turn around the circle to search for parking, instead of having to circle the block, or go through multiple lights and into Bal Harbour to make a U-turn.
- Parallel parking along Harding makes it safer for diners and pedestrians in the business district.
- Will make it easier and more convenient for southbound thru traffic from Bal Harbour and Bay Harbor to skip the congestion, parallel parking, double parking, delivery trucks, passenger drop-off, public transportation stops, and additional cross-walks of the business district, if so desired.
- Will make local trips, walking, biking, and driving, safer and easier for our neighbors from Bal Harbour and Bay Harbor.
- Integrates perfectly into a similar proposal being pushed forward in Miami Beach, increasing the property values to the south and well as ours.



Collins Ave.

- Travel: 4 lane, 2 way
- Parking: None
- Trees: 2 Sides in Planter Boxes
- Sidewalk: 2 Sides
- Utilities: Underground

Along Collins Avenue, where land use patterns call for commercial/tourist facilities and multi-family residential units, HPE proposes a street section with a 5' sidewalk, two 10' southbound travel lanes, a 10' safety strip, two 10' northbound travel lanes and a 5' sidewalk on the beachside, with dedicated turning lanes at intersections. The narrower lanes will encourage slower traffic speeds to better accommodate pedestrians.



COLLINS AVENUE, EXISTING CONDITION

In its current configuration, Collins Avenue is a wide, high-speed arterial, with little other redeeming attributes. A “car sewer.”



COLLINS AVENUE, PHASED IMPROVEMENTS

In this interim phase, Collins’ travel lanes have been increased in number and reduced in size, to reduce travel speed and to introduce two-way traffic back onto the street.

On-street parking has been removed to help facilitate this transition, and a new, 10’ foot wide “safety strip” has been added to the middle of the ROW to add additional flexibility and enhanced safety to the street, while still permitting limited cross-access.

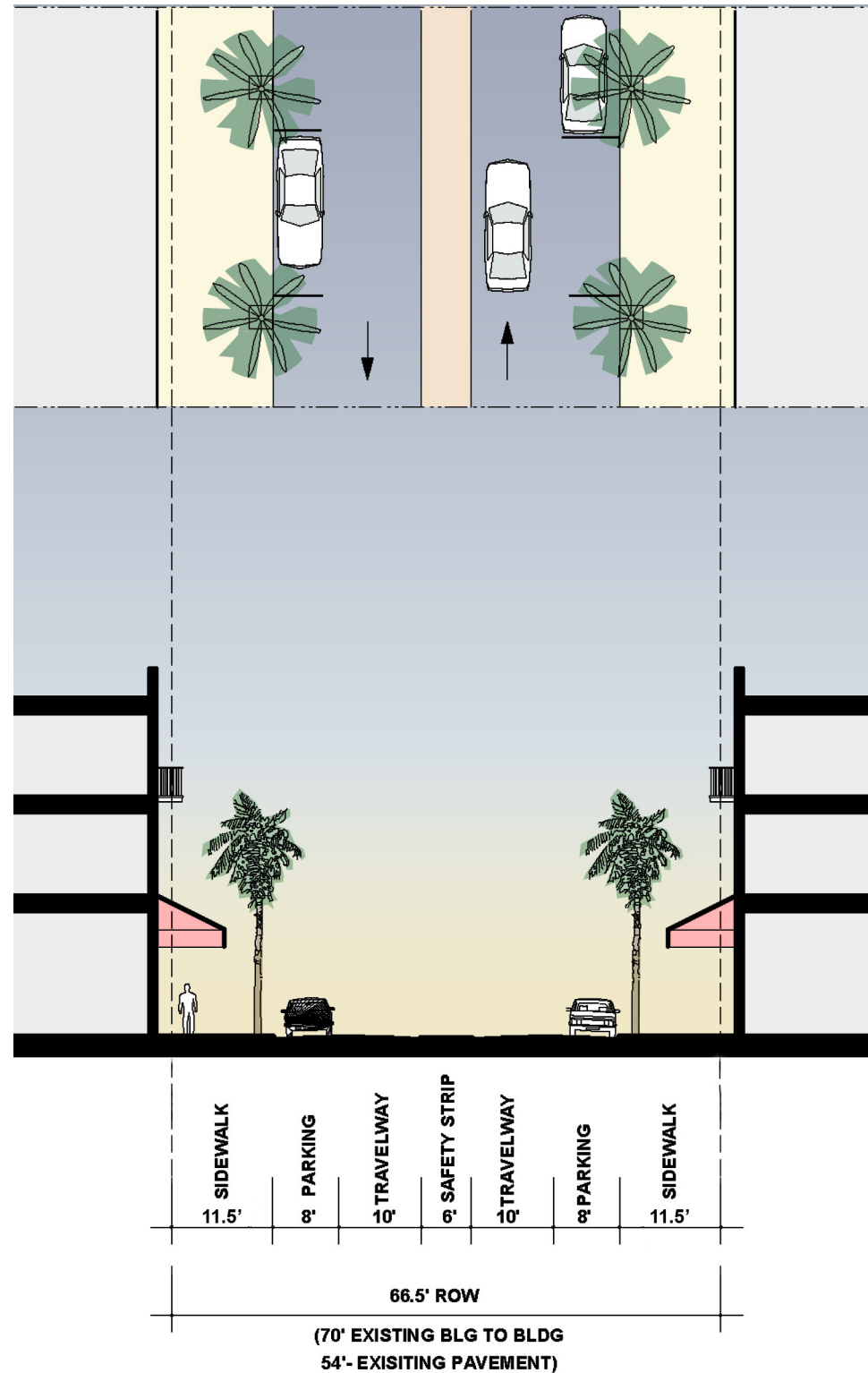
The final iteration of Collins Avenue shows an elegant, walkable, safe, and thoroughly calmed boulevard section. Pedestrian-scaled street lighting, islands for pedestrians to rest at while crossing, landscaped turn medians and new street trees and landscape improvements dramatically improve the pedestrian experience, while dedicated turn lanes at key signalized intersections, and traffic slowed through the use of proven traffic calming strategies such as enhanced visual references, and narrowed travel lanes, provide additional pedestrian safety and comfort. Slower speeds will also improve local access, and the new 10’ wide “safety strip” provides an attractive buffer for two-way traffic, as well as additional lane width, to accommodate larger vehicles safely, when needed.

The safety strip also allows for limited cross access in off-peak times, without necessarily encouraging this practice. Two-way travel should also significantly improve local access by minimizing the additional turn movements and greater travel distances typically associated with one-way pairs.



COLLINS AVENUE FINAL STAGE

In the final stage, Collins Avenue is seen in its final proposed iteration, as a thoroughly calmed and pedestrian friendly beach-side boulevard.



Harding Ave.

- Travel: 2 lane, 2 way
- Parking: 2 Sides
- Trees: 2 Sides in Planter Boxes
- Sidewalk: 2 Sides
- Utilities: Underground

Along Harding Avenue through downtown, where land use patterns call for a mixture of residential types and businesses, HPE proposes a street section with an 11.5' sidewalk, 8' parallel parking lane, one 10' southbound travel lane, a 6' safety strip, one 10' northbound travel lane, 8' parallel parking lane, and an 11.5' sidewalk on the beachside.

The safety strip is a textured pavement in the center of the street. The textured surface discourages continuous driving on the safety strip but allows temporary usage of the strip for delivery vehicle parking, slowly passing a transit vehicle, or for additional space for oversize vehicles if needed. The strip also provides a center area where pedestrians can stop.

The narrower lanes and on-street parking will encourage slower traffic speeds to better accommodate pedestrians. Bicycle lanes will be implemented south of downtown.



Surfside’s residents have expressed a desire to create a more walkable neighborhood, providing increased foot traffic for the commercial district and the new civic and recreational amenities, while improving overall traffic movement and parking operations.

Though perhaps counter-intuitive, improvements to the area’s traffic circulation, primarily converting the one-way operations of Harding Avenue and Collins Avenue into two-way flow, will help achieve the vision outlined during Surfside’s Citizen’s Planning Workshop and Charrette.

Both local and regional traffic will continue to be accommodated with these changes, while providing a much healthier and safer environment for pedestrians and bicyclists who reside in the area or will be frequenting the commercial businesses along Surfside’s main streets.



HARDING AVENUE COMMERCIAL DISTRICT, EXISTING CONDITIONS
In its current configuration, Harding Avenue is essentially a “car sewer” -- a high speed thoroughfare given over primarily to the automobile. Three lanes of noisy high-speed one-way traffic creates a major impediment and safety concern for pedestrians, and a very unpleasant walking or shopping environment.



HARDING AVENUE COMMERCIAL DISTRICT PHASED IMPROVEMENTS, PHASE ONE
Returning Harding Avenue to two-way local traffic will reduce traffic speed and make access to local businesses much easier and convenient. Wider sidewalks, a unified landscaping scheme, and storefront enhancements will result in a more attractive streetscape and a more pleasant experience for patrons and visitors.

Combined with additional improvements, such as pocket plazas, the wider sidewalks will create a more vibrant street life, with sidewalk dining, enhanced merchandising, and seasonal events.



HARDING AVENUE COMMERCIAL DISTRICT FINAL STAGE
A 6’ textured safety strip and landscape median is added to the center of the street to visually narrow travel lanes further while still allowing drivers to navigate around parking cars, as well as provide a place for delivery vehicles to park temporarily.

Median landscape elements add additional charm and pedestrian protection, while providing more visual cues to drivers to help encourage even slower speeds.



Returning south Harding Avenue to a local two-way street allows it to be better integrated into the community, more in scale with the single family homes and small multifamily buildings along the street, and makes it an asset to nearby residents. The final stage of improvement turns the street into a gracious avenue, and more effectively connects the neighborhoods to the south with the rest of Surfside.

As trees are planted and bike lanes added, the improved Harding Avenue will become the preferred choice for pedestrians and cyclists on the east side of Town leading directly to the business district. And residents and children crossing the street to access the beach will no longer face a dangerous and daunting challenge.



**HARDING AVENUE SOUTH OF 93RD STREET
EXISTING CONDITIONS**
The real impact of A1A's one-way pair is truly felt south of Harding's downtown commercial district, where residences front directly on a high-speed, heavily traveled thoroughfare. Suburban arterial standards dictate a very unappealing streetscape, with little provision for the pedestrian, unsafe access conditions, and zero curb-appeal.



**HARDING AVENUE SOUTH OF 93RD STREET
PHASED IMPROVEMENTS, PHASE ONE**
Reverting Harding Avenue to two-lane one-way traffic and reducing regional traffic will begin to calm traffic speeding by existing residences and will allow the start of streetscape improvements.

The reduction of both lanes and lane widths reduces ambient travel speeds and allows for driveway "pockets" dramatically improving local access safety.



**HARDING AVENUE SOUTH OF 93RD STREET
FINAL STAGE**
In the final stage, even more streetscape improvements are made by planting street trees and updating lighting. Bike lanes are also added, which help connect the neighborhoods to the south with the downtown, and further slow traffic.

Incremental Traffic Calming

With regard to the neighborhood streets and the issue of both speeding and cut-through traffic, the proposed solution is a comprehensive traffic management strategy employing demonstrated traffic-calming design techniques. Depending on the demonstrated results of these implemented design solutions, they could be combined with a more elaborate system of street closures and gating, incrementally deployed as needed, until specific objectives are achieved.

Specifically, traffic calming recommendations will take several forms:

- *Strategically placed and appropriately sized traffic circles, intended to disrupt the high-speed flow of traffic though the neighborhood, without compromising pedestrian and/or the local connectivity of the internal, neighborhood street network*
- *Rational placement and retention of on-street parking to visually reduce the apparent lane width, maximize access to adjacent land uses, and to encourage speed reduction*
- *Introduction of street trees and lane stripping into the ROW, carefully coordinated with the above mentioned on-street parking, to visually reduce the apparent lane width, without effectively compromising the ability of two vehicles to pass one another.*
- *The addition of bike lanes, again, to help reduce the visual width of the road, and to provide a designated area within the street for bicycle traffic.*

In order to comply with County standards for street closures, and in recognition of the potential impact street closures may have on the community as a whole, it is important to reiterate that any proposed closures would be implemented incrementally, with results measured and assessed prior to moving forward with any additional phased closures.

This will allow the Town to make a credible, detailed and progressive case for additional closures, as needed, if the interim steps do not produce the desired net results.

Regardless, certain streets that are currently closed to traffic shall be recommended to remain closed, and to the extent that other roads may be proposed to be closed in the future, those closures shall be proposed to be implemented in such a way (through the use of controlled gates), as to permit ongoing access by local residents, and also in a way consistent with the principles of walkability, street connectivity and convenient local access to community goods and services. Provision will also be made for guests as well as for the residents of the Village of Indian Creek.



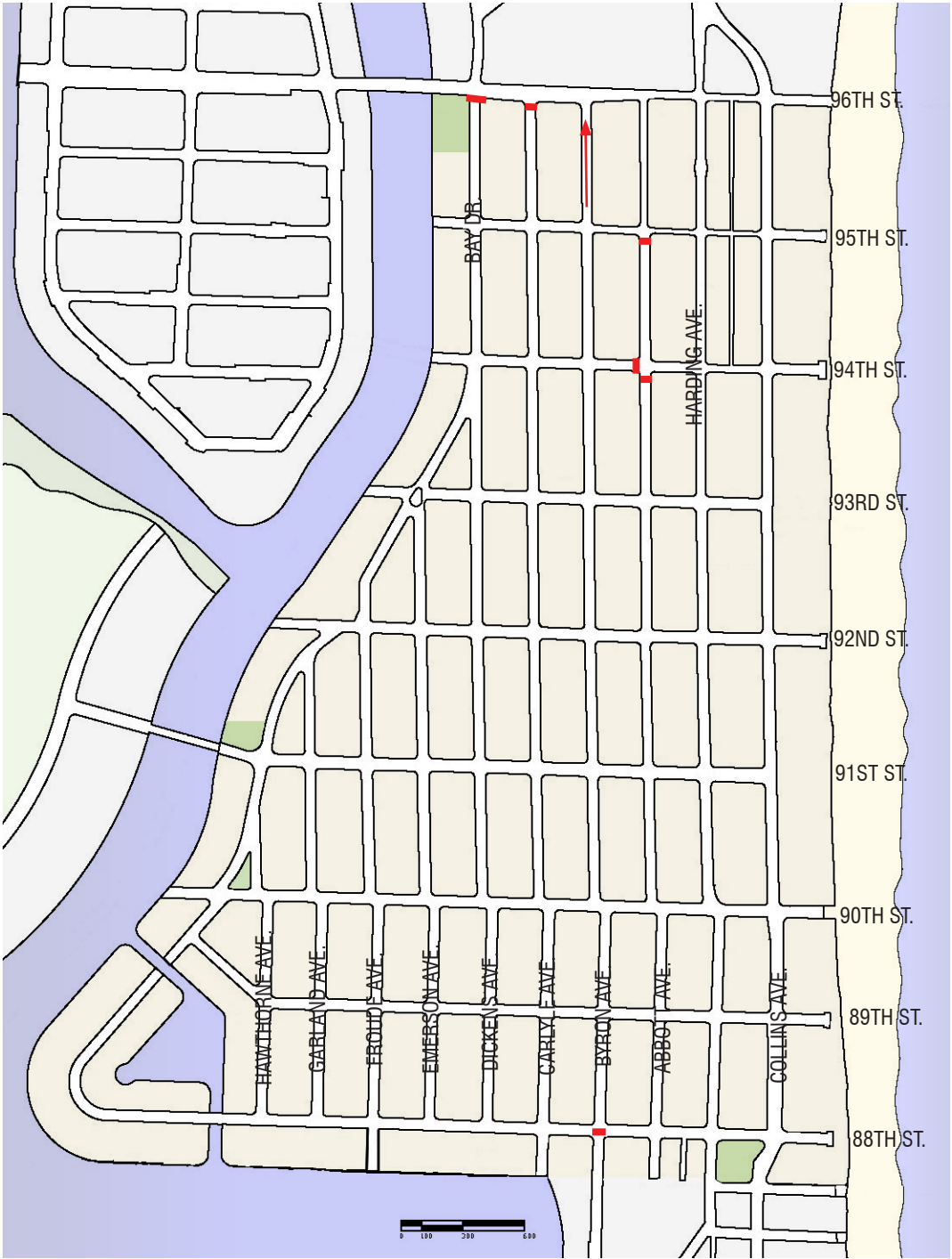
Traffic calming circles present an opportunity to introduce civic art such as statues, fountains, or landscaping features.



GATEWAYS
Iconic neighborhood entrance features provide more explicit neighborhood boundary definition, as well as the potential to limit access, if needed.



Closed and exit only residential streets discourage cut-through regional traffic, but also make access difficult for residents.

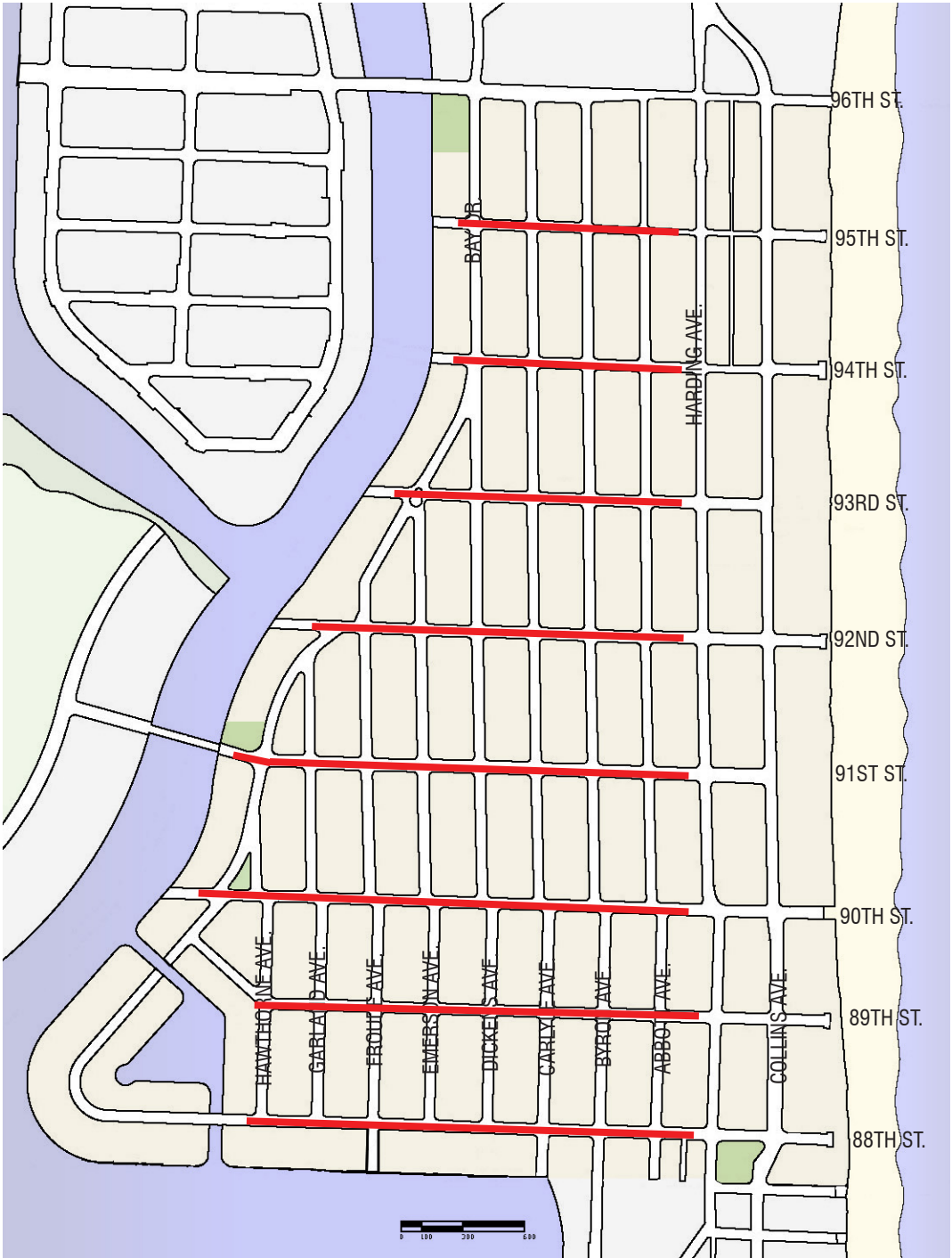


Streets Currently Closed or Exit Only
Many streets are currently closed in key locations to discourage “cut-through” traffic. These streets are recommended to remain closed.

— CLOSED OR EXIT ONLY STREET



RESIDENTIAL NORTH/SOUTH STREET IMPROVEMENTS
In combination with the traffic calming techniques shown above, the proposed residential street improvements, utilizing a continuous series of stop signs on all North/South thoroughfares, will minimize traffic on these “cut through” streets and improve the overall quality of the neighborhood.



Step 1
The first step recommended to calm traffic in the residential neighborhoods is to encourage East/West streets to be used as the primary means to access the neighborhood rather than North/South streets, meaning residents and visitors go to Harding Avenue or Collins Avenue to leave the neighborhood. Once Harding Avenue becomes two-way, it will become the preferred choice for North/South traffic as it will be more efficient than in its present configuration.

It is also recommended to install stop signs at all intersections in the North/South directions.

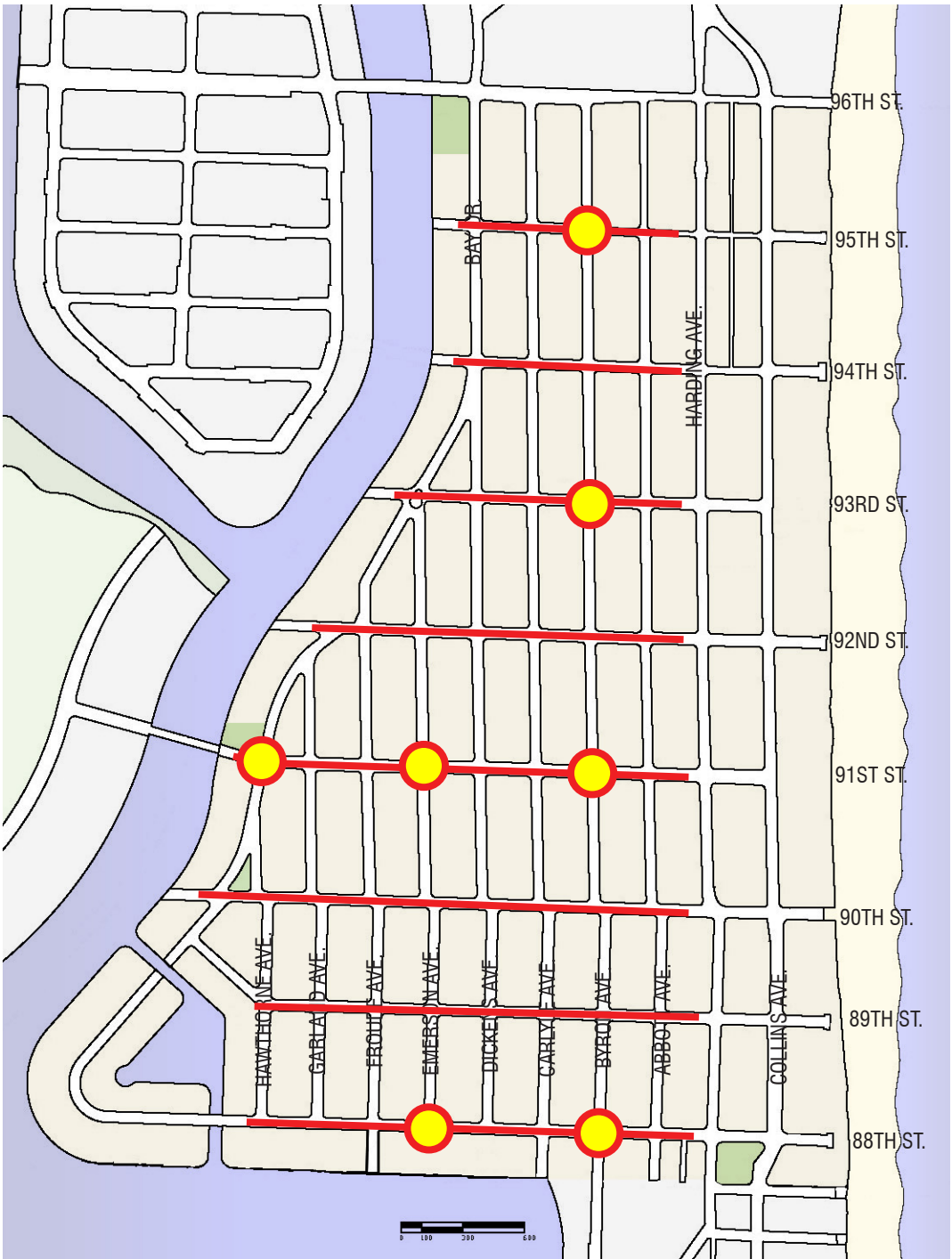
Calming North/South streets through recommended improvements and obliging drivers to stop at all intersections will discourage “cut-through” traffic, both regional and local.

Speeding vehicles present a more significant danger to pedestrians on these thoroughfares as almost all of the houses front onto the North/South streets. Therefore, there is an increased danger on these streets with children playing in front of homes, and with the designated walking and bike paths encroaching into the roadway.

— STOP SIGNS FOR ALL NORTH/SOUTH STREETS



TRAFFIC CALMING CIRCLES
Circles calm traffic through neighborhood streets by obliging drivers to slow as they negotiate intersections containing them. They also provide an opportunity to mark important locations and beautify neighborhood streets. Existing circles are too large and should be narrowed.



Step 1 Continued
Install traffic calming circles at major neighborhood intersections on Byron Avenue, a major route for “cut-through” traffic. Install traffic calming circles on 91st Street, as a main entrance to the neighborhood, to add green space to the neighborhood, break up the long street, and to slow traffic without adding additional stop signs.

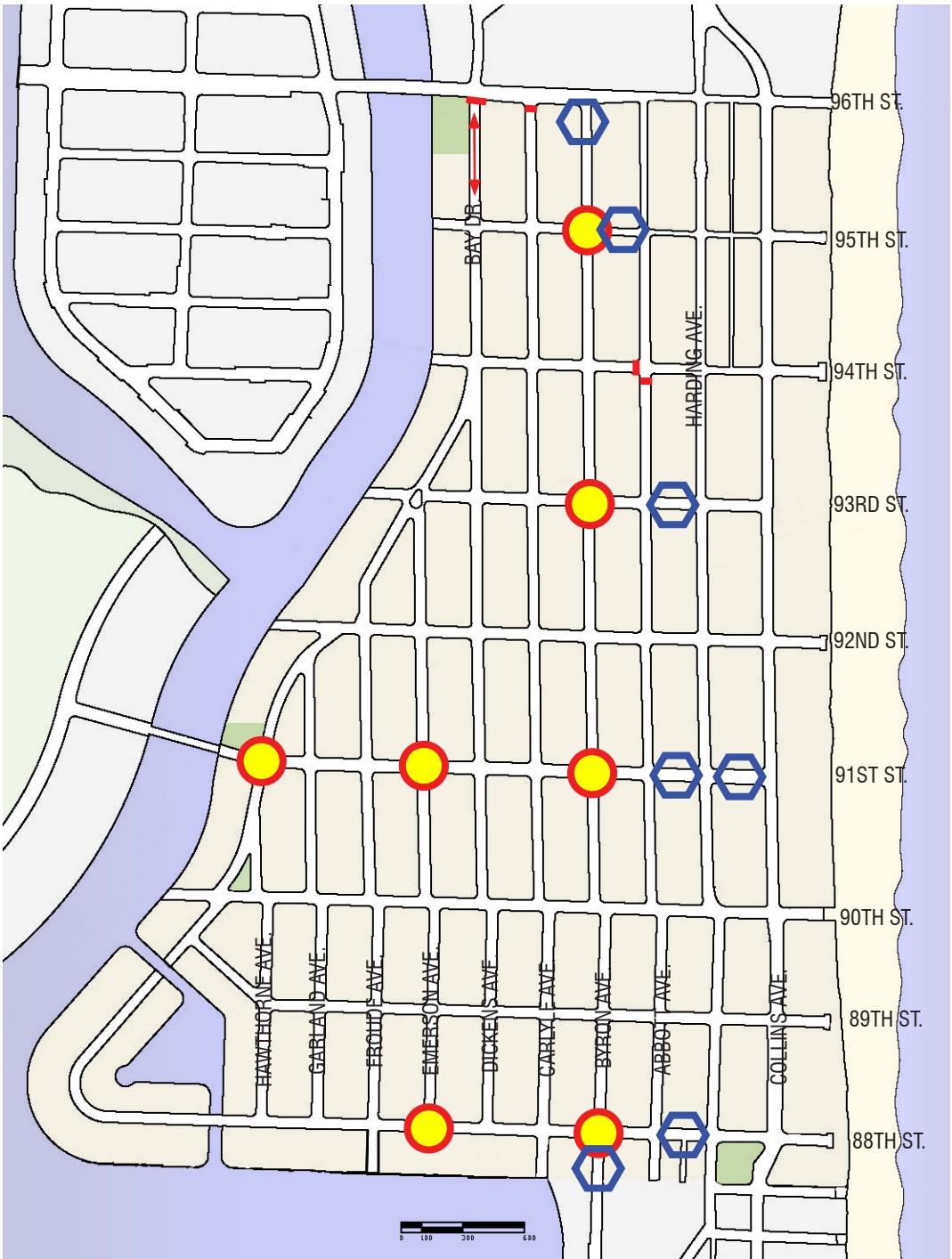
Circles should be engineered to the appropriate size to allow pedestrian and bicycle traffic to easily share the space with cars and emergency vehicles. Signage indicates to an approaching vehicle that they are entering a traffic circle should be clearly understandable.

Move the traffic signal at 90th Street and Collins Avenue to 91st Street to allow better access to the main entrance of residential neighborhoods and to align it with the corresponding signal on Harding Avenue.

- STOP SIGNS FOR ALL NORTH/SOUTH STREETS
- TRAFFIC CALMING CIRCLE



DESIGNERS SUGGESTION FOR A POSSIBLE SURFSIDE NEIGHBORHOOD ENTRANCE FEATURE. These can also be designed to accommodate a future automated and/or manned gate, if conditions warrant.






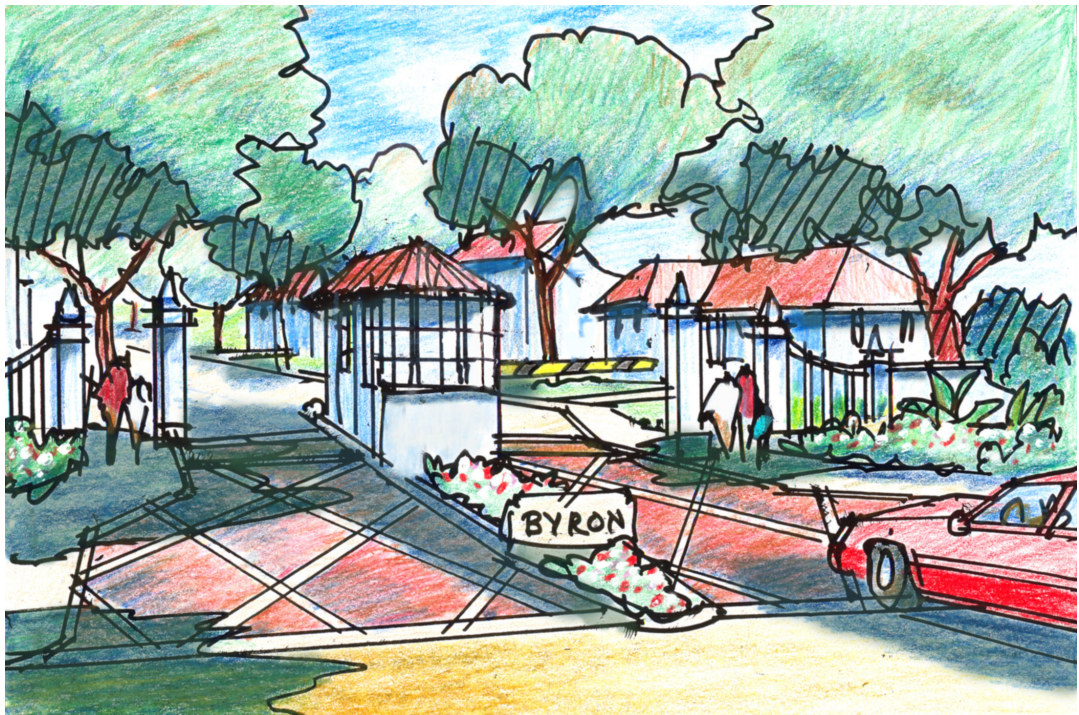
Step 2
Install entrance features (blue hexagon) at major neighborhood entrances.

Entrance features will help indicate to drivers that they are entering a residential neighborhood, a place distinct from the more regionally-oriented thoroughfare network they are leaving, and that they should drive more carefully within its boundaries.

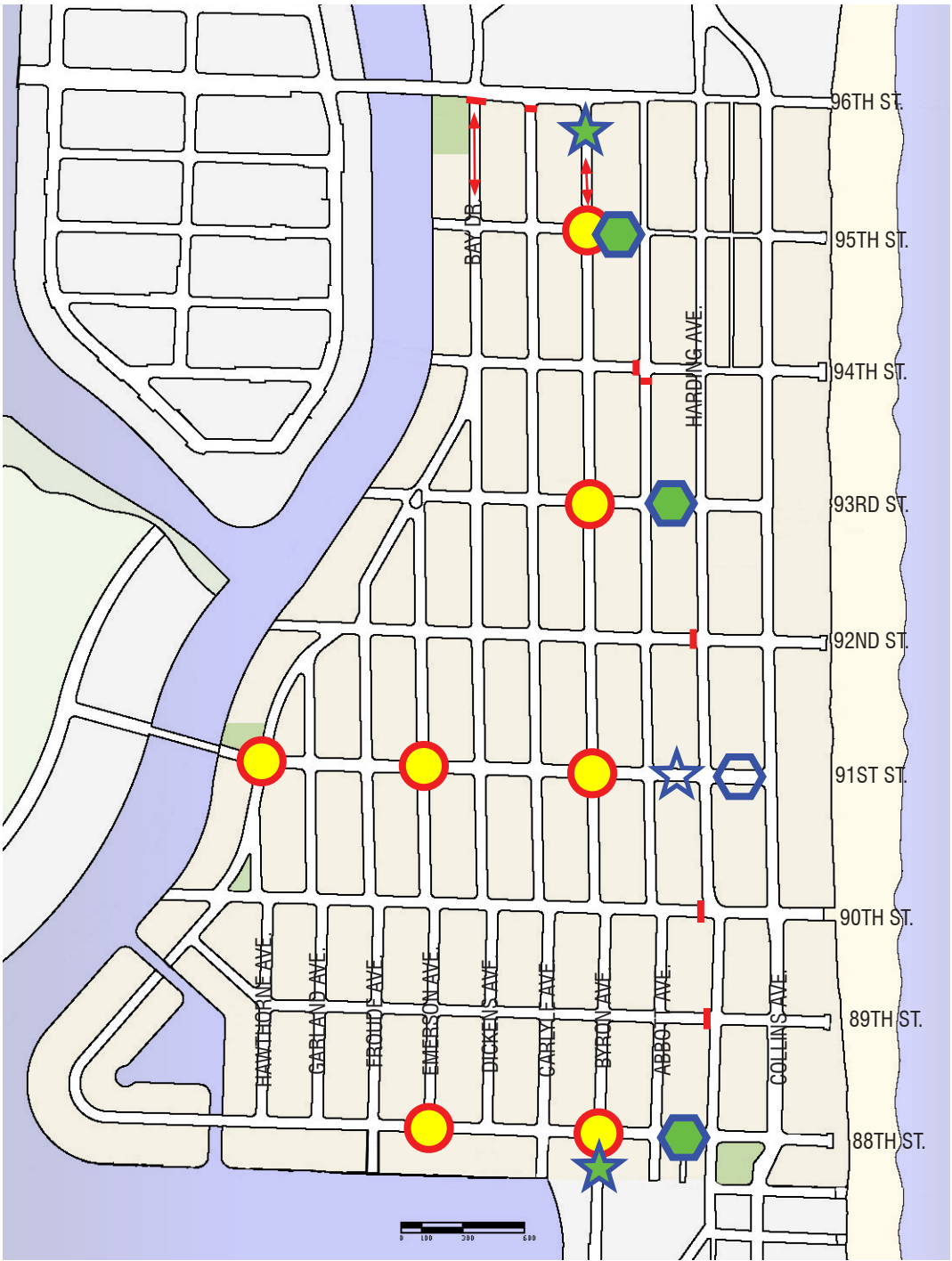
Entrance features could include distinct paving patterns with landscaped medians and constricted lanes, encouraging drivers to slow down, as well as distinctive architectural elements for pedestrian and auto gateways. The design of these entrances presents an opportunity for the neighborhood to express its unique character and could be designed to allow for an easy retrofit of a gated transponder entrance at a later date, as conditions dictate. The entrance on 91st Street from Collins Avenue would be designed to clearly suggest that it is the principal neighborhood entrance.

Also, Step 2 would include closing off Bay Dr. at 96th street (along with the remodeling of the 96th street park) to further reduce North/South traffic in front of the homes, and to eliminate traffic passing by the park, currently using this route to exit the neighborhood. This would include adding a cul-de-sac and angled parking along the park frontage, allowing traffic to drive north around the cul-de-sac, and park facing south (see diagram in Section 2.4.2 Parks & Recreation).

-  **CLOSED OR EXIT ONLY STREET**
-  **TRAFFIC CALMING CIRCLE**
-  **ENTRANCE FEATURE**



GUEST ENTRANCES
While residents will be able to enter at both manned and automated entrances, guest will be required to enter only at manned, or guest entrances. Automated entrances, however, should be designed to allow easy conversion to manned entrances, if additional guest entrances are deemed necessary.

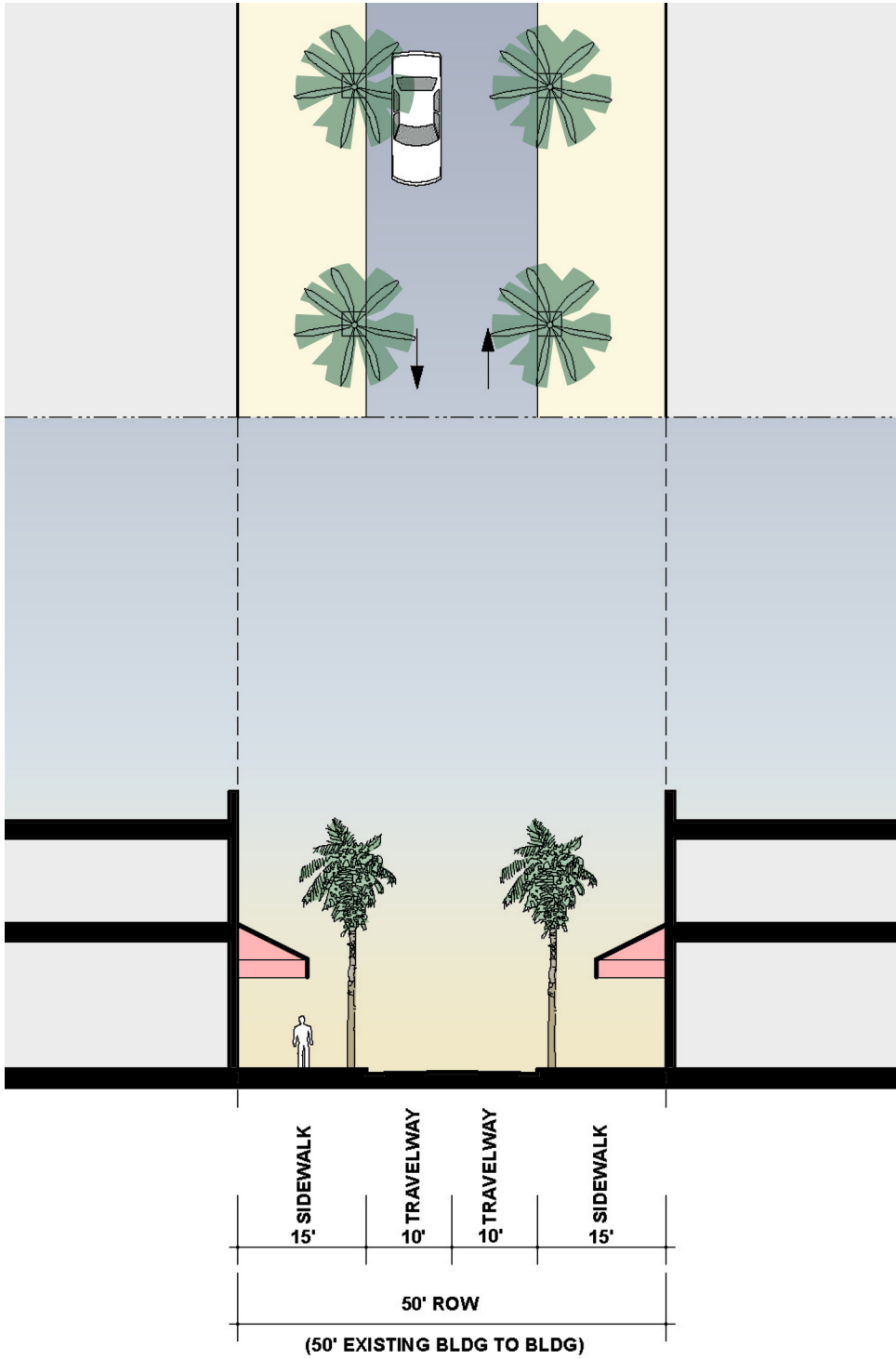


Step 3
If steps one and two haven't adequately addressed the neighborhood's traffic problem, the neighborhood can then petition the County to allow Surfside to become fully gated, thereby eliminating all unwanted cut-through traffic and visitors.

Close secondary neighborhood entrances to auto traffic (red lines) and gate all others. Residents and guests could enter through manned gates (blue stars), allowing visitor access, and/or residents can enter through entrances equipped with transponders that would automatically open gate arms to allow them through (filled hexagons). In this proposed scheme, most residents will be able to get to an exit without having to cross an East/West Street.

The town can begin with just one manned guest entrance on 91st street (open blue star), and if residents determine that they need more access points for visitors, the town can create additional guest entrances on the North and South ends of Byron Avenue (filled stars).

- CLOSED OR EXIT ONLY STREET**
- TRAFFIC CALMING CIRCLE**
- ENTRANCE FEATURE**
- TRANSPONDER RESIDENT ENTRANCE ONLY**
- TRANSPONDER RESIDENT ENTRANCE & MAIN GUEST ENTRANCE**
- TRANSPONDER RESIDENT ENTRANCE & POTENTIAL GUEST ENTRANCE**



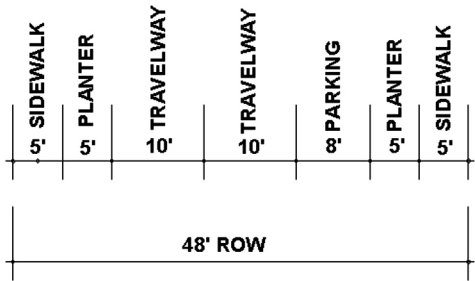
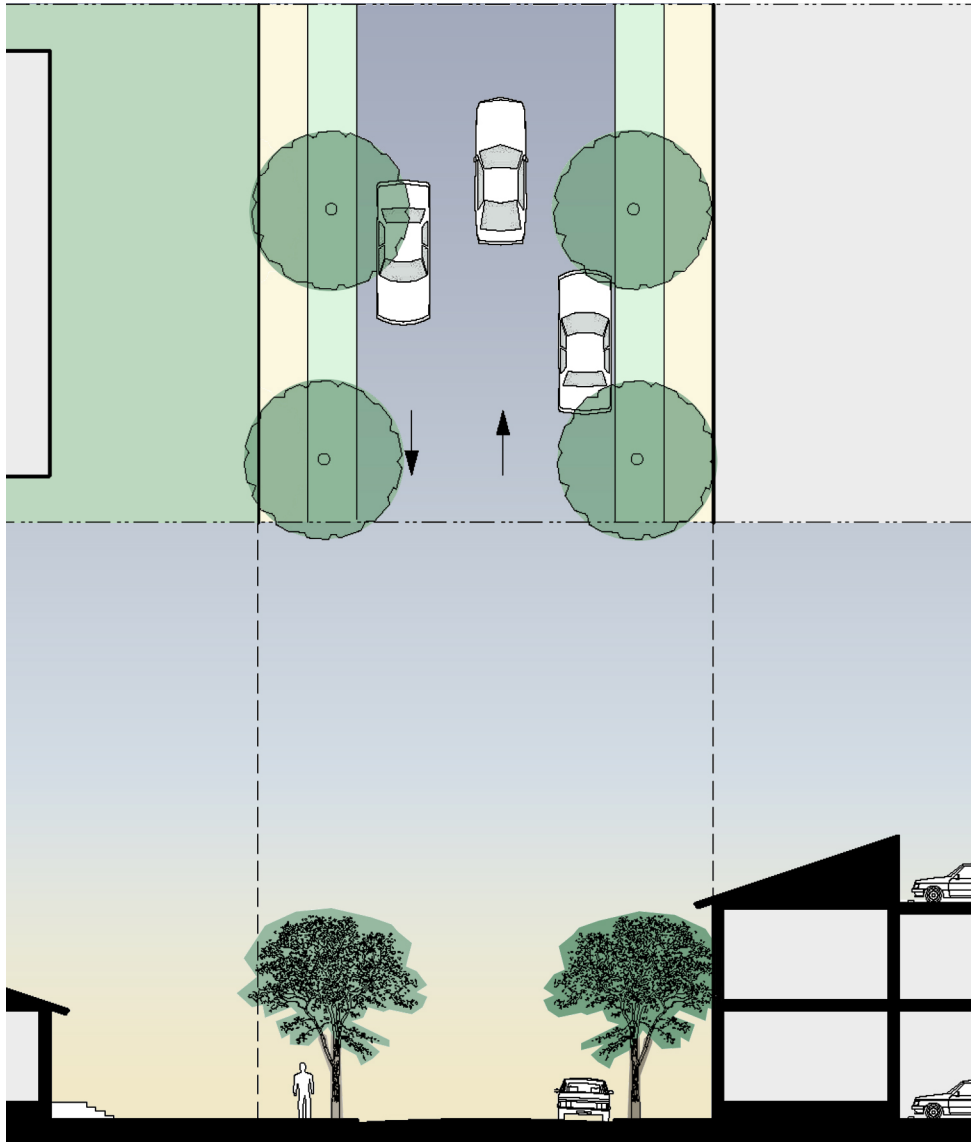
95th, 94th, 93rd Streets In The Business District

- Travel: 2 lane, 2 way
- Parking: None
- Trees: 2 Sides in Planter Boxes
- Sidewalk: 2 Sides
- Utilities: Underground

The proposed design of 95th street between Abbott and the beach (and additionally 94th street between Abbott and the beach, and 93rd street between Harding and Collins), allows for wider sidewalks on a tree lined street. This will create an improved walking connection between the business district and the beach, and allow for a large amount of outdoor seating on a less busy street with a constant breeze.

*** NOTE:**
All of the following proposed street sections were developed in close coordination with community input and were conceptually reviewed by professional consultants on the design team. However, for the purposes of this document, they should be considered illustrative until verified technically feasible, through a more detailed and site-specific engineering process.





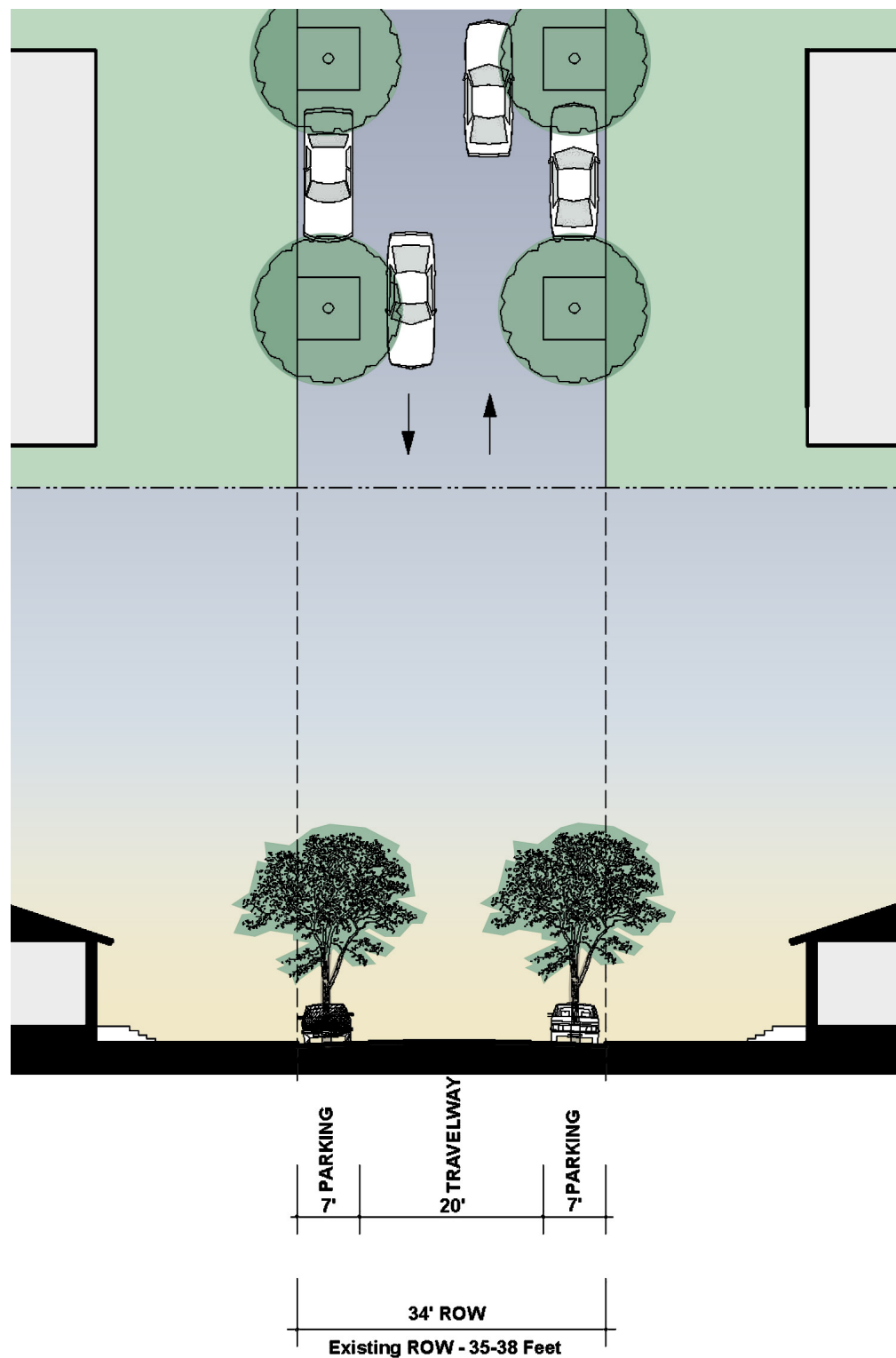
ABBOTT AVE
(Business District)



Abbott Ave. Between 94th & 96th Sts.

- Travel: 2 lane, 2 way
- Parking: 2 Sides
- Trees: 2 Sides
- Sidewalk: 2 Sides
- Utilities: Underground

The proposed design of Abbott in the business district allows for a sidewalk on the west side of the street to compliment the live/work units on that street.

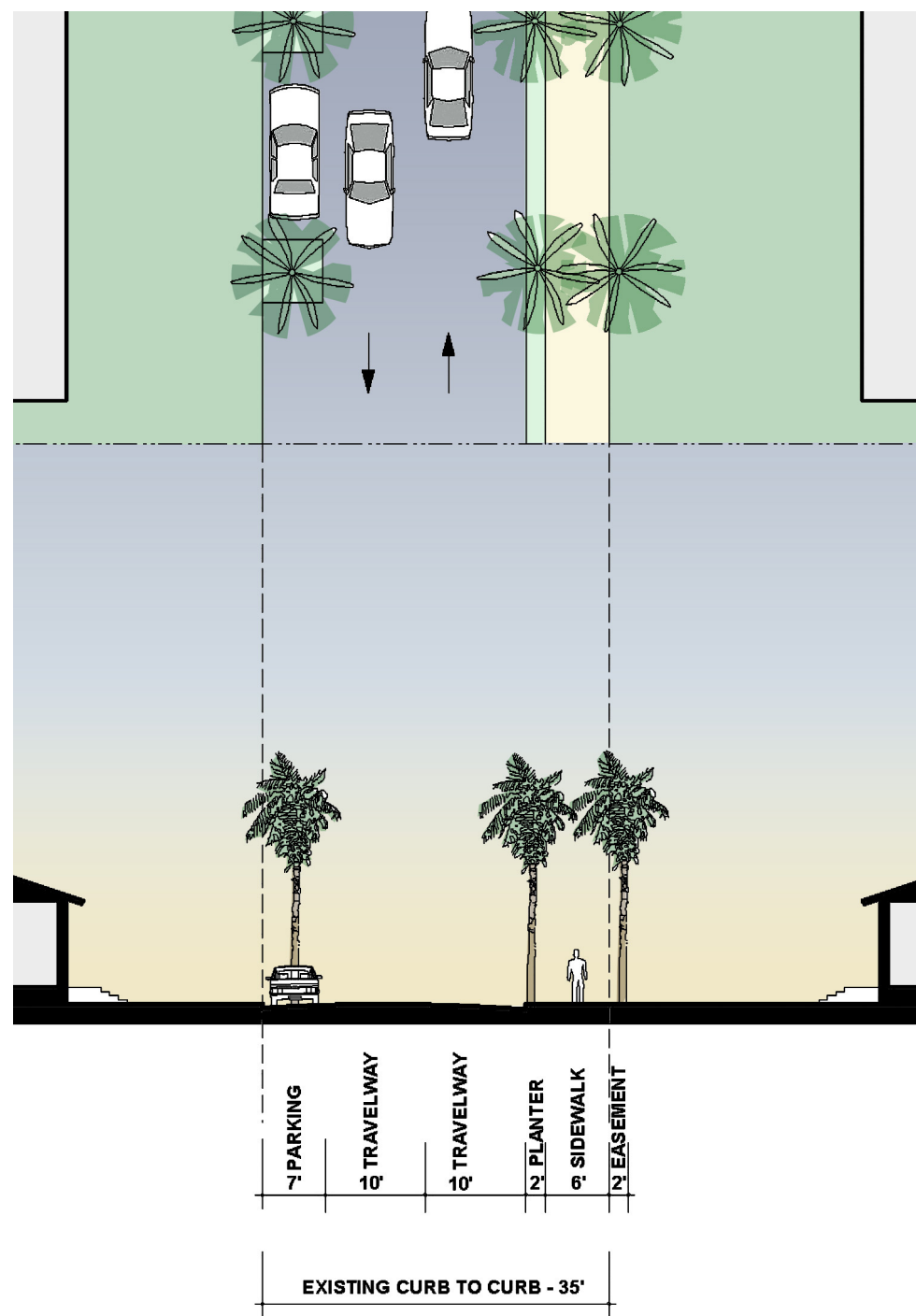


91st St. (Surfside Boulevard)

- Travel: 2 lane, 2 way
- Parking: 2 Sides
- Trees: 2 Sides in Planter Boxes
- Sidewalk: none
- Utilities: Underground

91st is the only East/West street proposed without sidewalks. The reasoning is that there are houses that face 91st (the only street other than 88th street) with small lots that may need street parking. In addition, 91st Street ends at Collins Avenue, so anyone walking eastbound would have to go north or south to the next block regardless, and anyone walking westbound would have to come from a block to the north or the south.

Either way, the block to the north or to the south can be used as an alternate walking path, and there is an added benefit of less traffic on those blocks. Also, the trees in the parking lanes allows for larger trees to line that street.

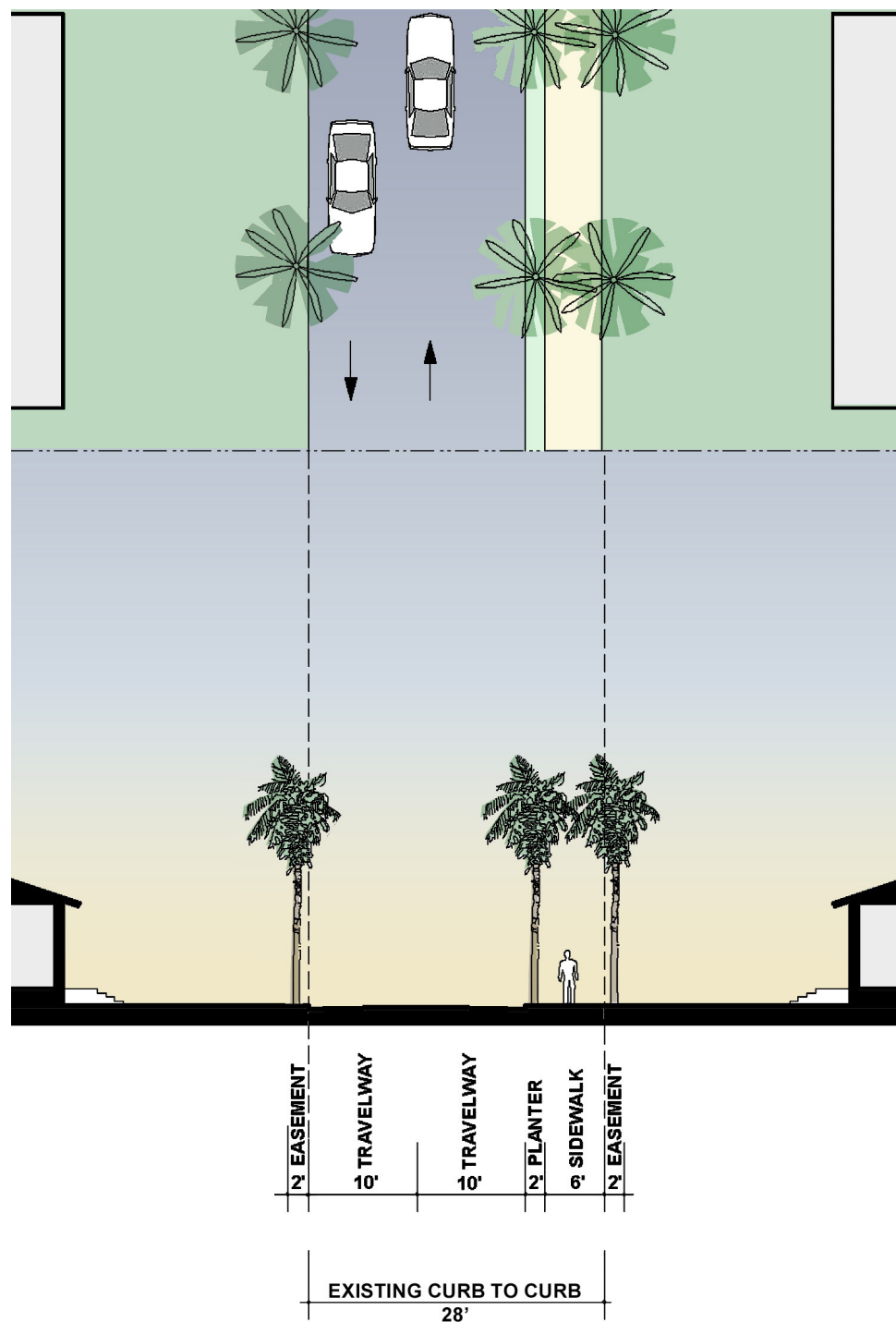


Bay Dr. (Walking Boulevard)

- Travel: 2 lane, 2 way
- Parking: 1 Side
- Trees: 2 Sides
- Sidewalk: 1 Side
- Utilities: Underground

The design of Bay Drive and the Walking Boulevard maintains parking on the east side, but removes the parking on the west side to provide space for the sidewalk to be accommodated within the existing curbs, as the homes on the west side generally have much larger lots and less of a requirement for on-street parking.

This configuration will allow for a tree lined walking boulevard (along with a tree lined street) to encircle the neighborhood and provide attractive pedestrian connections between parks, while not requiring the town to use any of the allowable easement on the properties, except for appropriate landscaping. The planter strip between the travelway and the sidewalk will place the curb-cuts to the outside of the sidewalk and provide for an even walking surface.

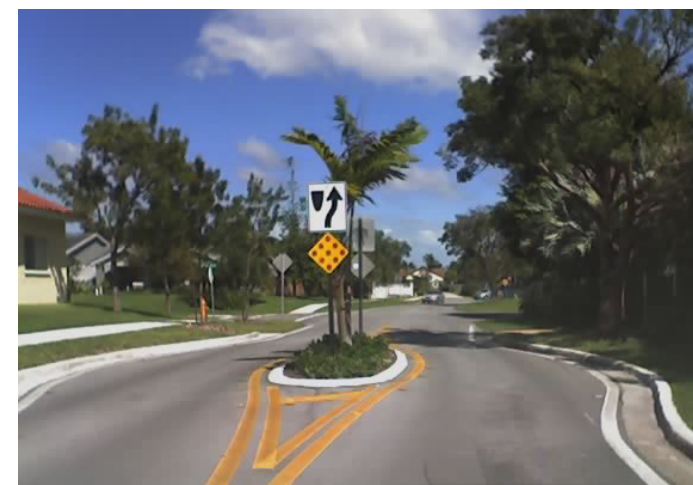
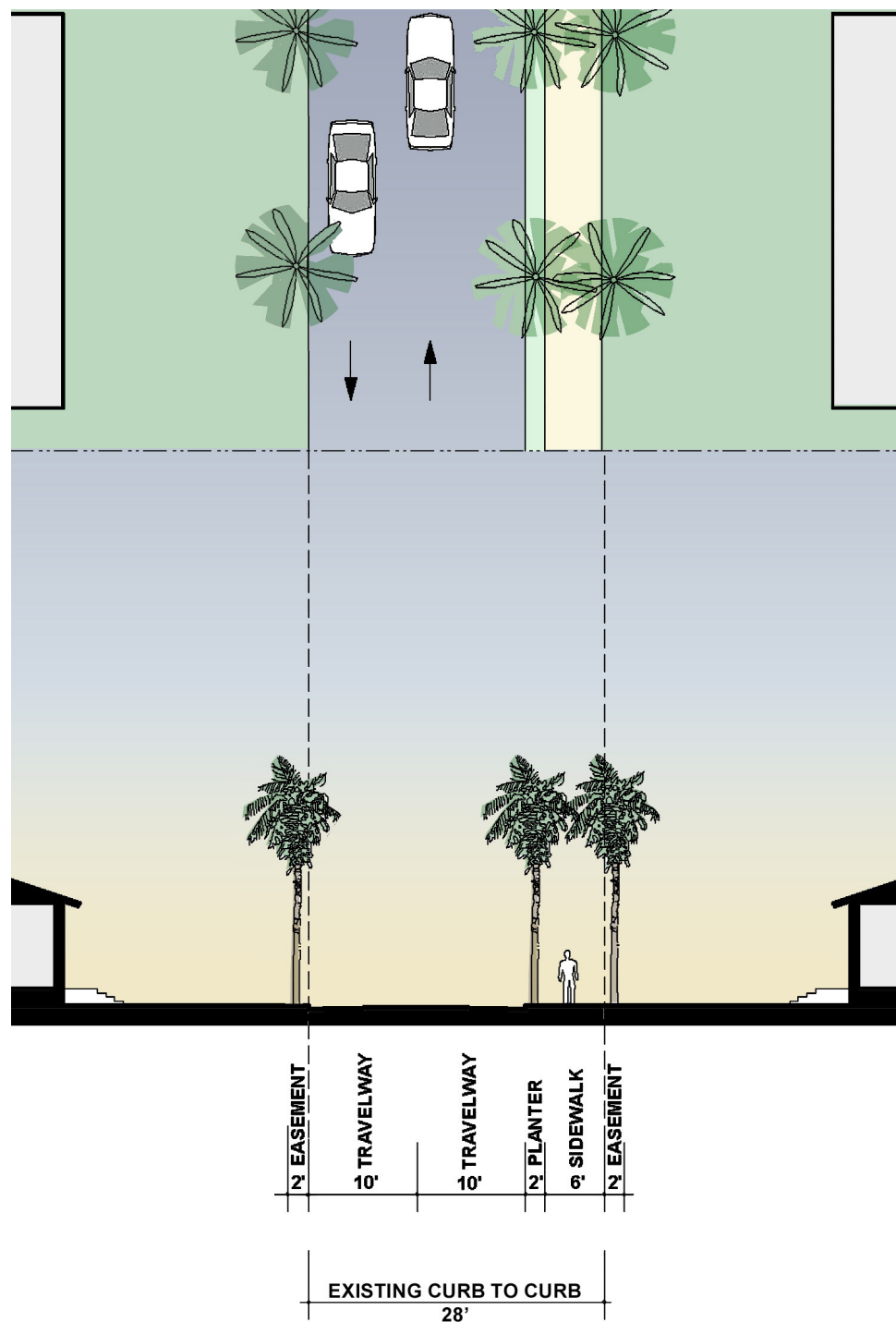


88th St. (Walking Boulevard)

- Travel: 2 lane, 2 way
- Parking: None
- Trees: 1 Side
- Sidewalk: 1 Side
- Utilities: Underground

The proposed design of 88th Street and the Walking Boulevard removes on-street parking to provide space for the sidewalk within the current curbs, as the homes on the south side generally have much larger lots and less of a requirement for on street parking.

This configuration will allow for a tree lined walking boulevard (along with a tree lined street) to encircle the neighborhood and provide attractive pedestrian connections between parks, while not requiring the town to use the allowable easement on the properties, except for appropriate landscaping. The planter strip between the travelway and the sidewalk will place the curb-cuts to the outside of the sidewalk and provide for an even walking surface.

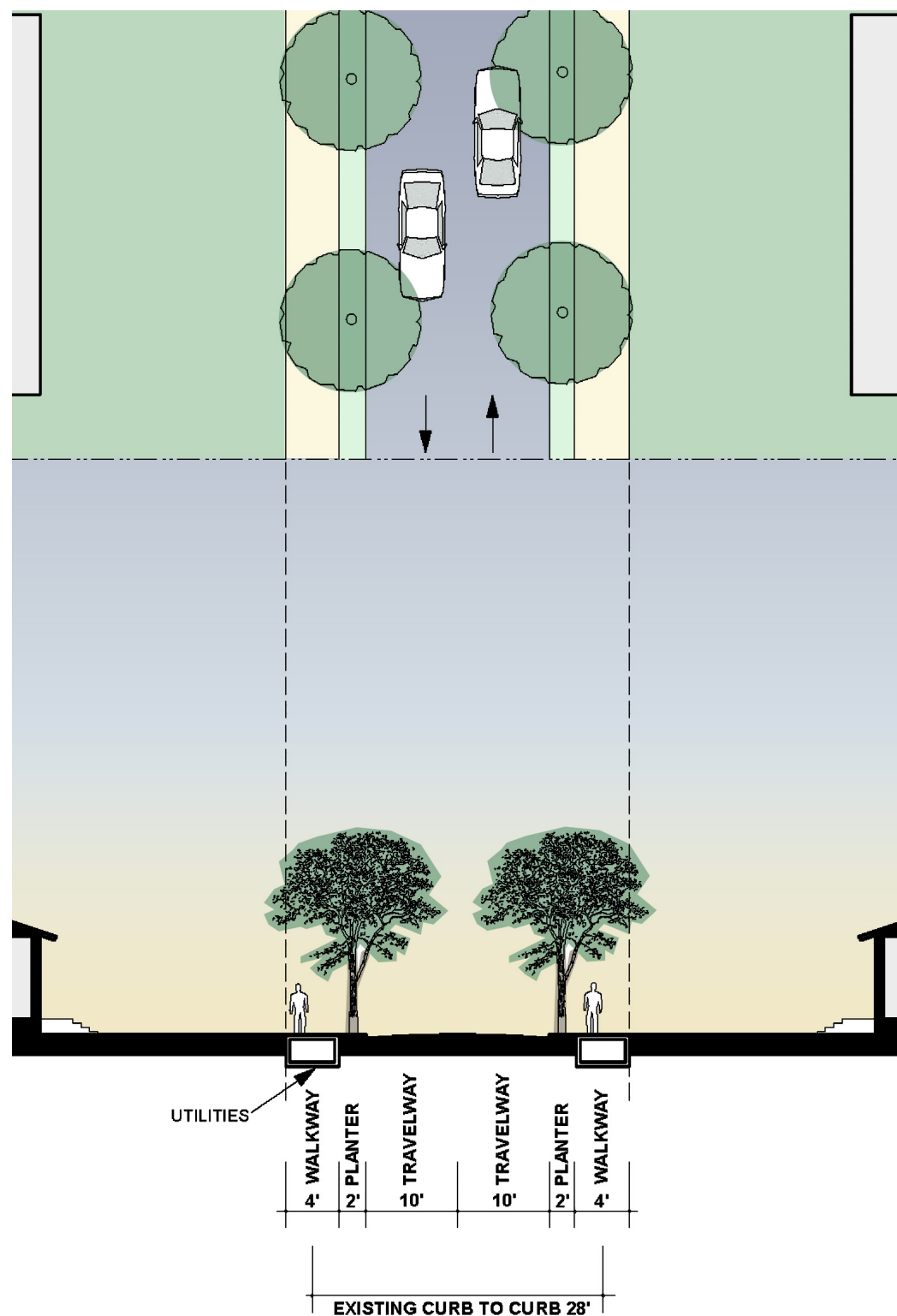


If additional traffic calming on east-west streets appears warranted, small lane dividers, such as this one shown above, set mid-block, can act like mini-roundabouts, to provide a slight trajectory deflection to help slow travel speed.

East/West Residential Streets

- Travel: 2 lane, 2 way
- Parking: None
- Trees: 2 Sides
- Sidewalk: 2 Sides
- Utilities: Underground

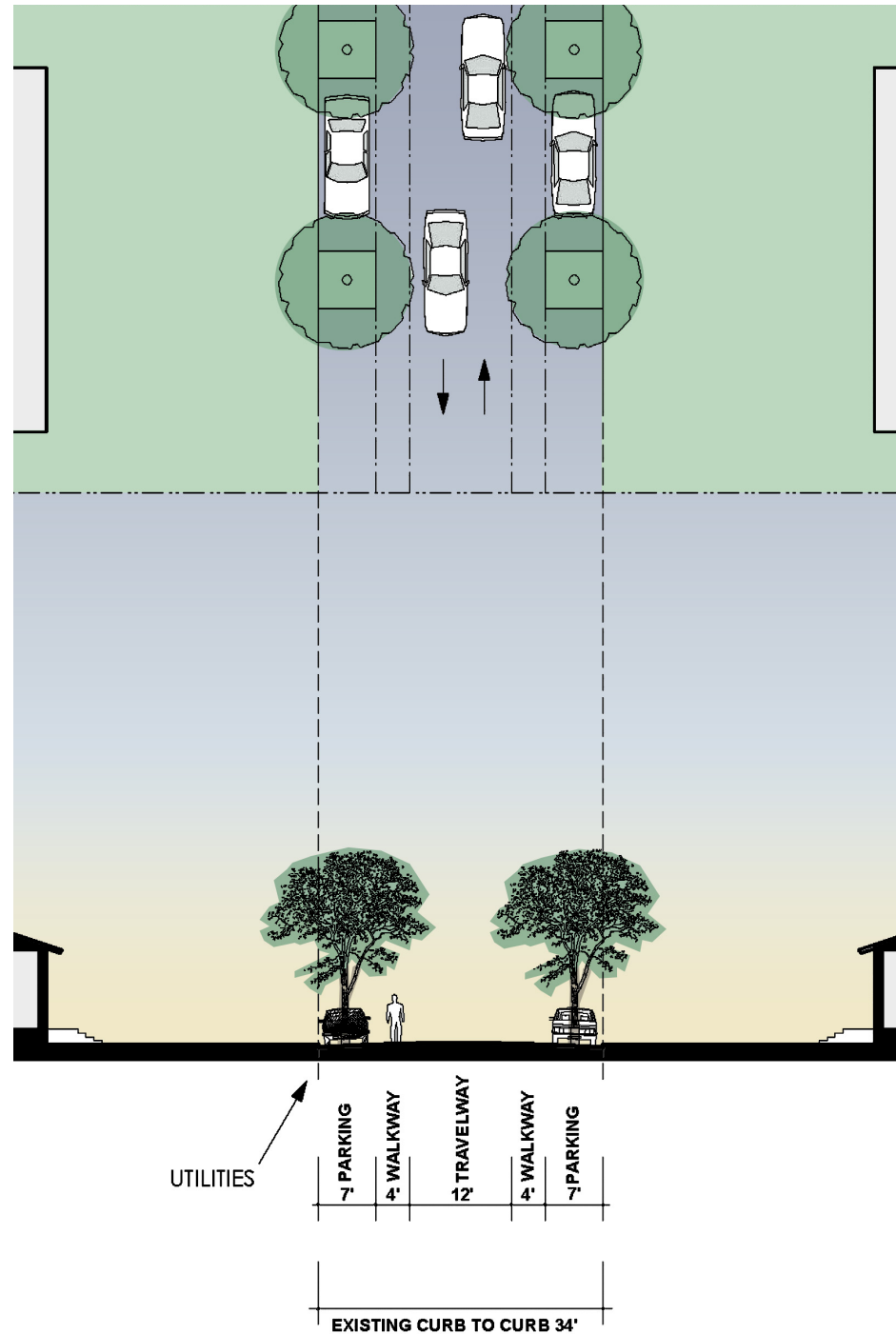
The proposed design of the East/West streets allows for a sidewalk to be accommodated on one side of the street within the existing curbs. Since traffic entering and exiting the town will be directed onto the East/West streets, sidewalks are important to separate the pedestrians from the travelway. The planter strip between the travelway and the sidewalk will place the curb-cuts to the outside of the sidewalk and provide for an even walking surface.



East/West Residential Streets Alternative

- Travel: 2 lane, 2 way
- Parking: 1 Side
- Trees: 2 Sides
- Sidewalk: 1 Side
- Utilities: Underground

This alternative design of the East/West streets has the benefit of a planter strip between the sidewalk and the travelway, allowing for the driveway curb-cuts to be in the planter, allowing for a more even walking surface, and for greater separation between the pedestrians and the travelway. This also maintains the connection with the sidewalk structure on Harding. While this is a better design, it would require a 2' encroachment onto the Town's easement on each side of the roadway.



If additional traffic calming on North-South streets appears warranted, further traffic calming devices, such as this speed bump shown above, set mid-block, can help encourage slower travel speeds.

North/South Residential Streets

- Travel: 2 way, Yield
- Parking: 2 Sides
- Trees: 2 Sides in Planter Boxes
- Sidewalk: Painted, 1 Side
- Utilities: Underground

The North/South streets, intended to be our slowest streets as they pass in front of almost every residential lot frontage, are proposed to be designed as a yield street. As drivers are encouraged to enter and exit the town on the East/West streets, the North/South streets will become much less traveled and safer.

Basically, the design maintains parking on both sides while adding trees for traffic calming and shade. We also recommend adding stripped walking/bike lanes, within the travel lane (see illustrative example, next page). By doing this, drivers are more aware that they are sharing the lane with pedestrians and bicyclists and are encouraged to more thoughtfully share the lane. They can move over into the opposite stripped lane, as necessary, to pass an oncoming car, or to pass a pedestrian (if you'll notice, many cars are already doing this today).



The North/South residential streets become a low-speed pedestrian/bike-friendly “yield” street, meaning that the single narrowed travel lane is used in both directions. When two cars approach each other, one driver simply pulls over into the bike lane and allows the other to pass.

Yield streets have been built, and still exist, in traditional cities and towns throughout the country in low traffic neighborhoods and have been implemented in various developments in recent years.



**RESIDENTIAL NORTH/SOUTH STREETS
EXISTING CONDITIONS**
The North/South residential streets are far wider than is desirable for local low traffic neighborhood streets, which encourages speeding. This also makes these streets an attractive alternative for “cut-through” commuter traffic using the neighborhood streets as a time-saving bypass around traffic-choked A1A. As a result, these residential street make for dangerous and unappealing walkways for pedestrians.



**RESIDENTIAL NORTH/SOUTH STREET
PHASED IMPROVEMENTS, PHASE ONE:**
The solution is to calm the affected streets, using a combination of proven techniques. By simply narrowing overly-wide travel lanes, drivers are encouraged to slow down and pay more attention to their surroundings.

Proposed improvements begin with narrowing the perceived width of the travel lanes by installing textured pavement to distinguish parking lanes from travel lanes, which could also be accomplished by simply striping the parking lane. This signals to drivers that the street is not a racetrack and should be navigated with care.



**RESIDENTIAL NORTH/SOUTH STREET
FINAL STAGE:**
The final stage involves planting trees between the existing curbs by essentially cutting tree wells out of the pavement in the parking lanes. Street trees enclose the street and further narrow the street visually. A striped walking/ biking lane is introduced to provide a designated path for pedestrians and cyclists, narrowing perceived travelway to one 12’ lane, though cars will still be able to safely pass one another by “borrowing” additional lane width from the stripped bike/pedestrian lanes, if needed. This is the concept behind a “yield street” If necessary, pedestrians can also simply use the parked cars and parking lane as a further pedestrian refuge.