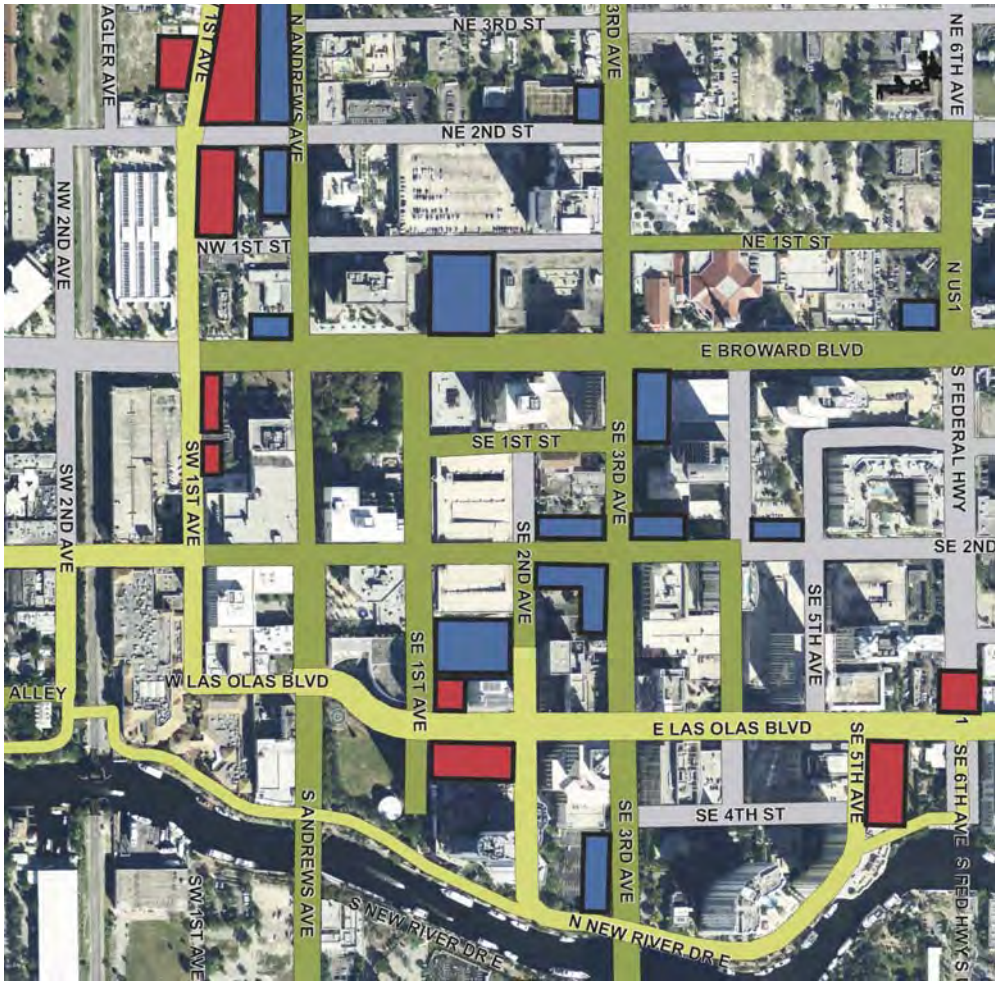
FORT LAUDERDALE
DOWNTOWN WALKABILITY ANALYSIS



SUBMITTED JANUARY 15, 2013

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EXECUTIVE SUMMARY

By applying a design strategy centered on walkability, this study asserts and attempts to demonstrate how a limited number of relatively small planning interventions can exert a profound influence on the livability and vitality of downtown Fort Lauderdale.

This study applies an "urban triage" methodology that determines where walkability is achievable in the short run and integrates these findings with an analysis of important anchors and paths in order to designate a Primary and Secondary Network of Walkability in the downtown. These Networks indicate where, in both the short- and mid-term, the fewest investments in infrastructure are likely to have the greatest impact on people's choice to walk.

GENERAL RECOMMENDATIONS

General recommendations to the downtown include, but are not limited to:

- Adjusting meter rates to result in the proper rate of curb vacancy;
- Making use of shade trees rather than palm trees almost everywhere;
- Making streetscape improvements in the order suggested by the Networks of Walkability (described ahead);
- Applying enhanced urban coding within the Networks of Walkability;
- Prohibiting the abandonment of further vehicular streets;
- Designing all future streets with 10-foot-max travel lanes, 8-foot-max parking lanes, ample sidewalks, and continuous tree cover;
- Adding integrated bike lanes where they fit—and *sharrows* where they don't—along Las Olas, Himmarshee, N 2nd Street, N 4th Street, and Brickell Avenue, and separated bike lanes against E 3rd Avenue and, eventually, Broward Boulevard;
- Eliminating unnecessary loops from, and simplifying transfers between, the planned WAVE streetcar and Bus Rapid Transit systems; and
- Not allowing transit stops not undermine walkability by unduly widening pavements or removing parallel parking.

SITE-SPECIFIC RECOMMENDATIONS

The report contains hundreds of site-specific recommendations, organized principally by street. While further explanation is needed (and provided ahead), they can be summarized as follows:

Broward Boulevard should receive an attractive low barrier along the curb in most locations, and shade trees where possible. Its crosswalk at Federal Highway should be replaced, and several sidewalks expanded into adjacent properties. Mid-term, it should be restriped with 10-foot travel lanes to create curbside buffers, receive additional crossings at SE 1st Street and Financial Plaza, eliminate several underutilized bus and turn lanes, and receive LPIs. Ultimately, it should be redesigned through a public process to be a four-lane *complete street* including parallel parking, biking facilities, and a roundabout where it meets Federal Highway.

Las Olas Boulevard should receive consistent parallel parking along all of its curbs, and either bike lanes or *sharrows* as space allows. It's thick baluster above the Kinney Tunnel should be replaced temporarily by something more transparent, and eventually by a retail pad overhanging the highway. It should receive two-way traffic where it bends into Brickell Avenue, and shade trees wherever they are missing.

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South 2nd Street (Himmarshee) should receive a similar treatment as above, from Brickell to the Center for the Performing Arts. It's passage under the parking structure at SE 1st should receive better wayfinding.

The Riverwalk, as it awaits its eventual north-south loop, should create a new wayfinding loop that includes Las Olas and Himmarshee to its north. It should further be made to connect to the Plaza above the Kinney Tunnel as soon as possible.

N 2nd, 3rd, and 4th Streets all contain too much pavement for their current use, and should be restriped to include an appropriate application of parallel parking and/or bike lanes. The Flagler Greenway should make use of 2nd Street to shift cyclists west to W 7th Avenue and east to Brickell. *N 1st Street* should also include a parking lane where excess pavement exists.

Federal Highway should receive LPI signals and shade trees where they are lacking. A signalized crossing should be provided at NE 2nd Street, and perhaps also at 1st and 3rd. Ultimately, in conjunction with a roundabout at Broward Boulevard, the highway should be limited to a 4-lane section (plus turning lanes) from the Kinney tunnel to NE 4th Street. Like Broward Boulevard, it would also benefit from a low, attractive barrier along the sidewalk edge.

Brickell Avenue should be restriped to include additional parallel parking and bike facilities. As the main north-south axis in the Primary Network of Walkability, it should additionally receive the highest priority when it comes to streetscape improvements.

E 3rd Avenue should receive low barriers along its sidewalks as it crosses the New River. As soon as possible, the Avenue should be designated a *complete street* and trade two of its travel lanes for curbside parking on one flank and a two-way separated bike path on the other.

Andrews Avenue should maintain its current striping through downtown for now, but reserve its two outer lanes for parallel parking at all times except rush hour. By right-sizing its 12-foot lanes across the new river, additional space can be carved out for a protected sidewalk across the bridge, so that pedestrians can avoid the current spiral ramp. Eventually, the entire avenue should be rebuilt along the lines of the City's 2007 Downtown Master Plan.

W 7th Avenue should narrow its 12-foot lanes to 10-feet in order to carve out room for the southern extension of the Flagler greenway, which can run in both directions down its eastern flank beginning at NW 2nd Street.

SE 1st Avenue and SW 5th Avenue both contain excess pavement on the block south of Broward Boulevard. The former should receive angled parking in place of its parallel stalls, while the latter should be restriped to include parallel parking and bike lanes on each flank. Additionally, SW 5th Avenue should eventually run past the front of the Center for the Performing Arts to connect to W Las Olas, currently a cul-de-sac.

Flagler Greenway should jog west on N 2nd Street to continue south as a separated path down the side of W 7th Avenue.

This Executive Summary does not provide the full set of recommendations outlined in this study, not does it communicate their justification. For that reason, we encourage a review of the full document.

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OVERVIEW

Process

By applying a design strategy centered on walkability, this study asserts and attempts to demonstrate how a limited number of relatively small planning interventions can exert a profound influence on the livability and vitality of downtown Fort Lauderdale.

This study applies an "urban triage" methodology that determines where walkability is achievable in the short run and integrates these findings with an analysis of important anchors and paths in order to designate a Primary and Secondary Network of Walkability in the downtown. These Networks indicate where, in both the short- and mid-term, the fewest investments in infrastructure are likely to have the greatest impact on people's choice to walk.

These Networks of Walkability are then used as a means to prioritize a series of suggested improvements, principally to thoroughfares, but also to flanking properties. In most cases, suggested street improvements attempt to make use of restriping rather than reconstruction in order to conserve funds. Recommendations are also prioritized with an eye towards where the City is better able to exert its authority, understanding that State- and County-owned thoroughfares are more difficult to modify quickly.

The study area for this exercise is principally the heart of the downtown, bounded by W 7th Avenue, Federal Highway, N 4th Street, and the New River. Conditions beyond these borders are considered in this report's recommendations, but all recommendations are limited to this area and the three bridges that connect it to the south side of the River.

Recommendations are divided into Short-, Mid-, and Long-Term actions, based not on their priority but on their ability to be accomplished quickly. A longer-term action is not one that should be delayed, but one that is likely to experience delay in its implementation, and therefore needs to be started soon if it is to produce results before very long. That said, many actions that are considered a higher priority achieve that status in part because they are likely to face fewer impediments and therefore produce results most quickly.

Because they are much under discussion and have a great impact on walkability, this study pays considerable attention also to the downtown's nascent bicycle network and evolving transit network, making suggestions as to how they can best support walkability as well as thrive in their own right. It concludes with Next Steps, highlighting the ten short-term physical interventions that can be expected to have the most immediate impacts on the walkability and vitality of downtown Fort Lauderdale.

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Recommendations

This executive summary is no substitute for reading the entirety of the report, especially since it is impossible in few pages to present the reasoning behind the proposals contained herein. With that warning, the paragraphs that follow sacrifice argument for comprehensiveness in an attempt to list every significant recommendation that follows.

JUSTIFICATION

Downtown Fort Lauderdale is not considered particularly walkable for good reason. While it contains a generally good mix of uses in a network of mostly small blocks, that network has been degraded by the widening (and speeding) of its streets, the placement of parking lots against sidewalk edges, and the addition of many pedestrian-unfriendly buildings. Remedying these problems across the majority of the downtown is a project for many decades, but carving out a limited area of excellent walkability can be accomplished quite quickly, and can have a profound impact on the function and the reputation of the city.

Accomplishing this change is important for all the reasons that walkability it important. These reasons include making Fort Lauderdale a more attractive place for residents and workers and improving the health of the city's inhabitants while reducing their carbon footprint as well. Walkable cities are wealthier, healthier, and more sustainable cities.

BACKGROUND

Most people have the choice to walk or to drive. Most will only make the choice to walk if that walk is useful, safe, comfortable, and interesting.

The *useful walk* means having the best mix of uses all in close proximity. The *safe walk* means designing thoroughfares so that pedestrians feel safe, which includes: small blocks and streets, lanes of the proper width, limited turn lanes, bike lanes where appropriate, continuous on-street parking and shade trees, ample sidewalks, limited curb cuts, and pedestrian-friendly signals. The *comfortable walk* means bringing buildings up to the sidewalk edge, avoiding surface parking lots and missing teeth, and planting more shade trees. The *interesting walk* means requiring active building edges against principal walking streets.

All of these conditions must be met to truly encourage walking, which is very hard to do. For that reason, it is necessary to delineate a Network of Walkability where such an outcome is possible, and to focus improvements there first.

SETTING PRIORITIES

The *urban triage* methodology already described under *Process* leads to the diagram on the following page, in which a Primary (short-term) and Secondary (mid-term) Network of Walkability are defined in order to direct and prioritize modifications to the

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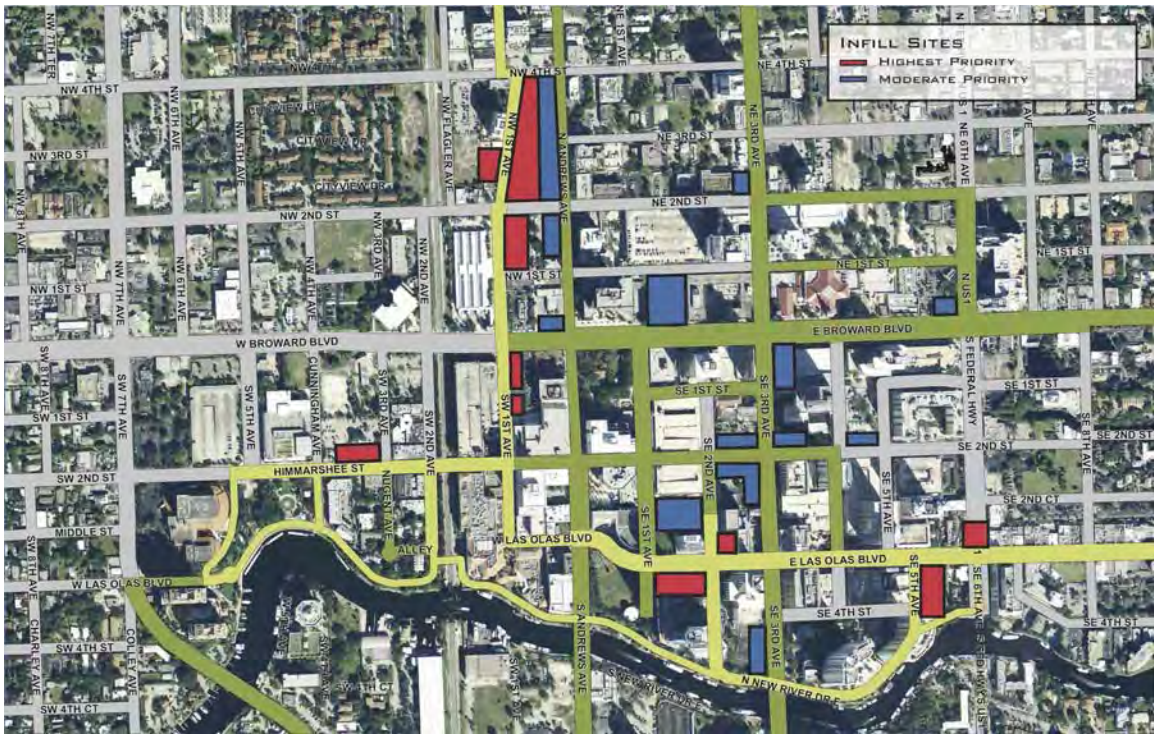
downtown. These consist primarily of the redesign of thoroughfares, but also include the construction of new buildings on a limited number of key sites.



The Primary Network of Walkability (light green) is the location of the most important street improvements and building opportunities (red). The Secondary Network (dark green) contains the next most important improvements and building sites (blue).

As indicated above, the Primary Network of Walkability, in addition to the Riverwalk, is centered upon Las Olas, W. Himmarshee, and Brickell Avenue. As a result, these three trajectories receive special attention in the report's recommendations.

GENERAL RECOMMENDATIONS

General recommendations to the downtown include:

- Supplementing the downtown's incomplete crosswalk network;
- Adjusting meter rates to result in the proper rate of curb vacancy;
- Making use of shade trees rather than palm trees almost everywhere;
- Maintaining minimum sidewalk clear zones;
- Making streetscape improvements in the order suggested by the Networks of Walkability;
- Introducing Leading Pedestrian Interval signals (LPIs);
- Applying enhanced urban coding within the Networks of Walkability;
- Prohibiting the abandonment of further vehicular streets; and
- Designing all future streets with 10-foot-max travel lanes, 8-foot-max parking lanes, ample sidewalks, and continuous tree cover.

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THE BICYCLE NETWORK

This study proposes integrated bike lanes where they fit—and *sharrows* where they don't—along Las Olas, Himmarshee, N 2nd Street, N 4th Street, and Brickell Avenue, and separated bike lanes against E 3rd Avenue and, eventually, Broward Boulevard. It also recommends that the Flagler Greenway jog west on N 2nd Street to continue south as a separated path down the side of W 7th Avenue. It asserts certain minimal standards for these facilities, and recommends that the next two Bike-Share stations be located by the Cheesecake Factory and at the Broward Central Terminal, respectively.

THE TRANSIT NETWORK

This study reviews the proposed routes and station locations of the WAVE streetcar and planned Bus Rapid Transit, and makes suggestions for enhancing same by eliminating unnecessary loops and simplifying transfers where possible. It also raises the mandate that transit stops not undermine walkability by unduly widening pavements or removing parallel parking.

SITE-SPECIFIC RECOMMENDATIONS

Thoroughfares

The report contains hundreds of site-specific recommendations, organized principally by street. While further explanation is needed (and provided ahead), they can be summarized as follows:

(Note: These are repeated from the *Executive Summary*)

Broward Boulevard should receive an attractive low barrier along the curb in most locations, and shade trees where possible. Its crosswalk at Federal Highway should be replaced, and several sidewalks expanded into adjacent properties. Mid-term, it should be restriped with 10-foot travel lanes to create curbside buffers, receive additional crossings at SE 1st Street and Financial Plaza, eliminate several underutilized bus and turn lanes, and receive LPIs. Ultimately, it should be redesigned through a public process to be a four-lane *complete street* including parallel parking, biking facilities, and a roundabout where it meets Federal Highway.

Las Olas Boulevard should receive consistent parallel parking along all of its curbs, and either bike lanes or *sharrows* as space allows. It's thick baluster above the Kinney Tunnel should be replaced temporarily by something more transparent, and eventually by a retail pad overhanging the highway. It should receive two-way traffic where it bends into Brickell Avenue, and shade trees wherever they are missing.

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Brickell Avenue should be restriped to include additional parallel parking and bike facilities. As the main north-south axis in the Primary Network of Walkability, it should additionally receive the highest priority when it comes to streetscape improvements.

E 3rd Avenue should receive low barriers along its sidewalks as it crosses the New River. As soon as possible, the Avenue should be designated a *complete street* and trade two of its travel lanes for curbside parking on one flank and a two-way separated bike path on the other.

Andrews Avenue should maintain its current striping through downtown for now, but reserve its two outer lanes for parallel parking at all times except rush hour. By right-sizing its 12-foot lanes across the new river, additional space can be carved out for a protected sidewalk across the bridge, so that pedestrians can avoid the current spiral ramp. Eventually, the entire avenue should be rebuilt along the lines of the City's 2007 Downtown Master Plan.

W 7th Avenue should narrow its 12-foot lanes to 10-feet in order to carve out room for the southern extension of the Flagler greenway, which can run in both directions down its eastern flank beginning at NW 2nd Street.

SE 1st Avenue and SW 5th Avenue both contain excess pavement on the block south of Broward Boulevard. The former should receive angled parking in place of its parallel stalls, while the latter should be restriped to include parallel parking and bike lanes on each flank. Additionally, SW 5th Avenue should eventually run past the front of the Center for the Performing Arts to connect to W Las Olas, currently a cul-de-sac.

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Buildings

Finally, as suggested by the *Infill Sites* diagram, the following additional modifications are recommended, principally on private property:

- Placing a residential or hotel use on the key missing tooth just west of the County Courthouse on Broward Boulevard;
- Adding greenery or art to the blank southern wall of the Art Museum;
- Removing the internal bridges within River Front that obscure views of the Riverwalk from downtown;
- Prioritizing construction on the three missing teeth along Las Olas;
- Placing a building against the sidewalk on the north side of Himmarshee just west of SW 3rd Avenue;
- Placing front doors facing SE 1st Street in the three stores currently facing only the parking garage that holds them.;
- Ensuring that the new WAVE "One-Stop-Shop" creates an active façade against Brickell Avenue;
- Narrowing the curb-cut and driveway to the bank drive-thru on the north side of Broward Boulevard across from SE 1st Avenue;
- Encouraging large amount of residential within the River Front complex;
- Improving facades along Himmarshee between Brickell Avenue and the FEC corridor;
- Creating a thin building against Brickell Avenue's east sidewalk just south of Broward Boulevard;
- Eventually creating an enhanced design code for new buildings against a rebuilt Broward Boulevard; and
- Eventually placing a building in the parking lot at the NW corner of Broward Boulevard and Federal Highway.

It is understood that, unlike its thoroughfares, the City has less ability to control the disposition of these parcels, most of which are privately owned. But, from financial incentives to urban design codes, to the bully pulpit, City leadership can choose to circle the wagons around these few sites to encourage that they be built soon and built well, given their importance in achieving a walkable downtown.

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PART I: JUSTIFICATION

The Purpose of This Document

This is a downtown walkability analysis, not a downtown master plan. It is not comprehensive, and does not try to be visionary. But, like a master plan, it hopes to have a profoundly positive impact on the physical form, economic success, and social vitality of the downtown.

Fort Lauderdale is already in possession of a top-notch downtown master plan, completed in 2003, with its design guidelines updated in 2007. This document, and the city planning regulations that exist to enforce its vision, are excellent tools for shepherding the long-term transformation of the downtown from its current state into something much better. We have seen, as development has occurred in places like F.A.T. Village and along NE 4th Avenue, that each new building and streetscape is making the downtown a more attractive, livable place. But these individual, scattered projects are quite small in the context of such a large downtown, and their cumulative impact on the life of the city has been limited. Over a decade or two, a steady stream of such projects can indeed transform the nature of the downtown in the very way its master plan and codes intend. But what are we supposed to do until then?

A document—and an ensuing effort—is needed to short-circuit this process and to reorganize redevelopment in way that causes limited public investment in a few key locations to transform the very nature of the downtown. Such an approach is possible once it becomes understood that the key contributor to urban vitality is walkability, and that only certain parts of your downtown possess the capacity to be truly walkable in short order. These parts can be perfected and connected into a small but meaningful network of pedestrian excellence that has a dramatic impact on the experience and the reputation of the downtown.

This report intends to serve as that catalyzing document. For this reason, while it does not fail to make long-term recommendations, it focuses principally on the short- and mid-term, so that the much of its impact may be felt within five years, and the majority within ten. These recommendations are not vague. It will become clear very quickly whether or not they are being implemented. They are presented with a confidence that the City's leadership understands the value of walkability, and embraces it as a path to creating to a more robust, resilient, and rich city.

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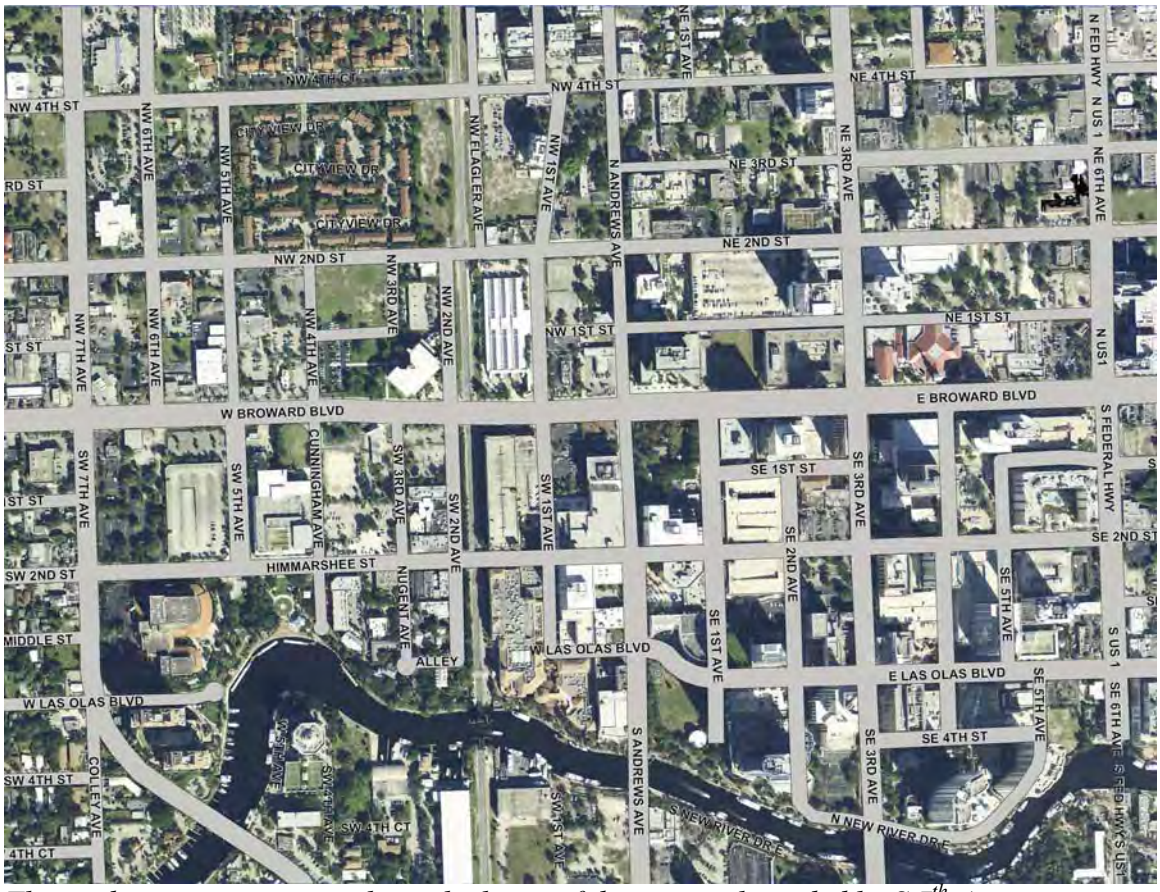

The study area, appropriately, is the heart of downtown, bounded by S 7th Avenue, Federal Highway, N 4th Street, and the New River.

Walkability in Downtown Fort Lauderdale

Downtown Fort Lauderdale has it all, but, as put by one observer, "none of it seems to connect to anything else." Hundreds of successful businesses, thousands of units of housing, a nice collection of restaurants, cafés, bars, and an impressive array of civic and cultural institutions all sit within a ten-minute walk of each other. But almost no one is taking that walk, and, as a result, the whole has not become more than the sum of its parts.

From a technical planning standpoint, downtown Fort Lauderdale also has it all—almost. A mostly fine-grained network of relatively small blocks, a robust network of two-way streets, a major transit hub, a beautifully amenitized riverfront. As they say, "the bones are good." Were it not for certain degradations imposed in the past forty years, the downtown would still enjoy much of the street life it has lost.

Those degradations were of two main types. First, the broadening and of its principal thoroughfares—Broward Boulevard, Federal Highway, East 3rd Avenue, and Andrews Avenue—has led to a standard condition in which cars travel at dangerous speeds against sidewalks that are typically not protected by parked cars or street trees. Crossing these

wide streets, thanks in part to their long signal timing, takes inordinately long as well. This condition, present throughout the region, is principally the result of transportation engineers attempting to meet an anti-congestion mandate, and is the principal reason that the Miami/Fort Lauderdale/Pompano corridor is the fourth most dangerous place for pedestrians in the entire United States. ("Dangerous by Design, 2011, Transportation for America.) It is worth noting that four of the five most dangerous regions in America are located in Florida.

The second type of degradation has been at the architectural scale. Responding to these broadened roadways, some buildings pulled back from the street behind parking lots, which are uncomfortable and unpleasant to walk past. Additional buildings sites were lost to parking lots, as parking demands rose with the unpleasantness of walking. Finally, many new buildings were allowed to place blank walls and dark mirror-glass directly along sidewalk edges.

As a result of these changes, there is much less walking in downtown Fort Lauderdale than there would have been otherwise, and only the beginning of what might be called a "pedestrian culture." One need only look a block east of the study area, to E Las Olas, to see what a thriving, walkable neighborhood looks like, and to understand the characteristics that make it so—the slow traffic, shade trees, parallel parking, and friendly storefronts missing in much of downtown.

Transforming the majority of downtown back to such a pristine condition of walkability—and livability—will only be possible over several decades. However, Las Olas presents an instructive example. It fair to say that E Las Olas is world famous, and has lifted the reputation of its entire city. Outside of South Florida, when one hears of Fort Lauderdale, one almost always hears of Las Olas as well. Yet, for all of this, E Las Olas is barely six blocks long, and most of it is one story tall.

Clearly, it does not take a wholesale reconstruction of a downtown to change its nature and its reputation. A strategic intervention that creates a Primary Network of Walkability in the study area—reinforcing places of promise and connecting them together in a clear, continuous circuit—will allow downtown Fort Lauderdale to quickly become more than the sum of its parts, and bring with it a rebirth of street life in the city.

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Why is Walkability Important?

Fort Lauderdale is principally a driving city. The typical downtown resident drives to most of her destinations, as the walk to entertainment or dining seems too far—even when it is often quite close. The typical downtown worker, when she eats out, drives to lunch, even though many restaurants are located nearby. Much of this behavior can be attributed specifically to the uninviting nature of the downtown's built environment, and to specific details of that environment that can be changed. There are many reasons to want this change:

Economic Development Reasons
As cities compete to attract corporations, citizens, and especially young, entrepreneurial talent, the winners will be those places that can claim the sort of environment and culture that is favored by creative class and millennial workers. Studies document how these workers favor communities with *street life,* the pedestrian culture that arises from walkability. Street life is rarely evident in principally driving cities, and the first step to achieving street life is to achieve at least a small urban core of excellent walkability.

Environmental Reasons
One of the greatest contributors to greenhouse gases is the emissions from vehicular tailpipes. It is principally for this reason that the "greenest" communities in America, with the lowest carbon usage per resident, are those in which people walk more and drive less. Any commitment to community sustainability and climate change action brings with it a commitment to encourage pedestrian life.

Health Reasons
In the book *Urban Sprawl and Public Health,* the epidemiologist authors compare more walkable cities with less walkable ones, and confirm that residents of less walkable environments face a measurably higher risk of the following physiological and psychological impacts:

- Decreased physical activity;
- Obesity;
- Diabetes, especially childhood diabetes;
- Asthma;
- Increased traffic injuries;
- Decreased social capital; and
- Increased social isolation.

Each of these health impacts has a cost that is borne first by individuals and ultimately by the community as a whole.

Any of these reasons alone provides compelling justification for becoming a more pedestrian-friendly city. Collectively, they provide ample reason for change. Any arguments against improving walkability, or delays in making such improvements, must be weighed against the significant daily costs of being a principally driving city.

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PART II: BACKGROUND

What Causes People to Walk?

The pedestrian is a delicate creature. While there are many harsh environments in which people are physically able to walk, there are few in which they actively choose to walk, especially when the option of driving is available. The following four sections provide a hierarchy of conditions that must be met if the average person is going to make that choice. Each is necessary but not alone sufficient. They are:

- A reason to walk;
- A safe walk;
- A comfortable walk; and
- An interesting walk.

A Reason to Walk

As Jane Jacobs noted, "Almost nobody travels willingly from sameness to sameness. . . even if the physical effort required is trivial." For people to choose to walk, the walk must serve some purpose. In planning terms, that goal is achieved through mixed use. Or, more accurately, placing the proper balance of the greatest number of uses all within walking distance of each other.

The first step towards achieving walkability, therefore, is to consider all of the uses present in the heart of your city, and to see which uses are lacking or in short supply. These uses include office, housing, retail, dining, entertainment, hospitality, schools, recreation, worship, and others. The better these uses can be balanced in your downtown, the more walkable it will be. In most downtowns, the use that is most underrepresented is housing.

In this regard, Fort Lauderdale does better than most. An impressive collection of towers near the New River suggest that a large number of residents could potentially walk downtown if that experience were made more inviting. The continued development of significant amounts of new housing in this area, and also just north of downtown, is more reason for optimism—especially in this economy. However, almost no housing at all exists in the central 4-block-thick swath heading east-west along Broward Boulevard. Within the study area, this adds up to more than 25 blocks of almost exclusively commercial and institutional uses, buildings that shut their doors at night and fail to give life to the street.

If the goal is to support walkability through mixed-use, the City should make a greater effort to locate a significant amount of housing within this specific corridor. Happily, this corridor also includes a large number of parking lots that sit mostly empty at night, unburdening new housing from having to provide its own. The savings resulting from this factor suggests that this housing could be more attainable than elsewhere, especially since luxury housing usually demands reserved (non-shared) spaces.

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A Safe Walk

While crime is always a concern, most people who avoid walking do so because the walk feels dangerous due to the very real threat of vehicles moving at high speed near the sidewalk. Statistically, automobiles are much more dangerous to pedestrians than crime, and the key to making a street safe is to keep automobiles at reasonable speeds and to protect pedestrians from them. This is achieved by meeting the following criteria, each of which will be addressed individually:

- A network of many small streets;
- Lanes of the proper width;
- Limited use and length of turn lanes;
- Including bike lanes;
- Continuous on-street parking;
- Continuous shade trees;
- Ample sidewalks;
- Limiting curb cuts; and
- Pedestrian-friendly signals.

A Network of Many Small Streets
Generally, the most walkable cities are those with the smallest blocks. This is because many small blocks allow for many small streets. Because traffic is dispersed among so many streets, no one street is required to handle a great amount of traffic, and that traffic does not reach a volume or speed that is noxious to the pedestrian. In a recent California study, cities with larger blocks suffered more than three times as many vehicular fatalities as cities with smaller blocks. (Marshall and Garrick: *Street Network Types and Road Safety*.) Smaller blocks also make walking more convenient: the more blocks per square mile, the more choices a pedestrian can make, and the more opportunities there are to alter one's path to visit a useful address such as a coffee shop or dry cleaner. These choices make walking more interesting, while shortening the distances between destinations. Downtown Fort Lauderdale benefits from a fairly small block size, but suffers in certain areas, most notably north of Broward Boulevard to the west of Federal Highway, where NE 1st, 2nd, 4th, and 5th Avenues have all gone missing for several blocks. The result is four blocks each 1000 feet long, a truly inhospitable measure.

Lanes of Proper Width
Different-width traffic lanes correspond to different travel speeds. A typical urban lane width is 10 feet, which comfortably supports speeds of 30 mph. A typical highway lane width is 12 feet, which comfortably supports speeds of 70 mph. Drivers instinctively understand the connection between lane width and driving speed, and speed up when presented with wider lanes, even in urban locations. For this reason, any urban lane width in excess of 10 feet encourages speeds that can increase risk to pedestrians. Many streets in downtown Fort Lauderdale contain lanes that are 12 feet wide or more, and drivers can be observed approaching highway speeds when using them.

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Limited Use and Length of Turn Lanes
Left-hand turn lanes are by no means the standard approach to intersection design. They should be used only at intersections where congestion is caused by cars turning left. Right-hand turns lanes are rarely justified, and only make occasional sense where heavy pedestrian activity causes queuing right-hand turners to dramatically impede through-traffic. When unnecessary turn lanes are provided, the extra pavement width encourages speeding, lengthens crossing distances, and takes up roadway that could otherwise be used for on-street parking or bike lanes. When justified, turn lanes should be just long enough to hold the number of cars that stack in them in standard rush-hour conditions, and no longer, for the same reasons. Most turn lanes in downtown Fort Lauderdale seem to have been applied indiscriminately in an attempt to forestall anticipated congestion rather than to solve a specific challenge, and many seem longer than their queues of cars would mandate.

Including Bike Lanes
There are many reasons to institute a comprehensive downtown bicycle network, including pedestrian safety. Bikes help to slow cars down, and new bike lanes are a great way to use up excess road width currently dedicated to oversized driving lanes. Moreover, Fort Lauderdale has a nascent biking culture that seems poised to flower if provided with adequate facilities. The experience in most American cities has been that a modest investment in bike lanes results in a dramatic increase in cycling. Right now, there is no discernible bike network in downtown Fort Lauderdale. The Riverwalk and the Flagler Greenway are good recreational corridors, but current efforts to create a true network must be clarified and expedited.

Continuous On-Street Parking
Whether parallel or angled, on-street parking provides a barrier of steel between the roadway and the sidewalk that is necessary if pedestrians are to feel fully at ease while walking. It also causes drivers to slow down out of concern for possible conflicts with cars parking or pulling out. On-street parking also provides much-needed life to city streets, which are occupied in large part by people walking to and from cars that have been parked a short distance from their destinations. Many streets in downtown Fort Lauderdale have lost their parallel parking in order that additional travel lanes could further ease traffic flow. The resulting unprotected sidewalks are not hospitable to walking, and the lack of on-street parking capacity has contributed to the proliferation of unattractive surface parking lots.

Continuous Shade Trees
In the context of pedestrian safety, street trees are similar to parked cars in the way that they protect the sidewalks from the moving cars beyond them. They also create a perceptual narrowing of the street that lowers driving speeds. But they only perform this role when they are sturdy, green, and planted tightly enough to register in drivers' vision. For this reason, most of the palm-lined streets in downtown do little to improve safety. "Arboring" shade trees (*vs.* palms) are also essential to pedestrian comfort in climates like South Florida's. Trees between the sidewalk and the building are a welcome

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supplement in non-retail locations, but should never be allowed to substitute for trees between the sidewalk and the street, as happens often in the study area.

Ample Sidewalks
This obvious point sometimes doesn't need mentioning, because few American cities have forgotten about sidewalk width. But, particularly against certain stretches of Broward Boulevard, Andrews Avenue, and E 3rd Avenue, sidewalks in the downtown can get scarily small. Generally, absent pedestrian crowding, most sidewalks need provide little more than a 6-foot clear zone to be comfortable, but this condition changes when parallel parking or mature shade trees are missing. In these cases, it is more important to provide the car-and-tree buffer than it is to widen the clear zone, but an ideal solution accomplishes both.

Limiting Curb Cuts
Every time a driveway crosses a sidewalk, pedestrians are endangered. Entries into parking structures must be limited and well marked. Drive-thrus and drop-offs – in which a vehicular path cuts into the sidewalk for driver convenience – are a suburban solution that does not belong in cities. Any drive-thrus should be accessed away from primary pedestrian streets, and as narrow as possible. Drop-offs, rather than breaking the curb, should be accomplished simply by reserving a few curbside parking spaces for that use.

Pedestrian-Friendly Signals. Cities that prioritize driving have long signal cycles and "dedicated" crossing regimes in which pedestrians are allowed to cross only when no cars are moving. Cities that prioritize walking have signal cycles of 60 seconds or less (total), and "concurrent" crossing regimes, in which pedestrians move with parallel traffic, and turning cars must wait for the crosswalks to clear. Such signals are made more effective by a new technology called the Leading Pedestrian Interval (LPI), in which pedestrians receive a 3-second head start to enter (and "claim") the intersection before cars receive a green light. There are a number of locations where these could be put to good use in the downtown. Additionally, it should be stressed that better walking cities do not have (or need) pushbutton signals of the type that proliferate in Fort Lauderdale. In such places, these are reserved only for highway intersections, where an outside authority like a state DOT has not allowed cycles of the proper short length. In walking cities like Washington and Chicago, the typical downtown intersection has a rapid cycle which renders pushbuttons unnecessary.

A Comfortable Walk

The need for comfortable walk is perhaps the least intuitive part of this discussion, because it insists that people like to be *spatially contained* by the walls of buildings. Most people enjoy open spaces, long views, and the great outdoors. But people also enjoy – and need – a sense of enclosure to feel comfortable as pedestrians.

Evolutionary biologists tell us how all animals seek two things: prospect and refuge. The first allows you to see your prey and predators. The second allows you to know that your

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flanks are protected from attack. That need for refuge, deep in our DNA from millennia of survival, has led us to feel most comfortable in spaces with well defined edges. This issue has been discussed from before the Renaissance, in which it was argued that the ideal street space has a height-to width ratio of 1:1. More recently, it has been suggested that any ratio beyond 1:6 fails to provide people with an adequate sense of enclosure, creating a *sociofugal* space: an environment which people want to flee.

Therefore, in addition to feeling safe from automobiles, humans are not likely to become pedestrians unless they feel enclosed by firm street edges. This is accomplished in several ways:

Streets Shaped by Buildings
The typical way in which cities shape streets is with the edges of buildings that pull up to the sidewalk. These buildings need to be of adequate height so that the 1:6 rule is not violated, ideally approaching 1:1. Gaps between buildings should not be very wide. If a street is intended to be walkable, then no building along it should be allowed to sit behind a parking lot.

No Exposed Surface Parking Lots
Most American cities suffer from the windswept spaces created where historic buildings have been torn down to provide ample surface parking. These parking lots are the single greatest detriment to pedestrian comfort, and city codes and private land-use practices must be reviewed in order to fundamentally alter the conditions that lead to their proliferation. Among these are the on-site parking requirement, which should ideally be replaced by a regime that treats parking as a public good, provided strategically in the proper locations to encourage more productive land use. Some streets in the study area are currently lined by so many parking lots, that converting them to more walkable status is unimaginable in the short term. Other streets contain only one or two parking lots that mar an otherwise viable pedestrian trajectory; these lots should be made high-priority development targets. Conveniently, it is not necessary to eliminate such parking lots fully; rather, only the front 50 feet or so need to be replaced by a building against the sidewalk.

Filling Missing Teeth
While most missing teeth between buildings are converted to surface parking, there are other empty lots that are simply filled with grass. While a well-landscaped park encourages walking, a simple grass field can have the opposite effect. In downtown Fort Lauderdale, a number of such sites should be considered high-priority development targets.

Street Trees
Already mentioned under Safety, arboring (non-palm) trees are also essential to pedestrian comfort in a number of ways. They reduce ambient temperatures in warm weather, absorb stormwater and tailpipe emissions, provide UV protection, and reduce the effects of wind. Trees also improve the sense of enclosure by “necking down” the street space with their canopies. A consistent cover of trees can go a long way towards

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mitigating the impacts of an otherwise uncomfortable street space. Oaks are one of many species of shade trees that need to replace the current roster of palm trees that are still allowed on streets downtown. The City's tree list includes many such trees, but any residual commitment to decorative species over arboring ones needs to be exorcised from current thinking.

A Note on Weather: Almost every city, when presented with this discussion on walkability, insists that its weather makes it somehow less capable of supporting pedestrian life than the rest of planet Earth. It is worth noting that the principles described here have been developed by studying pedestrian behavior in such places as New Orleans in summer, Quebec City in winter, Seattle in the rain, and Chicago in the wind. While South Florida does not have the perfect climate of southern California, it presents fewer weather impediments to walkability than many of the most walkable cities in the world.

The city in North America with the greatest number of continuous blocks of successful retail-fronted sidewalk is Toronto. Clearly, climate has only a limited impact on this conversation. That said, the desire for pedestrian comfort reinforces the above mandate for consistently providing both building edges against sidewalks (for shade) and arboring street trees (for shade, cooling, and rain protection). Furthermore, it suggests that buildings along primary pedestrian corridors should also be required to provide consistent, if not continuous, awnings for solar and rain protection.

An Interesting Walk

Finally, even if a walk is useful, safe, and comfortable, people will not chose to go on foot unless it is also at least moderately entertaining. There needs to be something interesting to look at.

Humans are among the social primates, and nothing interests us more than other people. The goal of all of the designers who make up the city must be to create urban environments that communicate the presence, or likely presence, of human activity. This is accomplished by placing "eyes on the street," windows and doors that open, and avoiding all forms of blank walls. These include the edges of structured parking lots, which must be shielded by a minimum 20-foot thickness of habitable building edge, at least at ground level. Cities that support walkability do not allow any new parking structures to break this rule.

The activity that is placed against the sidewalk is also important. Retail use is much more interesting than office or residential use. Moreover, successful retail requires connectivity, so the goal of continuous retail against designated streets needs to inform planning requirements.

A final enemy of pedestrian interest is repetition. The era of the multi-block mega-project is fortunately over, but cities must take pains not to allow any single architectural solution to occupy more than a few hundred feet of sidewalk edge. Boredom is another

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reason why "almost nobody travels willingly from sameness to sameness," and multi-building developments should be asked to distribute schematic design responsibility to multiple architects (even within the same firm), to avoid a city-as-project outcome. Many hands at work is another way to suggest human activity, especially when the number of humans on the sidewalk is less than ideal.

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PART III: SETTING PRIORITIES

A Realistic Redevelopment Strategy

Most mayors, city managers, municipal planners, and other public servants feel a responsibility to their entire city. This is proper, but it can be counterproductive, because by trying to be universally good, most cities end up universally mediocre. This is particularly the case when it comes to pedestrian activity. Every city has many areas that would benefit from concerted public investment, but there are two types of areas within the downtown where public investment will have a greater impact on walkability than in others.

First, only certain streets in the downtown are framed by buildings that have the potential to attract and sustain pedestrian life. There is little to be gained in livability by improving the sidewalks along a street that is lined by muffler shops and fast-food drive-thrus. These streets should not be allowed to go to seed; the trash must be collected and the potholes filled. But investments in walkability should be made first in those places where an improved public realm is given comfort and interest by an accommodating private realm—or a private realm that can be improved in short order.

Second, there are streets of lower quality than those above, but which are essential pathways between downtown anchors, for example from a transit hub to a nearby entertainment venue. These streets may require greater investment to become walkable, but that investment is justified by their importance to the downtown pedestrian network.

By studying existing conditions, we can see where streets are most ready, or most needed, to support pedestrian life, and focus there. This technique of *Urban Triage*—a phrase coined by Andres Duany—may sound a bit mercenary and unfair, but it results in money being spent wisely.

The Street Frontage Quality Rating

The drawing on the next page is a Street Frontage Quality Rating for the study area. This map rates each block subjectively in terms of its pedestrian quality, based on the criteria of comfort and interest. Lighter-colored areas are generally comfortable and interesting, and therefore capable of attracting pedestrians. Darker-colored areas are principally automotive, and it is hard to imagine how limited interventions could turn them into places where pedestrians would feel comfortable.

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Please note that this assessment only addresses the quality of the spaces and buildings flanking the street, and does not consider the traffic or safety characteristics of the thoroughfare. This approach is based on the expectation that streets in potentially walkable areas will be reconfigured for safety.

In this drawing, the ratings—from Best to Worst—truly cover the full range of quality, from delightful to miserable. Only those places marked Best or Good have frontages that are inviting to pedestrians. It is evident that very few trajectories present a continuously walkable experience. The Riverwalk is mostly excellent, but its lateral location, recreational nature, and lack of automotive traffic mean that it will never perform as a fully walkable urban axis. Just north, it is Las Olas that shows the greatest potential of functioning in this regard, especially once a few key empty lots along it are developed. Its connectivity to Fort Lauderdale's best walkability to its east also means that it has the potential of attracting pedestrians from an immediate adjacency. Further west, it is Himmarshee Street that shows the most potential, again interrupted by some unfortunate blank walls and missing teeth.

There are no north-south trajectories with consistently walkable frontages. Both Andrews and E 3rd Street mostly lack the sort of attractive frontages that motivate walking. If there is going to be a truly walkable north-south axis through downtown in short order, it is unlikely either of these heavily-trafficked streets.

The Urban Triage Street Assignment

Turning a Frontage Quality Rating into an Urban Triage Street Assignment is a two-step process. First, the Rating is studied for patterns that emerge, in which certain streets of higher quality come together to form a clear network of walkability. Second, that network is supplemented by the additional streets that are necessary to connect it to the key anchors that it almost reaches, including other pieces of itself. These anchors are chosen for practical purposes—like connecting a theater to its parking—and for social purposes—like connecting a transit hub to a health clinic. It is important to remember, in this work, that some people do not have the luxury of automobile use and, while they may not be many in number, they rely more heavily on walkability than others do.

As diagrammed on the next page, trajectories shown in light green are already pedestrian-friendly, capable of becoming so with limited short-term intervention, and/or important to the establishment of a meaningful network. This light green web is the Primary Network of Walkability. It is quite small but, if implemented properly, it will be enough to fundamentally alter the pedestrian experience downtown. This will be accomplished by providing a preferred way for pedestrians to traverse the area east-west and north-south in an environment of continuous excellence.

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The east-west trajectory takes advantage of the relatively high quality of both Las Olas and Himmarshee, connecting them into a single trajectory at SW 1st (Brickell) Avenue. Conveniently, Brickell presents itself as the ideal north-south trajectory, for a number of reasons. These include:

- Its designation as the path of the WAVE streetcar;
- The planned construction of the new WAVE One-Stop Shop as a mixed-use facility between NW 4th and 2nd Streets, with additional anticipated development immediately to its south.
- The presence of the Broward Central Terminal between NW 2nd Street and Broward Boulevard, with its great number of non-driving customers.
- The presence of F.A.T. Village and a large number of new residential apartments to its north;
- Its southern termination at Las Olas Boulevard and the gateway to River Front;
- Its relatively light traffic loads;
- The fact that, unlike both Andrews and E. 3rd Avenue, it is not a County-owned Street, and therefore can be improved without significant negotiation.

It should be noted that all of the streets in this Primary Network of Walkability are owned and maintained by the City, and thus offer the quickest and best opportunities for positive change.

Also included in this Primary Network are several small north-south stretches of already good quality, as well as N New River Drive E and, of course, the Riverwalk, both already excellent. The Street Assignment also shows two important connections that are currently missing: the continuation of the Riverwalk past the Icon site and Stranahan house to terminate in the plaza above the Federal Highway tunnel, connecting it to E Las Olas; and the continuation of SW 5th Avenue as a narrow vehicular thoroughfare in front of the Center for the Performing Arts to connect with Las Olas Boulevard, significantly improving the permeability of that area.

Shown in darker green in the same drawing is the Secondary Network of Walkability. Once the Primary Network is established, the Street Frontage Quality Rating suggests that this larger secondary network also possesses the potential to welcome pedestrians. Given the somewhat lower quality of surrounding frontages, the greater intervention necessary in street design, and the fact that many of the streets are State- or County-owned, the establishment of this Secondary Network must be considered a longer-term prospect. To be blunt: if the goal is to bring walkability to downtown Fort Lauderdale as quickly as possible, no public investments in walkability should be made in this dark green network until all such investments in the light green network are complete. Similarly, no investments in walkability should be made outside of the cumulative green network until it is complete.

This Secondary Network is distinguished from all of the uncolored streets by the fact that is has mid-term potential. The presence of poor frontages and/or unsafe-feeling roadways on all remaining thoroughfares exclude them from consideration as walkable trajectories except in the longer term. For example, it is recommended that Broward

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Boulevard be dieted into *complete street* from W 7th Avenue east, but that effort will take many years, and only then will it be possible to dramatically remake the dismal frontages that run along it from W 7th to 1st.

The Urban Triage Street Assignment is an essential tool in the planning of the downtown. The City has a limited amount of funds for making public investments, and a limited number of tools for encouraging private investments. If these funds and tools are to be used wisely, they will be concentrated on those specific areas that will improve, reinforce, and make continuous the part of downtown that has potential to be truly walkable.

The Infill Sites

In terms of private investment—and public investment in vertical construction—a final diagram takes the Urban Triage Street Assignment one step further, to indicate the non-roadway construction that is necessary if the Primary and Secondary Networks of Walkability are to take root. Transforming the realities of the Urban Frontage Quality Rating into the Network of Walkability requires correcting the flaws that distinguish these two drawings. This is done by filling in missing teeth, hiding parking lots, and otherwise turning unfriendly street edges into friendly ones. When combined with the thoroughfare redesigns outlined in detail ahead, these changes will add comfort and interest to these street's planned improvements in safety.

Creating this third diagram, titled Infill Sites, is a simple mechanical exercise, in which all missing teeth are replaced by buildings. Shown in red on the next page are the ten buildings—some quite small—that are needed to make the Primary Network of Walkability complete. In blue are the dozen-or-so additional buildings that will allow the Secondary Network to take shape. To the degree that the City is able to sponsor or incentivize building construction in downtown, these are the places to do so first. Any investments elsewhere, while perhaps justifiable for other reasons, will not contribute meaningfully to downtown walkability. The same can be said for investments in the Secondary Network, until the day that the Primary Network is complete. A city that truly prioritizes walkability will do everything in its power to fill these sites first.

The specific footprint of each building shown in the Infill Sites diagram can be somewhat flexible, with the understanding that they should sit directly against the sidewalk along the majority of their frontages, and that those frontages should receive active, open facades. More on certain key Infill Sites can be found in the recommendations ahead.

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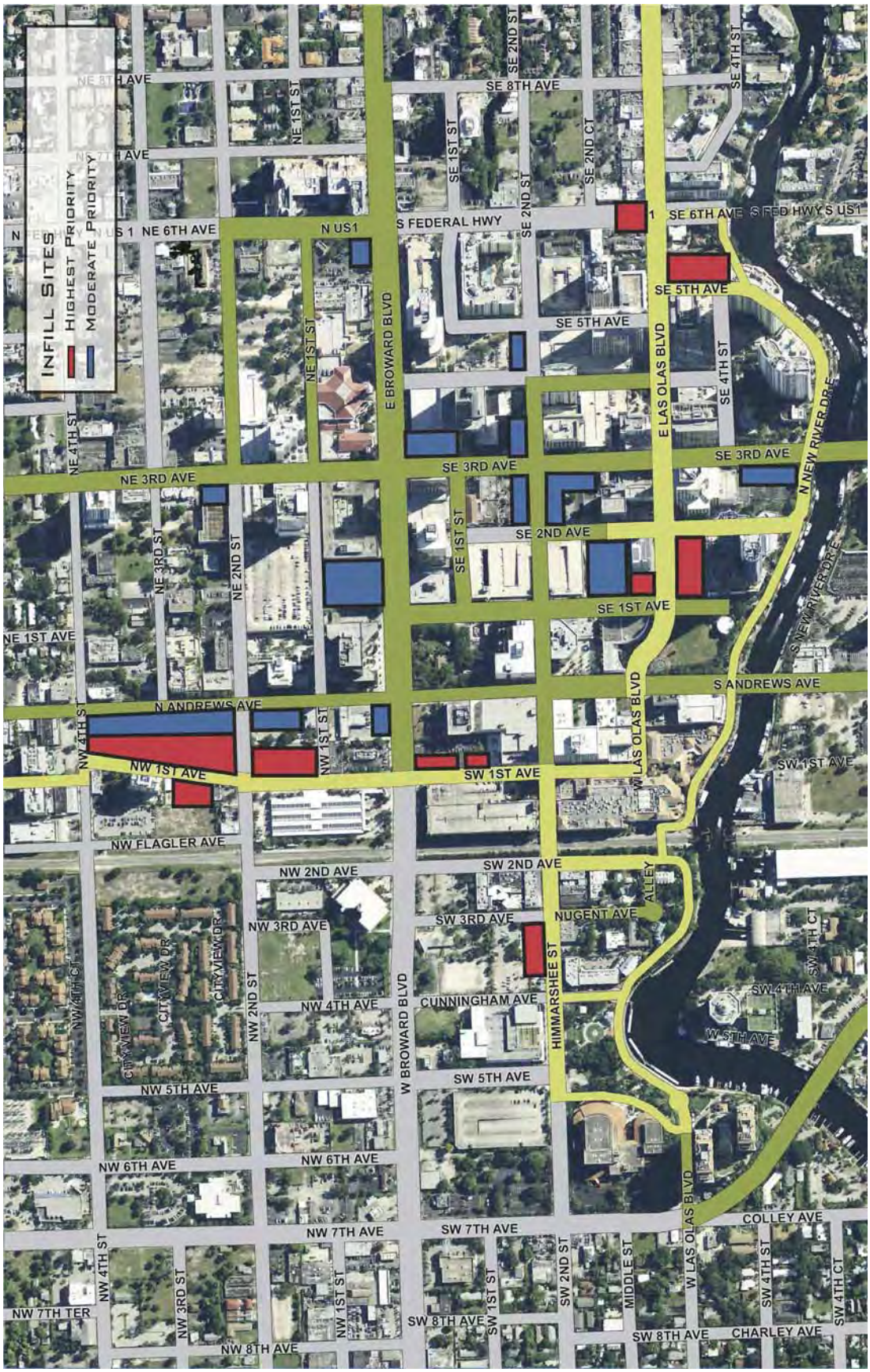
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NW FLAGLER AVE
NW 2ND AVE
SW 2ND AVE
ALLEY
NUGENT AVE
NW 3RD AVE
SW 3RD AVE
HIMMARSHEE ST
CITY VIEW DR
NW 4TH AVE
CUNNINGHAM AVE
W BROWARD BLVD
NW 5TH AVE
SW 5TH AVE
NW 6TH AVE
COLLEY AVE
NW 7TH AVE
SW 7TH AVE
NW 7TH TER
NW 8TH AVE
SW 8TH AVE
CHARLEY AVE

PART IV: GENERAL RECOMMENDATIONS

Because this effort is focused principally on short- and mid-term success, general recommendations, applicable to the entire downtown, are offered with trepidation. They are only included with the further instruction that, to the degree that their implementation costs money, they should be implemented first in the Primary Network of Walkability and next in the Secondary Network before being applied anywhere else. In no instance should a compulsion to implement a solution universally cause a delay in budgeting its application in the Primary or Secondary Network at lower cost.

Furthermore, to the degree that the large-scale application of a solution suggests a change of policy causing political delay, the application of that solution in the small-scale Primary Network shall be considered a "pilot project" beyond the bounds of policy. In order to evolve along with best practices, cities must allow such pilot projects to take place as inexpensive, local, and perhaps temporary experiments to determine whether a policy change is merited. Such a framework of intelligent investigation is the proper procedural model within which to implement many of this report's recommendations.

For purposes of implementation, all recommendations are categorized as either Short-Term, Mid-Term, or Long Term. Recommendations have only been placed in the Short-Term category if they are deemed easily executed at limited cost, without requiring further studies. If an official response to a suggestion is that such studies are needed, and if the City leadership is not able to overrule such a response, then that recommendation should be moved to the Mid-Term category. As a general mathematical principle: as the number of Short-Term items approaches zero, this study approaches being a waste of time and money.

Mid-Term recommendations are placed in that category because they require a moderate amount of money, a moderate amount of negotiation, or both. This does not mean that they should not be initiated immediately, but rather that an immediate initiation is likely to produce an outcome several years from now. The same is true of Long-Term recommendations: they should be pursued right away, but their greater expense and policy implications suggest that results will not be seen for perhaps a decade.

By way of illustration: Re-striping a local street is considered a Short-Term intervention. Re-striping a County or State street is considered a Mid-Term intervention. And reconstructing a County or State street is considered a long-term intervention.

General Recommendations are organized into three categories: Street Network, Bicycle Network, and Transit Network.

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The Street Network

The City already has a great stable of existing recommended street sections, described in Chapter 4 of its 2007 Downtown Master Plan Update. This effort does not mean to supplant those with new standards, but rather suggests supplemental solutions that should work hand-in-hand with a commitment to the existing standards.

As streets are slowly rebuilt in the downtown, they begin to conform to a superlative standard.

Short-Term Recommendations

Crosswalks
Every intersection in the downtown (with the exception of certain locations on Federal Highway) needs to have crosswalks marked across all four legs. A full survey should be completed to locate these. (This small scope of work can be executed in one day using Google Maps.) In the short term, a pair of painted stripes, which can be completed in an hour, are all that is needed across each missing leg. NW 1st Street is especially lacking in crosswalks. (Crossing signals are also recommended where NW 1st Street crosses E 3rd and Andrews Avenues.)

Meter Rates
Meter rates for curbside parking should be adjusted on a block-by-block basis to ensure that such parking spaces are well used but not oversubscribed to the degree that causes undue "cruising" for parking. In *The High Cost of Free Parking,* Donald Shoup places this occupancy rate as 85%, resulting in about one empty space per block face. The need to ensure the consistent availability of higher-priced curb parking must be balanced by the need to ensure the presence of parallel parking to keep vehicular speeds down. In some locations, this may mean making such parking free, particularly during off-peak hours. Successful examples of this approach can be studied in San Francisco, Pasadena, Ann Arbor, and elsewhere.

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Tree Selection
City tree-planting strategies should be adjusted to reflect an understanding that palms are relatively useless at improving pedestrian comfort. With the rare exception of along a few signature corridors in which palms have become an established trademark (like Broward Boulevard), the City should plant only arboring shade trees in its downtown. Additionally, established palm corridors such as Las Olas should plant shade trees where gaps exist among palms. It is more important for pedestrians to feel protected from sun, rain, and cars than it is to have a supposedly "signature" look that can actually be found anywhere else in the Sun Belt.

Clear Zone
If not already mandated and well disseminated, all public utilities and other entities authorized to place elements in sidewalks must follow a strict guideline of locating these objects laterally, up against the curb, to provide the maximum available clear space. In no instance should a sidewalk object be allowed if it results in a clear space of less than 48 inches, and a 6-foot minimum should only be violated on rare occasion.

Streetscape Priority
The City should focus its streetscape improvement efforts first along the designated Primary Network of Walkability before investing in walkability elsewhere. These efforts should include tree planting, other landscape, decorative lighting, banners, the artistic wrapping of signal boxes, and all similar activities.

Mid-Term Recommendations

Proper Arcades
City design codes should be amended so that improper arcades like that built along the east side of Federal Highway just north of Broward Boulevard are disallowed in favor of proper arcades like the one on the south side of Himmarshee Street just west of SW 3rd Avenue. Such arcades are a minimum of 8 feet deep and cover all but the outer 12 inches of the sidewalk. Arcades that allow pedestrians to skirt them undermine retail viability.

A proper arcade covers all but the outer edge of its sidewalk.

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Leading Pedestrian Interval
All intersections at which pedestrians are regularly threatened by turning cars should receive LPI signalization (Leading Pedestrian Interval).

Urban Performance of Walkable Network
City design codes should be amended along the designated Primary and Secondary Networks of Walkability to demand a higher standard or urban performance, including build-to lines at the sidewalk edge, minimum heights, active facades, mandatory awnings or arcades, avoidance of curb-cuts, and superior streetscape provision and maintenance, among other requirements.

Long-Term Recommendations

Street Abandonment Ban
No more permits should be granted by the City for projects that consolidate blocks, limiting the porousness, efficiency, safety, and walkability of the street network. This ban should not ignore turning driving streets into pedestrian streets, which historically have failed at an alarming rate. (The few exceptions like Lincoln Road remind us of the more than 150 such failures.) If developers wish to provide pedestrian streets through their properties, that can be encouraged, but closing any more streets in downtown to driving will only further consolidate traffic on the remainder, rendering the whole system less walkable.

Street Design
As the city moves forward with the design and redesign of downtown streets, all streets should be shaped around a low-speed standard. Whatever that standard—a number of cities are currently implementing "20's Plenty zones"—it is certain to be below 35 mph, which means that no lane should be wider than 10 feet, and no parking lane wider than 8 feet (7 is ideal). All new streets should include shade trees planted at an on-center spacing that roughly matches their canopy at maturity, with ample sidewalks beyond the tree zone. Sidewalks with trees in planters should maintain a 10-foot minimum width, while sidewalks located beyond separate planting-strips (appropriate to a less urban condition) should maintain a six-foot minimum width.

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The Bicycle Network

While the completion of the Flagler Greenway indicates a stronger commitment to biking in downtown, Fort Lauderdale is far behind many other cities in the implementation of a downtown bicycle network. There are many ambitious plans for putting cycle facilities on many city streets, but a quick solution is needed that creates a simple armature of north-south and east-west facilities that allows cyclists basic access to the more bikeable parts of the downtown.

Conversations with city planners and bicycle advocates have yielded the following set of recommendations towards establishing this armature. They are summarized in the diagram on the following page, and also described street-by-street in the Site-Specific Recommendations that follow.

East-West:

Las Olas and Himmarshee
As the principal east-west streets in the Primary Network of Walkability, Las Olas and W Himmarshee should be reconceptualized as *complete streets* and receive attractive cycle markings. Whether these take the form of 5-foot bike lanes or *sharrows* (wide driving lanes with cycle markings) will depend, block by block, on the amount of pavement available. This effort can be accomplished in the short-term as part of the recommended restriping of these streets.

N 2nd and 4th Streets
NE 2nd, 3rd, and 4th Streets all possess excess pavement that can be put to better use, and all three can be restriped to include bike lanes or *sharrows* as space permits. However, given that NE 3rd does not exist between NW 7th and Andrews Avenues, and that NW 2nd is already designated to hold the westward-shifting Flagler Greenway, a healthy spacing would suggest that NE 2nd and NE 4th are the proper choice. City streets, these can be restriped immediately.

Broward Boulevard
To be discussed ahead, Broward Boulevard is intended, in the long term, to remove two of its travel lanes east of W 7th Avenue in order to become a *complete street* including bicycle facilities. The design of these facilities should be a part of the eventual public effort surrounding the remaking of Broward Boulevard, and one suspects that they should be separated lanes, due to the heavy traffic volume.

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BICYCLE FACILITIES
2-WAY SEPARATED LANE
PAIR OF INTEGRATED LANES OR SHARROWS (AS SPACE PERMITS)
NE 6TH AVE
N US1
NE 1ST ST
NE 4TH ST
NE 3RD AVE
NE 3RD ST
NE 2ND ST
NE 1ST AVE
N ANDREWS AVE
NW 4TH ST
NW 1ST ST
NW 1ST AVE
NW FLAGLER AVE
NW 2ND AVE
NW 3RD AVE
NW 4TH AVE
NW 5TH AVE
NW 6TH AVE
NW 7TH AVE
NW 7TH TER
NW 3RD ST
NW 8TH AVE
CITY VIEW DR
NW 4TH CT
NW 2ND ST
E BROWARD BLVD
W BROWARD BLVD
SE 2ND ST
SE 8TH AVE
SE 1ST ST
SE 2ND CT
S FEDERAL HWY
S US 1
SE 6TH AVE
S FED HWY S US1
SE 5TH AVE
E LAS OLAS BLVD
SE 4TH ST
SE 3RD AVE
N NEW RIVER DR E
SE 2ND AVE
SE 1ST AVE
S NEW RIVER DR E
S ANDREWS AVE
W LAS OLAS BLVD
SW 1ST AVE
SW 2ND AVE
ALLEY
SW 3RD AVE
NUGENT AVE
HIMMARSHEE ST
CUNNINGHAM AVE
SW 5TH AVE
SW 4TH CT
SW 4TH AVE
W 5TH AVE
COLLEY AVE
SW 7TH AVE
SW 2ND ST
MIDDLE ST
SW 1ST ST
SW 8TH AVE
CHARLEY AVE
SW 4TH ST

North-South:

The Flagler Greenway and Brickell Avenue
The Flagler Greenway comes into downtown from the north and then is planned to cut west on NW 2nd Street in order to exit the downtown across the 7th Avenue bridge. This approach makes sense, but must be supplemented by bike lanes on Brickell Avenue—already designated a street of Primary Walkability—in order to cross the heart of downtown and reach the Riverwalk. This effort can be accomplished in the short-term as part of the recommended restriping of Brickell Avenue.

E 3rd Avenue
Both Andrews Avenue and E 3rd Avenue are under consideration as a regional-scale bike route. Only one is needed, since these two streets are quite close to each other. Given that E 3rd has a larger right-of-way than Andrews, carries fewer cars, and is a greater distance from the Flagler Greenway, it is the obvious choice. Given that E. 3rd is a County road with relatively fast traffic, this effort should be begun immediately in order to be accomplished in the mid-term, and should include a separated-lane solution.

Other Bicycle Network Recommendations:

Lane Design
Separated bicycle lanes should be a minimum of 6 feet wide if one-way, eight feet wide if two-way (with a center stripe). One excellent way to insert a separated lane in a street is to place it between parked cars and the curb, with a minimum 3-foot buffer protecting it from door-swings. Integrated Bicycle lanes should be 5-feet to 6-feet wide and painted green (or a similar contrasting color) from side to side for visibility, and not be merely striped.

Bike-Share Stations
Bike-share stations need to be placed with an eye to the needs of both tourists and transit riders. As already planned, the next new station should be located on the plaza atop the Kinney Tunnel (by the Cheesecake Factory) in order to service visitors to E Las Olas. The subsequent location should be at the Central Terminal, where the greatest potential ridership arrives by bus. Ultimately, bike share stations should be located at each stop of the BRT. The bike-share program and Broward County Transit should work together with an understanding that the smallest public transit vehicle is a shared bike.

The Transit Network

This is an exciting time for transit in Fort Lauderdale, with the upcoming construction of the WAVE streetcar, the advancement of plans for a Bus Rapid Transit (BRT) route through the downtown, and the anticipated arrival of regional rail service along the Flagler corridor. The diagram on the next page shows the currently planned location of routes and stops for all three of these services.

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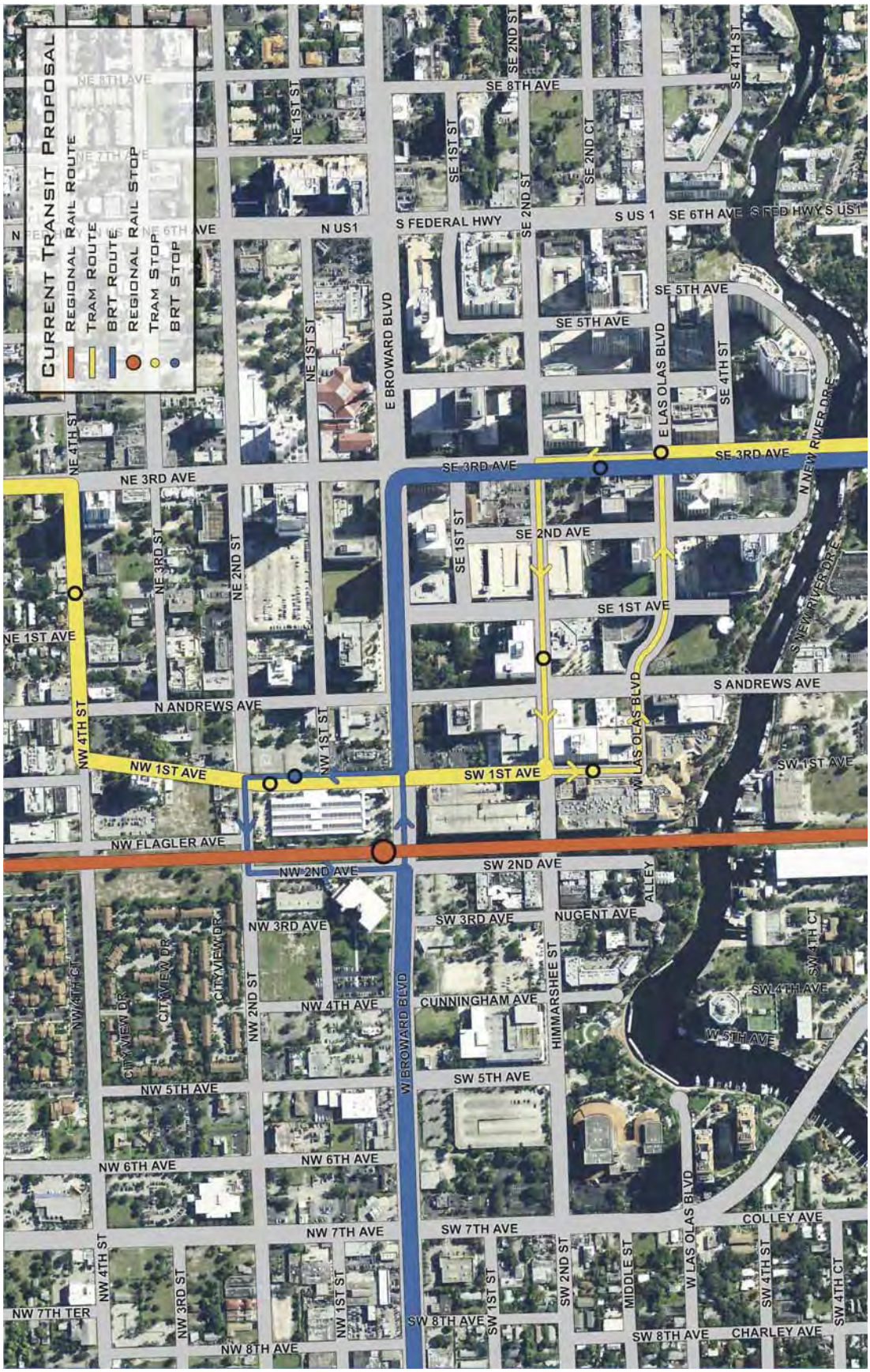

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This report is not focused on transit, but one cannot regard the previous diagram without it raising certain questions. Two fundamental rules of transit provision are the Simple Route and the Consolidated Network.

The Simple Route demands that the vehicle take as clear and obvious path as possible, easily conceptualized by passengers, both for mental comfort and to make it easy to find stops. Simple routes are usually either a plain line or a plain loop, but not both. Simple routes also place stops in opposite directions directly across the street from each other wherever possible.

The Consolidated Network demands that stops be located so that transfers between routes require very little walking, and that stations be consolidated as much as possible to serve multiple routes—even if the routes are served by different vehicles.

Applying these criteria to the current configuration leads to these concerns:

1. Is it best for the WAVE streetcar to have a one-way loop at its center? This loop brings it through the Las Olas bend in a way that will give life to that corridor, but presents functional challenges in terms of preserving curb parking and introducing the 2-way travel that is probably needed for that segment to thrive. The loop also separates the eastbound stop from the westbound stop, which will confuse riders, and makes the path less simple. An alternate path that ran both ways on Himmarshee could still place its stops near intersections with Las Olas to help energize it.

2. Shouldn't the streetcar place a stop at, or at least near, Broward Boulevard, its most important east-west corridor? Such a stop would also allow passengers to transfer from regional rail to local rail without first traversing all the bus bays of the Broward Central Terminal.

3. Does the BRT need to loop north around the Central Terminal on its westward path, rather than just staying on Broward Boulevard, where it can simply be boarded at the curb? In addition to slowing the route, this loop moves the stop away from its busiest corridor, and also about 400 feet away from the planned regional rail stop. As with the streetcar, it also creates confusion by separating eastbound and westbound paths. And is the diagram wrong, or is there actually no eastbound stop anywhere near the westward stop at the Central Terminal?

4. Could the BRT and WAVE stops on SE 3rd Avenue be consolidated, or at least a bit closer together?

The revised transit proposal on the next page is an attempt to resolve all of the above issues. This new proposal eliminates loops and consolidates stations wherever possible. Among other things, it imagines two signature intersections (Broward/Brickell and

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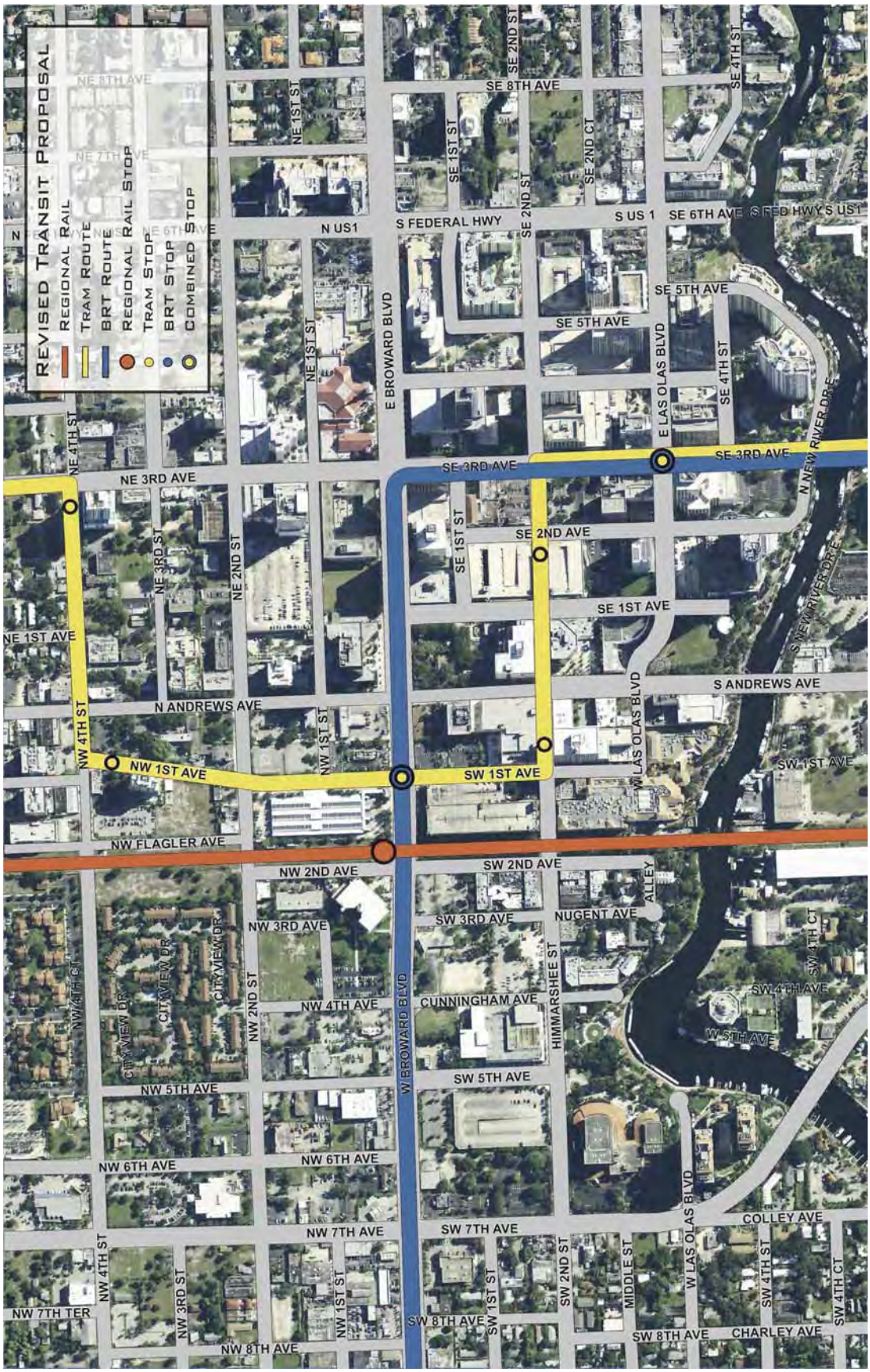

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LasOlas/E 3rd) where multiple corners receive stations. By simplifying both the individual paths and their interrelation, this proposal creates an integrated transit network that is easy for passengers to conceptualize and negotiate.

There is no doubt that the above proposal contains certain technical challenges that will have to be resolved, and each change will have pricing ramifications. It is based not on a thorough understanding of the specifications of the trains and buses that will be used, but rather on an understanding of what will cause them *to be used*—by fickle humans, most of whom will choose to drive if their transit experience is not utterly rewarding. That said, it would seem that a combined two-way path would be less expensive and cause less construction disruption than two one-way paths.

Other Transit Network Recommendations:

All the recommendations below are Short-Term.

<u>Platform Location</u>
Many of the streets in the study area a designated to hold the WAVE trolley. In some cases, the trolley is currently slated to be served by a center-street platform. This configuration theoretically makes sense if the street is to include a continuous planted median, or some other design feature that does not result in a continued overabundance of asphalt, and also as long as the presence of this central platform does not impede the provision of parallel parking along both curbs. Generally speaking, however, flanking stations would be a superior solution. Sidewalk stations are more convenient and comfortable, and don't result in the unpleasant widening of streets. Having a single shared facility may save money on stations, but it creates a situation in which the remainder of the middle of the street must be landscaped expensively if the street is not to be blighted by empty zones of striped pavement. Also, it is worth inquiring whether stations are necessary to load passengers onto streetcars at all, since trams are lower to the ground than buses and should only require a simple shelter for waiting passengers. Over-engineering the streetcar/pedestrian interface can make the streetscape less inviting for walking.

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One proposed WAVE station would remove much of the parallel parking shown in the background on SW 1st. Moving the station to the location of this tour bus would preserve that parking.

Trolleys *vs.* Pedestrians

Speaking more generally, the route and station placement of the WAVE streetcar need to be studied more closely to make sure that they are not undermining the walkability of downtown. Streetcars are essentially known as "pedestrian accelerators," and they only thrive where pedestrian activity is heavy. Anything that the WAVE does to deter sidewalk activity hurts both the downtown and the WAVE. For this reason, the WAVE must not be allowed to remove on-street parking (exposing the sidewalk and dooming retail), create an excess of asphalt (encouraging speeding), limit automotive access (killing activity), or clip building-site corners (eroding the streetwall). This mandate is already being violated by the proposed location of the WAVE station on the L-section of Las Olas / SW 1st, where it will remove half of the on-street parking from that already struggling retail location. It is likely that other similar circumstances exist.

Stranahan Stop

An important bus stop is located along Broward Boulevard just west of SE 1st Avenue, at Stranahan Park. Many patrons use this stop in lieu of the terminal, yet it is a mere bench. This stop should receive a more elaborate shelter that befits its significance.

Shelter Design

Canopies on new bus shelters should not be limited in depth as has recently occurred on Sistrunk Boulevard due to excessive requirements regarding roadway encroachment. If a bus shelter canopy does not overhang the curb, it does not encroach vehicles.

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PART V: SITE-SPECIFIC RECOMMENDATIONS

East-West Thoroughfares

BROWARD BOULEVARD

Broward Boulevard is a special problem with a special solution. The Broward Boulevard corridor is the heart of your community, but that heart currently pumps nothing but cars. Turning this noxious seven-to-nine-lane highway into a *complete street* that serves pedestrians, cyclists, and transit users as well as drivers is essential to the future of downtown.

Reconstructing this street is so important to the vitality of Fort Lauderdale that its design cannot be left to a mere report. As already imagined by City leadership, a major public planning effort must be launched to create a proposal that has the full support of local businesspeople and residents. Only then will the City have the capacity to negotiate effectively with the State and the County to produce the desired outcome.

With many lanes of high-speed travel directly against the sidewalk, Broward Boulevard feels particularly unsafe to pedestrians.

This process will take several years or more. It would be nice to know how many, in order to determine how much short-term investment in temporary improvements makes sense. Given that this is a State road, and will require a large amount of funding, this report assumes a five- to ten-year window, which suggests that relatively inexpensive stopgap solutions are warranted. . . thus the Short- and Mid-Term Recommendations below. Ultimately, the redesign of this corridor should be taken up in tandem with the redesign of Federal Highway through downtown as well, from the Kinney Tunnel north to NE 1st Street or beyond, focusing on the Federal Highway/Broward intersection.

Few of the recommendations below are Short-Term, since any modification to traffic flow will require a chain of State approvals. As with other sections, the longer term

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recommendations are so named because they will not be accomplished as quickly, but not because their pursuit should be delayed.

Short-Term Recommendations:

Curb Edge

Cars rarely jump the sidewalk on Broward Boulevard, but that's not how it feels to a pedestrian. The insertion of a solid, low attractive barrier along the curb would contribute considerable comfort where a narrow sidewalk sits directly against the roadway—the majority of its trajectory. Rather than constructing concrete Jersey-barrier type rails as can be found on the Andrews Avenue bridge, the sidewalk should receive a steel guardrail of approximately shin-height. As seen on Washington, DC's O Street Bridge, (and pictured below), these rails are attractive and unobtrusive, yet give pedestrians a sense of protection against stray vehicles potentially jumping the curb. Even more attractive than this barrier would be a hip-height hedge about 2 feet thick, but this investment only makes sense if the long-term complete-street reconstruction of Broward is many years away. Please note that the insertion of such a hedge would depend on the capacity to maintain a minimum 6-foot-clear sidewalk, but that the presence of such an edge is more important than maintaining clear-zones any wider than that.

Low steel rails give a feeling of safety to sidewalks directly against speedy traffic.

Shade Trees

Broward Boulevard currently offers its pedestrians little shade. Where a tree strip exists with gaps in the canopy, supplemental shade trees should be planted. Note that any future reconstruction should aim to maintain existing healthy trees in their current locations. If the goal is to attract pedestrians, than the future signature look of Broward Boulevard will have to be palm trees *and* shade trees, not just palms.

Broward/Federal Crosswalk

The Broward Boulevard / Federal Highway intersection markings do not clearly designate the crossing area for pedestrians, and should be modified to do so. It is currently a narrow white strip that seems more of a seam than a crosswalk.

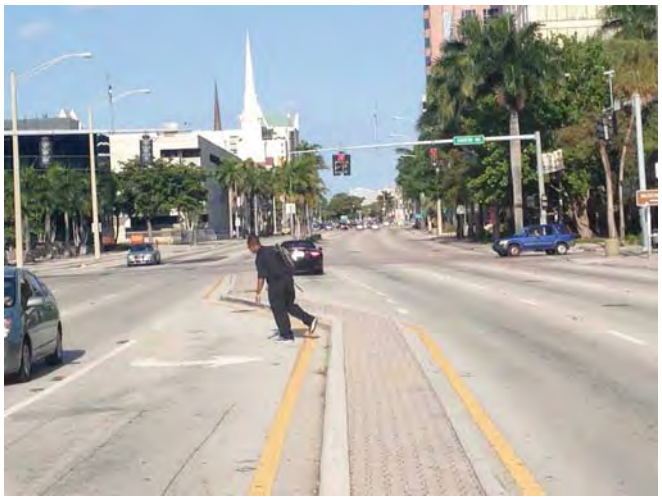
The important crosswalk at Broward Boulevard and Federal Highway does not look like a crosswalk.

Sidewalk Opportunities

Without moving any curbs, sidewalks in four locations could be widened by altering their interface with adjacent properties. They are:

- Along Stranahan Park
- The southwest Corner of Andrews Avenue
- The southeast corner of SE 3rd Ave
- Enfronting the vacant lot west of the Federal Courthouse.

All but the first of these require a negotiation with the adjacent property owner, but these could hopefully be undertaken quickly.



Jaywalking abounds on both Broward Boulevard and Federal Highway, yet seems to have caused few accidents.

Jaywalking

There has been much discussion about deterring jaywalking along Broward Boulevard, and good solutions exist, such as placing bollards connected by chains continuously

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along the roadway median. However, such solutions are expensive, and would be torn out in an eventual reconstruction. More to the point, as dangerous as it seems, there have only been two car/pedestrian incidents in this full stretch over the past six years. This data is not immaterial. If jaywalking cannot be demonstrated to have increased injury, it is not in keeping with the intentions of this study to advocate for its elimination.

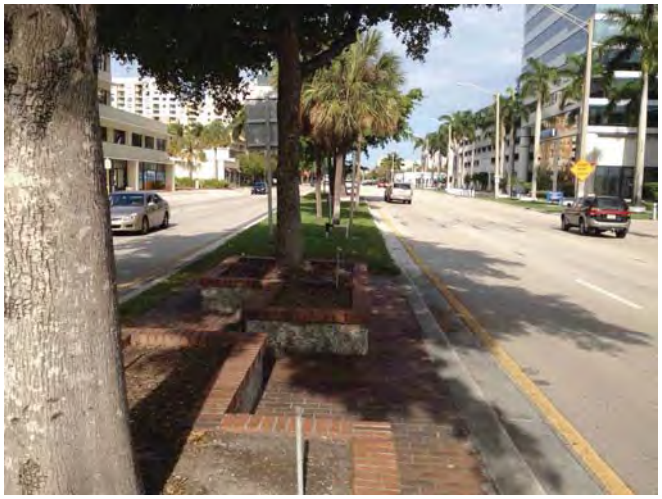
Mid-Term Recommendations

Narrower Lanes

While a careful survey was not conducted, most of the travel lanes on Broward Boulevard seem to be 12 feet wide or larger. Without changing any of the functional patterns on the street, these lanes should be restriped down to a 10-foot width in correspondence with the street's 35-mph speed limit. Doing so would create large buffers against each curb that should be marked with diagonal stripes. The additional distance from vehicles would make the sidewalks feel safer to pedestrians, and the appropriate lane widths would cause cars to drive closer to the speed limit.

Additional Crossings

Broward Boulevard should receive additional north-south crossings, signalized, at SE 1st Avenue and at Financial Plaza, where the super-long blocks to the north result in tremendous pedestrian inconvenience. These signals shall be carefully timed to synchronize with signals at surrounding intersections.



A new pedestrian crossing at Financial Avenue could make use of this refuge on Broward Boulevard.

Unnecessary Bus Lane

The indented westbound bus bay just west of Federal Highway is apparently little utilized and should be replaced with a full sidewalk. If a bus stop is to remain in this location, it should be moved several hundred feet west, where Broward has widened from two lanes to three.

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Unnecessary Turn Lane 1
The broad eastbound right-hand turn lane that runs between SE 3rd Avenue and Financial Plaza serves a small number of motorists. It should be eliminated and its sidewalk widened (with appropriate buffers).

Unnecessary Turn Lane 2
The long westbound turn lane that serves SE 1st avenue is underutilized and perhaps unnecessary. It should be shortened or removed, and replaced with a treed green median, or a striped one if reconstruction is imminent.

LPIs on Broward
All signals along Broward shall receive LPI (Leading Pedestrian Interval) timing, and lengthy signal cycles shall be shortened as feasible. Please note that "Pedestrian Scramble" or "Barnes Dance" signalization regimes are not recommended for any intersection in this study. Most pedestrian routes across the downtown are not due north-south or east-west, but diagonal, and a standard intersection provides the opportunity to cross in one direction at all times. Walkers like to keep walking, and dedicated signals kill momentum.

Long-Term Recommendations

Broward Redesign
Broward Boulevard should eventually be transformed into a *complete street* through a public design process. This street should ultimately include four lanes of travel (plus left-turn lanes at key intersections), separated bicycle facilities, and parallel parking along both curbs. This last item is essential if the street is to hold retail along its edges, as it should. The street will also hold the BRT, which should likely travel within two of the principal four lanes through this limited stretch, given the desire for a reasonable street width. The need to fit both bikes and parking is probably best satisfied by combining the bike lanes into a single two-way facility separated by a narrow buffer.

Juror Wayfinding
Concurrent with the transition from 7 lanes to 5, Broward Boulevard should include wayfinding at 7th Avenue directing County jurors south across the New River and onto SW 7th Street. This wayfinding would help reduce rush-hour trips along the downtown stretch.

Roundabout 1
In conjunction with the remaking of Broward Boulevard, the Broward Boulevard / Federal Highway intersection should be replaced by a two-lane roundabout. As discussed ahead, Federal Highway maintains a section of only 4 lanes as it emerges from the Kinney Tunnel, so a 2-lane roundabout is the appropriate intersection for this street with a newly-four-lane Broward Boulevard. If separated bike lanes are to be continued east of Federal Highway, then the roundabout proposed for this intersection will have to be designed to bring bikes through safely. One solution would be to use bold markings

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and a reduced speed limit to carefully merge bicyclists into the outer travel lane. Further study of this bike-roundabout interface is needed.

Roundabout 2

There is also discussion of the placement of a roundabout at W 7th Avenue, but a transition from 7 lanes to 5 lanes in this location is better accomplished through a dedicated right-hand turn lane than a roundabout.

LAS OLAS BOULEVARD

Changes suggested to Las Olas Boulevard reflect the fact that it constitutes the eastern half of the downtown's east-west Primary Axis of Walkability.

Short-Term Recommendations

2-lane Section

Las Olas Boulevard is poised to be the principal walking axis from beyond Federal highway to its terminus at Brickell Avenue. Its limited role in the traffic network does not justify its 4- to 5-lane cross section, and the sidewalks can be protected immediately by adding marked parallel parking wherever it is missing along the entire trajectory from Federal to Andrews. This trajectory includes the curve alongside the Art Museum, which is not too sharp to be parked easily.

This section of Las Olas is one of several where the outer travel lanes should be replaced by parallel parking.

Parking Ban

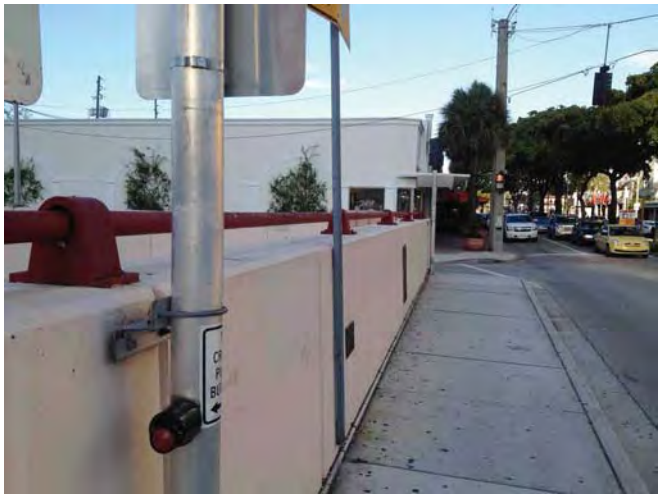
In some locations, Las Olas Boulevard contains parallel parking, but these zones are burdened by no-parking-during-rush-hour regulations (and, in some places, for much of the day). These regulations should be eliminated. As the principal axis of walkability, Las Olas (and W Himmarshee) should be right sized to provide pedestrian comfort first. If traffic backs up, drivers can choose instead to go east or west on any other east-west

street—in other words: *any street other than Fort Lauderdale's best shot at achieving pedestrian culture.*

It is doubtful that parking bans along Las Olas and Himmarshee are truly needed.

Bike Facilities

Where the street width allows (44 feet without turning lane, 54 feet with), two 5-foot bike lanes should also be added to Las Olas, between travel and parking lanes. (44 feet would result in the following cross section: 7-5-10-10-5-7.) Where the street width does not allow bike lanes, the travel lanes should be marked as *sharrows*.



This thick baluster along the north edge of Las Olas creates a dangerous circumstance for pedestrians headed west.

Bad Baluster

The bridge baluster on the north side of Las Olas Boulevard as it crosses the Kinney Tunnel entrance is too tall and opaque, blocking southbound driver views of westbound pedestrians. This baluster is believed to create a dangerous enough condition that the City has suggested requiring pedestrians to cross to the south sidewalk for this one

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section of the street. Such a solution puts the pedestrian's convenience last. A proper solution would tear out the offending baluster and replace it with a transparent one (composed of vertical members spaced approx. 4 inches on center). This baluster should turn the corner and wrap about ten feet to the north so that views are possible around the corner.

Sidewalk Extension

In anticipation of such a solution, the street could receive a temporary sidewalk extension for the width of its outer westbound lane, which is absolutely unnecessary for traffic flow. Both this lane and the outer eastbound lane (against the Cheesecake factory) should eventually receive parallel parking (the latter immediately), as they represent an unnecessary widening of Las Olas' 2-lane section. Against the offending baluster, however, a well-placed planter could direct pedestrians away from the baluster onto a temporary (Trex) sidewalk extension in this future parking lane, making them more visible to cars heading south.

Two-Way Bend

Theories abound about the failure of the River Front, but traffic flow, or its lack, has not received adequate attention. In a national best-practices context, the fact that Las Olas takes a one-way path through River Front is relevant, as one-ways have been associated with retail failure, and their reversion to two-way associated with success (See: Alan Ehrenhalt, "The Return of the Two-Way Street," *Governing Magazine.*) A westbound driver, trying to go through River Front, is thwarted by a Do Not Enter sign at Andrews, and must instead turn north to Himmarshee. The reversion to two-way may present a challenge to the current path of the WAVE streetcar, and the two issues need to be studied in tandem. Several decades of experience in places like Tampa and Memphis suggest that two-way traffic on Las Olas / Brickell will do more for the River Front's success than a rail line.

WAVE *vs.* Parking

The route of the new WAVE streetcar, if it does loop onto the L section of Las Olas / SW 1st, should locate its station closer to the L corner so as to not remove many parallel parking stalls from that street. These stalls are essential to retail viability.

Mid-Term Recommendation

Shade Trees

Gaps in tree cover on Las Olas boulevard should be filled with shade trees.

Long-Term Recommendation

Retail Bridge

To truly enliven Las Olas Boulevard and to ensure that its eastern vitality continues west across Federal Highway, a deck should be built above the northern tunnel entrance to a distance of perhaps 70 feet—as far north as the downward slope of Federal Highway allows. This deck should be filled not with a green, as open space is ample in this area,

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but with a building that places a shop or café against a 12-foot-deep sidewalk to its south, against Las Olas.

SOUTH 2ND STREET (HIMMARSHEE)

Changes suggested to Himmarshee Street reflect the fact that it constitutes the western half of the downtown's east-west Primary Axis of Walkability.

Short-Term Recommendations

Bike Lanes
South 2nd Street is designated as the prime walking corridor from Brickell Avenue to 7th Avenue. Along some of this route, restriping the street's driving and parking lanes to roughly 10 feet and 7 feet respectively will allow for the addition of two 5-foot bike lanes. Since both Brickell and 7th Avenue are to become bike corridors (discussed ahead), bike facilities should be inserted for this full trajectory. Where insufficient room exists for two designated bike lanes, vehicular lanes should be marked as *sharrows.*

Two-Lane Section
While it may not look so special, S 2nd Street between Brickell Avenue and the FEC corridor is the key block connecting the walkability of the River Front area (and, by extension, Las Olas) with the walkability of the Himmarshee Street corridor to its west. To make the sidewalks feel safe, it is essential that this one-block corridor be restriped to trade its 4-lane section for a 2-lane section including parallel parking for the same hours as the block to its west (and ideally around the clock, as discussed ahead.)

As Himmarshee heads under this parking garage, there is no indication that the southern sidewalk continues safely to the right of the elevator.

Hidden Sidewalk
As one walks east under the parking garage at S. Second Street and E 1st Avenue, it is not clear that one can find a safe sidewalk by skirting the right flank of the elevator. This

opportunity should be clearly marked, and the dangerous 18-inch path along the roadway should be blocked.

Parking Ban

Please see "Parking Ban" under Las Olas above. The same reasoning applies here, where the most significant pedestrian corridor in downtown should not be asked to bear an undue traffic burden. If necessary, an experiment should be conducted in which police vehicles are placed in the parking lanes along the north side of Himmarshee Street during the two-hour evening period in which such parking is illegal. A similar experiment should be conducted on the south side of the street during the morning rush. If rush-hour traffic does not become a nuisance and remain so after several days, these bans should be eliminated immediately. This police cruiser test could also be applied to East Las Olas if deemed necessary to convince authorities.

A tale of two sidewalks: banned rush-hour parking along the north side of Himmarshee produces the anticipated result:

To the south: vital sidewalk dining.

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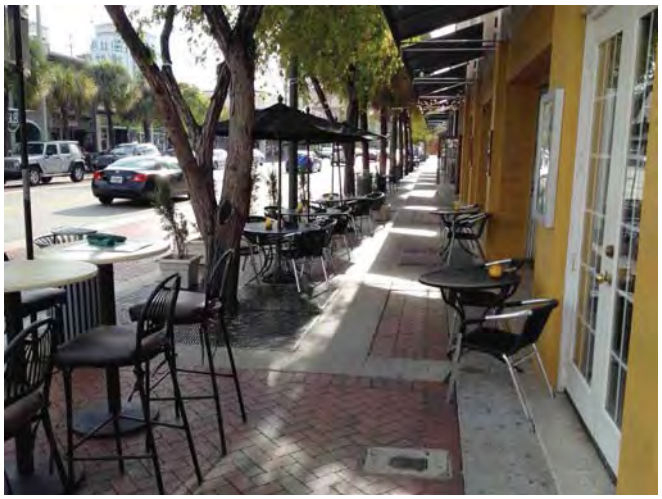

To the north: a very sad happy hour.

THE RIVERWALK

It is the Riverwalk's destiny, perhaps in 2030, to loop continuously along the north and south edges of the New River. This delay seems currently insurmountable due to the marinas that line the southern edge. For the intervening generation of pedestrians, a new loop is needed and, for recreational walkers, this loop needs to be clearly marked and understood as a circuit.

Three active marinas on the south side of the Riverwalk impede the creation of a full north-south walking loop.

Short-Term Recommendations

<u>A Temporary Loop</u>
As suggested by the primary walking designation of Las Olas and Himmarshee, that loop needs to consist of those two streets, the Riverwalk, and the north-south connectors at West City Avenue and S 4th Avenue. Roughly 2.5 Km in circumference, this loop should be clearly established in the public consciousness with wayfinding and marketing that

make it understood as an integrated community asset. For example, the cultural-themed banners that line the Riverwalk should be continued through the entirety of this loop.

The Last Block

It would be a Historic Preservation travesty if Stranahan House were to impede the connection of the Riverwalk to the plaza above the Kinney Tunnel, which is its natural link to the walkability and tourism of the E Las Olas corridor. Concurrent with the extension of the Riverwalk in front of the Icon property, this key leg of must be built. Indeed, if Icon is not slated to happen quickly, this full link should be completed prior. It would run directly along the river connecting the bottom of SE 5th Avenue to the Plaza.

A Straighter Walk

Just west of the Railroad tracks, the Riverwalk descends circuitously to grade in order to allow wheelchair axis. The existing baluster should be cut in its southwestern corner to allow steps to descend in a more efficient westerly trajectory. In the current condition, pedestrians are forced to double back unnecessarily.

Mid-Term Recommendation

An Underused Plaza

The plaza atop Kinney Tunnel west of the Cheesecake Factory is a powerful location for linking E Las Olas with the rest of Las Olas and the Riverwalk, as described above. As it approaches the water, this plaza should be activated as much as possible. The water's edge in this location would make an ideal hub for any new water taxi or ferry service under consideration. (This plaza is the ideal location for the City's next bike-share station, as already planned.)

NORTH 2ND 3RD AND 4TH STREETS

The south-side curb on this section of N 2nd Street is one of many that has room to accept absent parallel parking.

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N 2nd Street, N 3rd Street, and N 4th Street all possess excess pavement width for the uses currently supported. Further, none of these streets handle large amounts of traffic, and all are firmly under City control, allowing immediate improvement.

Short-Term Recommendations

Putting Pavement to Better Use

Since these streets are not about to be rebuilt anytime soon, they should be restriped now based on a kit of parts that includes 10-foot travel lanes, 7-foot parking lanes, and 5-foot bike lanes where they can be inserted continuously. Where interruptions to bike-lane continuity are caused by a left-hand turn lane, such turn lane should be eliminated. (Given the speed of N-S traffic and the limited E-W traffic at these intersections, right-hand turn lanes are more useful to traffic flow than left-hand turn lanes in these locations. If deemed necessary, such short lanes can be located against the curb in the parking zone, beyond the bike lane.) The discontinuity of N 3rd Street suggests that N 2nd and 4th make more sense as regional bicycle ways. That said, there is no harm in adding bicycle facilities to N 3rd street as well if these do not impede the provision of parallel parking lanes. On these streets, parallel parking should first be inserted along all curbs where there is room for it if: a. there is a likelihood that it will be well used; and b. there are not so many curb cuts that said parking cannot be provided efficiently. Then, in the remaining roadway, bike lanes should be inserted wherever an additional 10 feet of pavement is available for two 5-foot lanes. On these corridors, where insufficient room exists for designated bike lanes, the vehicular lanes should be marked as *sharrows.*

N 3rd Street is one of many thoroughfares that contains vastly more pavement that its current use requires.

The WAVE on N 4th

N 4th Street will hold the WAVE trolley, currently slated to be served by a center-street platform. This configuration makes sense if the street is to include a continuous planted median, or some other design feature that does not result in a continued overabundance of asphalt. Otherwise, two flanking stations would be a superior solution here, and would thus allow the modifications suggested above.

Flagler Greenway Shift—East

The Flagler Greenway will parallel the existing FEC Corridor as it heads south through downtown, but then must branch off it at NW 2nd Street, where its ROW is narrowed. Here, bicyclists should be given the option of jogging east on NW 2nd to Brickell Avenue to enter the downtown, or jogging west on NW 2nd to W 7th Avenue, to take the Greenway further south. On the northern edge of the Broward Central Terminal, NW 2nd street should be restriped (without eliminating any parallel parking) to include two 5-foot bike lanes connecting the Flagler Greenway to Flagler Avenue. This change means eliminating the second eastbound lane for bus access. Such elimination does not pose a problem, since buses are allowed to encroach upon bike lanes as they turn.

Flagler Greenway Shift—West

From the FEC Corridor to W 7th Avenue, the Flagler Greenway should share the right of way of NW 2nd Street. Florida DOT is apparently in the middle of adding new pedestrian and bicycle facilities to this trajectory, but we have not yet seen a design, if one exists. If the design is not yet cast in stone, it is strongly advised that the ultimate solution not kill mature street trees that make the street walkable, nor remove more than one of the street's two flanking sidewalks. Potential solutions include:

1. Designating one of the street's two sidewalks as a two-way bike lane and widening it to 8 feet;
2. Boldly marking the street's two travel lanes as *sharrows;* or
3. Dividing the existing pavement into an 8-foot two-way bike lane (on the north flank to skirt the fire station) and a two-way travel lane that absorbs the remaining width of the street.

This width, from as little as 13 feet to somewhat larger, should be a single driving lane handling traffic in both directions, with no center stripe. Far from creating a hazard, such shared lanes have been shown to create safer conditions for all modes of travel, by engendering lower vehicle speeds. Cars passing each other (or buses or fire trucks) from the opposite direction will slow to a speed that is ideal against a bike facility. It is unlikely that such a pedestrian-friendly concept is in keeping with the DOT's designs for the street, so these should be reviewed and potentially reconsidered as soon as they are available.

N 1ST STREET

N 1st Street also suffers from excess pavement and some missing crossing signals.

Short-Term Recommendation

Striping and Signals

Where the roadway of N 1st street meets or exceeds 27 feet, a 7-foot parking lane should be added along the curb least interrupted by curb cuts. Crossing signals are recommended where N 1st Street crosses E 3rd, Andrews, and Brickell Avenues.

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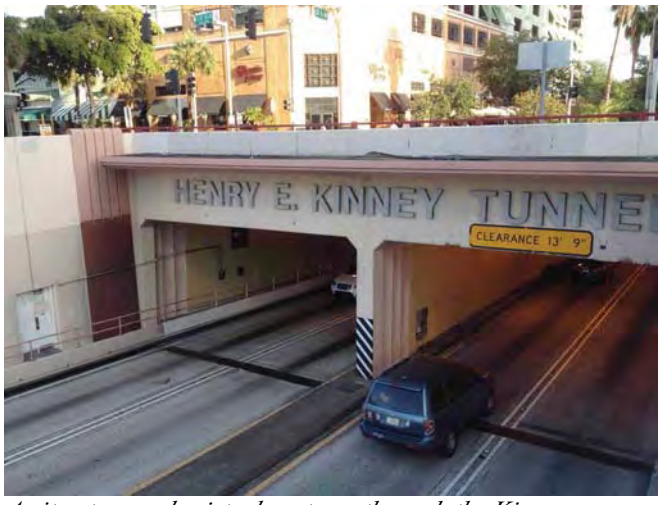
North-South Thoroughfares

FEDERAL HIGHWAY

Federal Highway does not play the same sort of role as Broward Boulevard in the functioning of the downtown. Of concern here is not the pedestrian life along it, which has little short- to mid-term potential, but rather the quality of its crossings, which should not deter people from walking to the downtown. Right now, not a single crosswalk exists across Federal Highway between Broward Boulevard and N 4th Street—a distance of more then a quarter mile. This can be amended in the mid-term. Longer term, the number of lanes that pedestrians have to cross should be reconsidered, since this seven-laner is only 4-lanes wide where it emerges from the Kinney Tunnel.



As it enters and exists downtown through the Kinney Tunnel, Federal highway is only 4 lanes wide. It should retain that basic dimension (plus turning lanes) through downtown.

Short-Term Recommendations

Signals
At all crossings of Federal Highway, especially at Broward Boulevard, signal timing should be adjusted to include LPIs (Leading Pedestrian Intervals).

Shade Trees
Where a tree strip exists with gaps in the canopy, supplemental shade trees should be planted to help bring down vehicle speeds.

Jaywalking
If the City is determined to deter mid-block jaywalking, Federal Highway should receive bollards connected continuously by chains along its entire central median (within the study area), wherever crosswalks are not present. However, as with Broward Boulevard, such a measure is not recommended.

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Mid-Term Recommendation

Crosswalks
If it is not to be a pedestrian barrier to downtown, Federal Highway should receive crosswalks and pedestrian-request signals at NE 2nd Street, and eventually also at NE 1st and 3rd Streets.

Long-Term Recommendations

Four Lane Section
When a roundabout is constructed at the intersection of Federal Highway and Broward Boulevard, Federal Highway must be reduced to a 4-lane road in the full stretch between NE 4st Street and the Kinney Tunnel. This may require the alley access behind Starbucks to be dead-ended. It must be noted that Federal Highway maintains a 4-lane section through the Kinney Tunnel, a condition suggesting that two lanes in each direction, plus turning lanes where necessary, is adequate in this area. Beyond the boundaries of this study area, it is likely that the above changes would suggest that a 4-lane section be instituted all the way north to Sunrise Boulevard.

Low Barrier
If it is deemed worthy of investment, the sidewalk edges of Federal Highway would benefit from the installation of a low steel barrier of the type recommended for Broward Boulevard.

BRICKELL AVENUE

For many reasons, Brickell Avenue (W 1st Avenue) should be designated as a principal pedestrian corridor through the downtown. These include:

- The presence of F.A.T. Village and a large number of new residential apartments to its north;
- Its southern termination at Las Olas Boulevard and the gateway to River Front;
- Its alignment against both the One-Stop Shop transit facility and the Broward Central Terminal;
- Its designation as a significant axis in the WAVE route;
- The presence of higher-quality urbanism along its flanks in some locations;
- The fact that it is not a County street;
- Its relatively light traffic loads; and
- The inferior walkability of surrounding north-south thoroughfares.

Short-Term Recommendations

Redesign
The short-term transformation of Brickell Avenue should eventually include new streetscape in areas where sidewalks and trees are lacking. In the immediate term, it should be restriped to make full use of its current curb-to-curb measurement through the

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insertion of a 7-foot parking lane wherever one is missing and the continuous addition of two 5-foot bicycle lanes. Such an arrangement means the elimination of the center left-hand turn lane, which is not needed on a street of this volume. The one exceptional block occurs against the Broward Central Terminal, whose roughly-50-foot pavement should be restriped as follows, from west to east: 8-foot drop-off lane, 6-foot bike lane, two 11-foot travel lanes, 6-foot bike lane, and 8-foot parking lane. (An alternative section, also recommended, would be 7-3-5-10-10-5-3-7, where the 3s refer to buffer zones to protect bikes from car doors.) On this block, the redundant northeastern bus driveway should be eliminated, as buses can easily exit onto NW 2nd street and then turn south on Brickell at the corner.

If Brickell Avenue is to become an important pedestrian axis, as suggested, its vast pavement must be restriped to accommodate biking and more parking.

WAVE Interface

N. Brickell Avenue will hold the WAVE trolley, currently slated to be served by a center-street platform. This configuration makes sense if the street is to include a continuous planted median, or some other design feature that does not result in a continued overabundance of asphalt. Otherwise, two flanking stations would be a superior solution here, and would thus allow the modifications suggested above.

E 3RD AVENUE

For many reasons, E 3rd Avenue should be designated as a complete street through downtown. These include:

- The presence of many new housing units nearby north of downtown;
- The Avenue's wide right-of way;
- Its convenient connection to the Flagler Greenway coming in from the north;
- Its lesser contribution to the regional automotive network than Federal Highway, Andrews Avenue, or 7th Avenue;
- Its direct New River crossing and its capacity to easily accept bicycle facilities as it continues south; and

- Its designation as a part of the WAVE streetcar route.

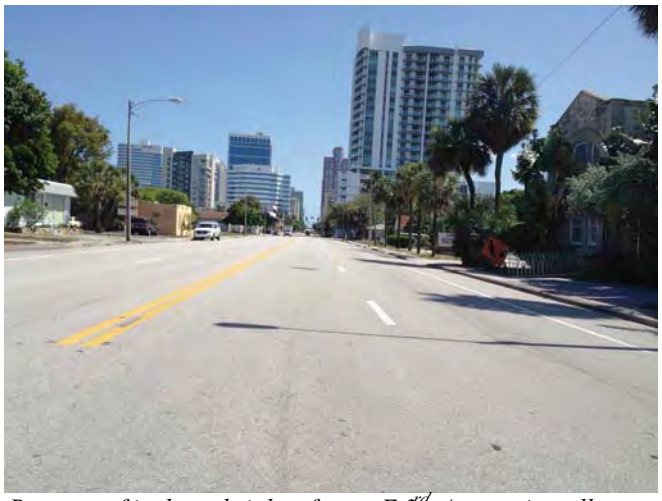
This transformation is designated as Mid-Term because it requires County approval.

Short-Term Recommendation

Low Barrier
As they head across the 3rd Avenue Bridge and the 7th Avenue Bridge, these avenues' flanking sidewalks do not feel adequately protected from their roadways. These sidewalk edges should receive a low steel barrier of the type recommended for Broward Boulevard.

Mid-Term Recommendation

Restriping
The proposed cross section would eliminate 2 of E 3rd Avenue's 5 lanes. One would be redesignated as a parking lane, and the other as a two-way 8-foot bike lane protected by a three-foot striped buffer containing plastic cycle flags (inexpensive breakaway bollards). No curb reconstruction would be necessary. This transformation would continue across the 3rd Avenue bridge, where the parking lane would instead take the form of a "green roof" amenitizing the roadway.



Because of its broad right-of-way, E 3rd Avenue is well suited to becoming a complete street through the transition of two travel lanes to parking and biking facilities.

ANDREWS AVENUE

As a County road, Andrews Avenue will also take some time to change. Improvements planned for Brickell Avenue nearby take some pressure off this axis as a key component to the Network of Walkability, but it will eventually have to feel more welcoming if that network is to thrive.

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Mid-Term Recommendations

A Ramp Too Far

An inconvenience leads to a unpleasant condition for pedestrians crossing the Andrews Avenue Bridge, where a circuitous spiraling ramp adds two full minutes to the time it takes to cross the river. The frustration of mounting this ramp, plus the discomfort of the hidden passageway to reach it, causes many pedestrians to walk straight over the bridge in an unmarked 2-foot-wide shoulder, directly in the path of speeding cars. While no pedestrians have been hit on this bridge in recent years, pedestrians should be provided with a better alternative to the current path.

The designated pedestrian passage to and from the Andrews Avenue bridge attracts few people.

Many pedestrians prefer to take their chances walking among the fast traffic.

An easy solution lies in the fact that the bridge's four lanes are apparently 12 feet wide which, in addition to encouraging speeding, takes up excess room. By restriping these lanes at ten feet, an additional six-foot sidewalk zone can be placed in the roadway,

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protected by a solid hip-high barrier like the one that appears at the spiral ramp. A careful design solution at the operable span would transition this protected path into the one that already exists from this point north.

Off-Peak Parking
Both pedestrian safety and business viability along Andrews Avenue would be improved tremendously by placing off-peak parallel parking against both of the curbs, turning this 5-laner into a 3-laner during non-rush-hour periods.

Long-Term Recommendation

The 2007 Design
The long-range reconstruction of Andrews Avenue should eventually occur along the lines of the design shown in the City's 2007 Design Guidelines.

W 7TH AVENUE

Due to its high traffic volume, lack of supporting uses, and lateral location, most of W 7th Avenue is not considered a part of the Network of Walkability in either the short or long term. However, its high-speed lane widths contain extra pavement that can be put to better use in support of the southern extension of the Flagler Greenway. Also, given that it does receive pedestrians across its New River bridge, this segment of the roadway deserves attention.

Short-Term Recommendation

Bridge Repair
See recommendations above for the sidewalk on the E 3rd Avenue and W 7th Avenue bridges.

Mid-Term Recommendation

Flagler Greenway Extension
W 7th Avenue will remain a principally vehicular thoroughfare, but it should receive the Flagler Greenway along its eastern flank from NW 2nd Street south, across the New River and beyond. This can be accomplished within the existing roadway by turning each of the street's roughly-12-foot lanes (high-speed) into 10-foot lanes (moderate speed), and thus gaining approximately 8 feet for a two-way bike lane protected by a 1-foot striped buffer containing cycle flags. This facility can continue over the four-lane section of the New River bridge span by widening the bridge's eastern sidewalk by approximately 5 feet to allow for a shared bike/ped facility (with appropriate ramps up and down from the bike lane in the roadway). As it heads further south, the Avenue should maintain its 8-foot bike flank consistently until it receives its median at SW 9th Street, where it should most likely split into two 5-foot bike lanes on opposite sides of the street.

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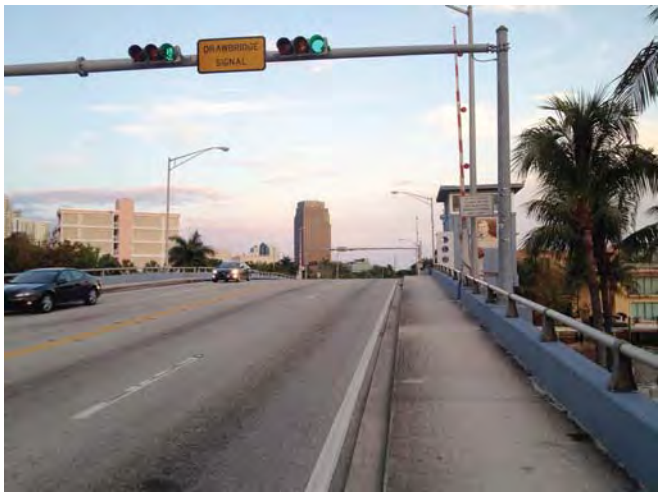

Right-sizing the broad travel lanes over the 7th Avenue bridge would allow for a wider sidewalk accommodating both pedestrians and bicycles.

SE 1st AVENUE

Short-Term Recommendation

Excess Roadway
The block of SE 1st Avenue south of Broward Boulevard is considerably wider than the rest of its section. Against the park, the parallel parking should be replaced by (45-degree) angled parking to make better use of excess roadway.

SW 5th AVENUE

Short-Term Recommendation

Excess Roadway
North of Himmarshee Street, SW 5th Avenue is much wider than it needs to be, containing 5 travel lanes approximately 11 feet wide for just one block. This street does not handle enough traffic to merit 4 lanes, and it does not face enough opposing traffic across its intersections to merit left-hand turn lanes. The street should be restriped to contain parallel parking, two lanes of traffic, and a five-foot bike lane in each direction. It is unlikely that pulse events of drivers entering and exiting the parking deck will cause a two-lane street to become too jammed here, as the parking facility can only process cars so quickly. That said, it should be tested with temporary markings before the striping is made permanent.

Mid-Term Recommendation

Improving the Network
As it crosses Himmarshee, SW 5th Avenue should continue as a real through-street connecting past the front of the Center for the Performing Arts (in place of the current

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valet drive) to the small roundabout at the riverfront end of W Las Olas Boulevard. Like Las Olas, this stretch of streets should be two lanes wide, with two parking lanes available for both parking and patron drop-off. This concept has been suggested for some time and would improve both street-network connectivity and Riverwalk visibility.

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Infill Sites

As discussed in the chapter on Urban Triage, certain sites flanking roadways must receive new construction if the Primary and Secondary Networks of Walkability are to become complete. These are illustrated in the *Infill Sites* drawing within that section. Most significant among those sites are the ones described below.

Short-Term Recommendations

The Key Site on Broward

The empty lot west of the Federal Courthouse on Broward Boulevard should be incentivized for the development of high-density housing that can dramatically lower its required parking ratio by taking advantage of empty nighttime spaces in the large City garage to its north. This site should also provide a block cut-through that exits onto Broward Boulevard towards its southwest corner, near SE 1st Avenue. Placing housing in this area will bring much-needed nighttime occupancy to the Broward Boulevard corridor. A hotel would also work well in this location.

By making use of the vast parking structure behind it—empty all night—this key missing tooth on Broward Boulevard could provide high-density housing at an attainable cost.

An Artless Wall

The architect of the Art Museum was no doubt an admirer of Le Corbusier, who said that "Architecture is the masterly, correct, and magnificent play of masses brought together in light." Unfortunately, that definition does not consider architecture's responsibility to give active or at least interesting edges to sidewalks. The Museum's giant blank south-facing curved wall should receive some sort of artwork, vertical planting, or both. An evening video projection should be considered as well.

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If huge blank walls attracted pedestrians, the Museum of Art would be a walker's Mecca.

River Front

The L-shaped section of Las Olas should be better connected to the Riverwalk by eliminating the two bridges within River Front that block views of the river. These bridges play a limited functional role in the complex, and present a psychological barrier between the downtown and the river.

The bridges within River Front obscure the Riverwalk from downtown.

Las Olas Gaps

Three key gaps along Las Olas need to receive expedited assistance to complete the spatial definition of this axis. As shown in the Infill Sites drawing, they are the Icon site east of SE 5th Avenue, the empty lot east of SE 1st Avenue (on the south side of the street), and the small green area across Las Olas, adjacent to the Broward College building. All of these should be developed in accordance with a requirement for storefronts against the sidewalk.

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Himmarshee Gap
A key gap exists along Himmarshee Street between SW 3rd and SW 4th Avenues, where a large surface parking lot ruins the spatial definition of the street. This gravel parking lot is approximately 250 feet deep. Only its front edge (against Himmarshee) needs to be built upon to properly front the sidewalk. The City should focus its resources in the short term towards the redevelopment of this crucial site connecting the Museum of Discovery and Science and the Center for the Performing Arts back to the lively 2nd Street / Las Olas corridor.

Back to Front
In the student area of SE 1st Street, between 1st and 2nd Avenues, the three businesses within the parking garage should be encouraged to place front doors against the street, as has already been suggested by others.

One-Stop Shop
The design of the "One-Stop Shop" transit facility, currently being put out to bid, is conceptualized as placing fronts to Andrews Avenue, NW 2nd Street, and NW 4th Street, the latter against a neighborhood green. Streetcars will be entering and exiting via Brickell Avenue, and it is easy to imagine that street as a rear. However, the importance of the Brickell Avenue axis into downtown and the presence of the new Eclipse apartment (plus streetscape) across Brickell suggest that the western face of the facility must present a pedestrian-friendly face against an improved streetscape. Given the Network of Walkability in this area, this Brickell face is actually considerably more important than the Andrews Avenue face.

Mid-Term Recommendations

Over-Wide Curb Cut
The bank drive-thru across Broward Boulevard from SE 1st Avenue currently has a curb cut about 30 feet long, and then quickly widens to provide 5 drive-thru lanes, each about 150 feet long. Given its one-way trajectory and the fact that no more than a few cars are ever waiting at each ATM, the curb cut should be narrowed to 12 feet and the pavement should not widen to 5 lanes until it is considerably closer to the ATMs.

River Front Residential
While not currently planned, it seems likely that the best additional strategy for rejuvenating River Front would be the inclusion of a large residential component, as has previously been proposed. Having many residents directly above the Riverwalk here would enliven both that pedestrian corridor and its struggling retail.

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Important Facades

Because it is the key block connecting the walkability of the River Front area with the walkability of the Himmarshee Street corridor, S 2nd Street between Brickell Avenue and the FEC corridor should be designated an area for façade improvement and activization.

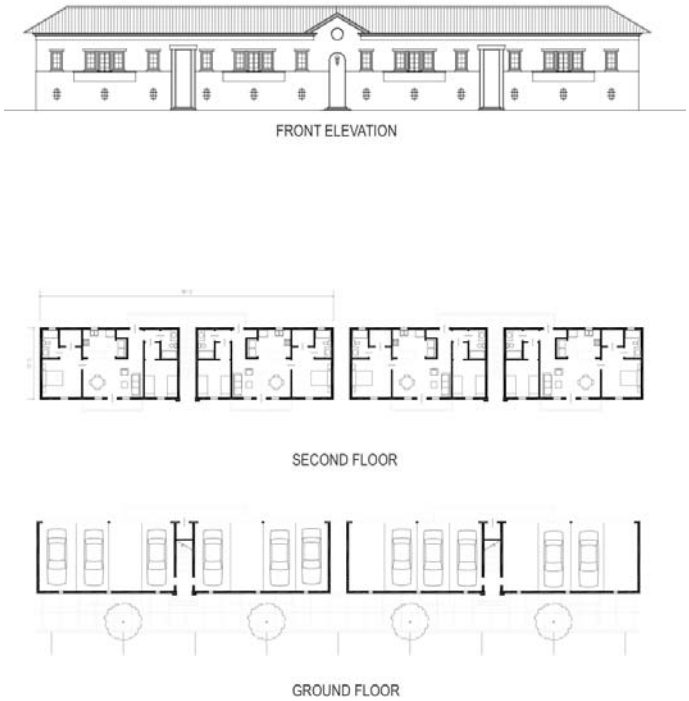
This important stretch of Himmarshee—between River Front and the restaurants along the FEC Corridor—needs more active facades if those two locations are to support each other.

Missing Edge

In order to enhance the corridor's walkability, the parking lot on the east flank of Brickell Avenue just south of Broward Boulevard should be redeveloped as a building site. Only the western edge of this lot is needed to give proper frontage to Brickell, and solutions should be investigated for transferring the displaced parking to (and providing additional new parking in) the existing parking structure across the street.

This stretch of Brickell Avenue, just south of Broward, has a strong need for sidewalk-facing buildings to its east (left side of photo).

The ideal building type for performing the function described above is a "Lot-Liner," which displaces limited parking and provides attainable housing above, as pictured below.



As designed by DPZ, Lot-Liner buildings sit atop parking spaces to create pedestrian-friendly edges against sidewalks.

Long-Term Recommendations

Broward Frontage

Once Broward Boulevard is turned into a complete street as described above, new attention can be given to all its enfronting properties from Andrews Avenue west, which will hopefully redevelop over time. Currently, not a single building along this stretch could be considered the highest-and-best use of a truly walkable urban boulevard. The reconstruction of this Boulevard will have to be undertaken hand in hand with a new code requiring a higher standard or urban performance for new properties, including build-to lines at the sidewalk edge, minimum heights, active facades, mandatory awnings or arcades, and superior streetscape provision and maintenance, among other requirements.

Key Corner

The parking lot at the northwest corner of Broward Boulevard and Federal Highway, now containing a SunTrust ATM, should eventually be reconfigured as a building that

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properly holds the corner, with doors facing both streets. Completing this Main/Main intersection is worthy of City financial incentives once the Primary Network of Walkability is complete.

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PART VI: NEXT STEPS

The central message of this report is about the need for setting priorities, and what those priorities should be. For that reason, any further discussion of timing is redundant. Nonetheless, it is worth repeating that the establishment of the Primary Network of Walkability should be considered the first and most important strategy for bringing street life to downtown Fort Lauderdale.

No recommendation is included in this report unless it is believed to be important to the walkability of downtown. Prioritizing the Primary and then the Secondary Network of Walkability, City leadership should review all of these recommendations, and determine which it wishes to pursue. Each recommendation should then be assigned a primary responsible agent and a timeline. A mentioned, the mid- and long-term recommendations are not meant to be delayed; rather, they have been categorized as such because they will take more time to accomplish, even if begun immediately.

In terms of the shorter-term recommendations, a small number of "easy-win" items could be accomplished immediately, with a dramatic impact on the life of the downtown. While the prior discussion makes clear what these are, it would perhaps be useful to conclude with a list of these items. They are chosen because they are either of the highest priority, most easily accomplished, or both:

<u>The "Just Do It" Roster for Immediate Action:</u>

1. Restripe Las Olas to a consistently 2-lane-plus-parking section, adding bike lanes were there is room and *sharrows* where there is not. Eliminate the rush-hour parking bans.

2. Do all the same for Himmarshee from Brickell to W 7th Avenue.

3. Reinstitute 2-way travel to the western bend of Las Olas / Brickell.

4. Create a consistently amenitized wayfinding loop connecting the Riverwalk, Las Olas, W Himmarshee, and W 4th Avenue.

5. Restripe Brickell Avenue to include consistent parallel parking and bicycle facilities.

6. Restripe N 2nd and 4th Streets to include bicycle lanes or *sharrows* (as space permits), and parallel parking as space further permits on all three streets, as further discussed in these recommendations.

7. Restripe N 1st and 3rd Streets to include parallel parking as space permits.

8. Replace parallel parking with angled parking along the over-wide block of SE 1st Avenue just south of Broward boulevard.

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9. Restripe SE 5th Avenue Between Broward and Himmarshee to include parallel parking and bicycle lanes.

10. Use every incentive at the City's disposal to speed development of the ten infill sites along the Primary Network of Walkability.

All told, this report contains hundreds of recommendations, but the above ten, accomplished quickly, could have a greater impact than all of the others combined.

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APPENDIX: PRIORITIZED SUMMARY

For geographical simplicity, and also to give a sense of how thoroughfares might evolve over time, the site-specific recommendations in this report have been organized by location. In order to assist with implementation, they are reorganized below based on priority. Each entry below is accompanied by the page number of the recommendation.

Please note that Mid- and Long-Term Recommendations are so named because of the expected length of their implementation process. To be implemented eventually, most will benefit from being initiated immediately.

Items marked with an asterisk (*) also appear on the "Just Do It" roster for most immediate action (page 69).

SHORT-TERM RECOMMENDATIONS

1. Broward Boulevard: Curb barrier. Page 42.
2. Broward Blvd.: Supplemental shade trees. 42.
3. Broward Blvd.: Improved Federal Highway crosswalk. 42.
4. Broward Blvd.: 4 sidewalk widenings. 43.
5. Broward Blvd.: Incentivized development of lot west of Courthouse. 63.*
6. Las Olas Boulevard: 2-lane section. 46.*
7. Las Olas Blvd.: Lifting of parking ban. 46.*
8. Las Olas Blvd.: Bike facilities. 47.*
9. Las Olas Blvd.: Baluster replacement over Federal Highway. 47.
10. Las Olas Blvd.: Sidewalk extension at baluster. 48.
11. Las Olas Blvd.: 2-way traffic at River Front. 48.*
12. Las Olas Blvd.: Reconsideration of WAVE stop location. 48.
13. Las Olas Blvd.: Activation of Art Museum wall. 63.
14. Las Olas Blvd.: Incentivized development of key infill sites. 64.*
15. Las Olas Blvd: Elimination of River Front bridges. 64.
16. S. 2nd Street (Himmarshee): Bike facilities. 49.*
17. S. 2nd St.: 2-lane section. 49.*
18. S. 2nd St.: Sidewalk wayfinding under garage. 49.
19. S. 2nd St.: Lifting of parking ban. 50.*
20. S. 2nd St.: Incentivized development of gravel lot at 3rd & 4th Avenues. 65.*
21. SE. 1st Street: Outward reorientation of parking garage shops. 65.
22. Riverwalk: Wayfinding of Riverwalk loop. 51.*
23. Riverwalk: Completion past Stranahan House. 52.
24. Riverwalk: Redirection of stairs by railroad tracks. 52.
25. N. 2nd, 3rd, and 4th Streets: Parking/cycling striping as appropriate. 53.*
26. N. 4th Street: Consideration of flanking vs. central WAVE platforms. 53.
27. Flagler Greenway east/west branch at NW 2nd Street. 54.
28. N. 1st Street: Addition of parking lane and crosswalks. 54.*
29. Federal Highway: Introduction of LPIs. 55.
30. Federal Highway: Supplemental shade trees. 55.

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31. Brickell Avenue: Restriping. 56.*
32. Brickell Ave.: Consideration of flanking vs. central WAVE platforms. 57.
33. Brickell Ave: Walkable orientation of One-Stop-Shop to Brickell. 65.
34. E. 3rd Avenue: Curb barrier on bridge. 58.
35. W. 7th Avenue: Curb barrier on bridge. 60.
36. SE. 1st Avenue: Insertion of angled parking South of Broward. 61.*
37. SW. 5th Avenue: Restriping as Complete Street. 61.*

MID-TERM RECOMMENDATIONS

1. Broward Boulevard: 10-foot lanes. Page 44
2. Broward Blvd.: Crossings at SE 1st Avenue and Financial Plaza. 44.
3. Broward Blvd.: Removal of unnecessary bus lane. 44.
4. Broward Blvd.: Removal of unnecessary turn lanes. 45.
5. Broward Blvd.: Introduction of LPIs. 45.
6. Broward Blvd.: Narrowing of bank drive-through curb cut. 65.
7. Las Olas Boulevard: Supplemental shade trees. 48.
8. S. 2nd Street: Façade activization between Brickell and FEC. 66.
9. Riverwalk: Activation of plaza atop Kinney Tunnel. 52.
10. Riverwalk: Advocacy of residential development at River Front. 65.
11. Federal Highway: Crosswalks and signals at NE 1st, 2nd, and 3rd. 56.
12. Federal Highway: Curb barrier. 56.
13. Brickell Avenue: New streetscape. 56.
14. Brickell Avenue: Lot liner buildings south of Broward. 66.
15. E. 3rd Avenue: Restriping as Complete Street. 58.
16. Andrews Avenue: Restriping on bridge to create direct sidewalk. 59.
17. Andrews Ave: Off-peak parking. 60.
18. W. 7th Avenue: Flagler Greenway extension. 60.
19. SW. 5th Avenue: extension from Himmarshee to Las Olas. 62.

LONG-TERM RECOMMENDATIONS

1. Broward Boulevard: Redesign as a Complete Street. Page 45.
2. Broward Blvd.: Juror Wayfinding at 7th Avenue. 45.
3. Broward Blvd.: Roundabout at Federal Highway. 45.
4. Broward Blvd.: Form-based urban code. 67.
5. Broward Boulevard: Redevelopment of NW corner with Federal Highway. 67.
6. Las Olas Boulevard: Retail deck at Federal highway bridge. 48.
7. Federal Highway: 4-lane section. 56.
8. Andrews Avenue: Reconstruction as per 2007 Guidelines. 60.

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