

C4 J REFERRAL TO THE FINANCE AND ECONOMIC RESILIENCY COMMITTEE TO DISCUSS FUNDING NEEDS FOR: 1) BICYCLE LANE IMPROVEMENTS AND SAFETY ENHANCEMENTS IDENTIFIED IN THE BICYCLE-PEDESTRIAN MASTER PLAN (BPMP) PROJECTS IMPLEMENTATION MATRIX; 2) RESTRIPIING AND/OR REPAINTING GREEN BICYCLE LANES CITYWIDE; 3) DRAINAGE IMPROVEMENTS ALONG THE BEACHWALK TO ADDRESS PONDING; 4) POTENTIAL WIDENING OF THE BEACHWALK AT CRITICAL CHOKEPOINTS; AND 5) PURCHASING SOLAR-POWERED ELECTRONIC SPEED FEEDBACK DEVICES AND DATA COLLECTION SENSORS.

Applicable Area:



COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission

FROM: Eric Carpenter, City Manager

DATE: September 11, 2024

TITLE: REFERRAL TO THE FINANCE AND ECONOMIC RESILIENCY COMMITTEE TO DISCUSS FUNDING NEEDS FOR: 1) BICYCLE LANE IMPROVEMENTS AND SAFETY ENHANCEMENTS IDENTIFIED IN THE BICYCLE-PEDESTRIAN MASTER PLAN (BPMP) PROJECTS IMPLEMENTATION MATRIX; 2) RESTRIPING AND/OR REPAINTING GREEN BICYCLE LANES CITYWIDE; 3) DRAINAGE IMPROVEMENTS ALONG THE BEACHWALK TO ADDRESS PONDING; 4) POTENTIAL WIDENING OF THE BEACHWALK AT CRITICAL CHOKEPOINTS; AND 5) PURCHASING SOLAR-POWERED ELECTRONIC SPEED FEEDBACK DEVICES AND DATA COLLECTION SENSORS.

RECOMMENDATION

The City Administration ("Administration") recommends that the Mayor and City Commission ("City Commission") refer this item to the Finance and Economic Resiliency Committee ("FERC") for discussion and a recommendation.

BACKGROUND/HISTORY

Under the leadership of Commissioner Tanya K. Bhatt, with the participation of the multi-departmental micromobility safety working group, comprised of representatives from various City departments, the Mayor's Office, and a City resident, have been engaged in discussions to explore innovative ways to improve the safety of all users on the Beachwalk and other shared-use paths and bicycle lanes throughout the City. The goal of the working group is to assist in developing a comprehensive and unified work plan with recommendations, including potential new legislation, for short-term and long-term improvements, cost estimates, and timelines for implementation.

At the December 13, 2023 City Commission meeting, the Mayor and City Commission ("City Commission") referred an agenda Item (C4 I), sponsored by Commissioner Tanya K. Bhatt and co-sponsored by Commissioner Laura Dominguez, to the Public Safety and Neighborhood Quality of Life Committee ("PSNQLC" or "Committee") to discuss regulations pertaining to electric vehicles and devices, along with the City's enforcement efforts and any additional regulations that may be necessary to aid in ensuring the safe operation of electric vehicles and devices for all.

At the July 10, 2024 PSNQLC meeting, the Committee discussed the item (Attachment A) following a presentation from the Administration (Attachment B). During the discussion, the PSNQLC recommended that the Administration move forward with safety striping and the proposed regulatory signage on the Beachwalk and Lincoln Road, as recommended by the multi-departmental micromobility safety working group. In addition, during public comment, a resident spoke in support of extending the safety striping and signage through the Cutwalk and Baywalk to 5 Street. The Administration responded that, provided the current budget allocation is sufficient, the safety improvements would be extended to the Cutwalk and Baywalk.

Furthermore, the PSNQLC recommended to refer this item to the Finance and Economic Resiliency Committee ("FERC") to discuss funding needs for: 1) bicycle lane improvements and safety enhancements identified in the Bicycle-Pedestrian Master Plan (BPMP) Projects Implementation Matrix; 2) restriping and/or repainting green bicycle lanes citywide; 3) drainage improvements along the Beachwalk to address ponding; 4) potential widening of the Beachwalk at critical chokepoints; and 5) purchasing solar-powered electronic speed feedback devices and data collection sensors.

ANALYSIS

Further discussions by the working group are necessary to continue to refine and finalize a comprehensive and unified work plan. The Administration will proceed to formulate a work plan, develop cost estimates and timelines for discussion and recommendation by the FERC.

FISCAL IMPACT STATEMENT

TBD

Does this Ordinance require a Business Impact Estimate? (FOR ORDINANCES ONLY)

If applicable, the Business Impact Estimate (BIE) was published on:

See BIE at: <https://www.miamibeachfl.gov/city-hall/city-clerk/meeting-notices/>

FINANCIAL INFORMATION

TBD

CONCLUSION

The Administration is supportive of identifying and implementing strategies to increase safety on the Beachwalk and other shared-use paths and bicycle lanes throughout the City. The Administration recommends the City Commission refer this item to FERC to engage in discussion regarding funding needs and opportunities to support these efforts.

Applicable Area

Citywide

Is this a "Residents Right to Know" item, pursuant to City Code Section 2-17?

No

Is this item related to a G.O. Bond Project?

No

Was this Agenda Item initially requested by a lobbyist which, as defined in Code Sec. 2-481, includes a principal engaged in lobbying? No

If so, specify the name of lobbyist(s) and principal(s):

Department

Transportation and Mobility

Sponsor(s)

Commissioner Tanya K. Bhatt

Co-sponsor(s)

Commissioner Laura Dominguez

Condensed Title

Ref: FERC - Micromobility Bicycle Pedestrian Mobility BPMP Projects. (Bhatt/Dominguez) TR

MIAMI BEACH

COMMITTEE MEMORANDUM

TO: Public Safety and Neighborhood Quality of Life Committee Members

FROM: Rickelle Williams, Interim City Manager *RW*

DATE: July 10, 2024

TITLE: **DISCUSS REGULATIONS PERTAINING TO ELECTRIC VEHICLES AND DEVICES, ALONG WITH THE CITY'S ENFORCEMENT EFFORTS AND ANY ADDITIONAL REGULATIONS THAT MAY BE NECESSARY TO AID IN ENSURING THE SAFE OPERATION OF ELECTRIC VEHICLES AND DEVICES FOR ALL.**

RECOMMENDATION

The City Administration ("Administration") recommends that the Public Safety and Neighborhood Quality of Life Committee ("PSNQLC" or "Committee") discuss this item and provide input and a recommendation.

BACKGROUND/HISTORY

At the December 13, 2023 City Commission meeting, the Mayor and City Commission ("City Commission") referred an agenda item (C4 I), sponsored by Commissioner Tanya K. Bhatt and co-sponsored by Vice-Mayor Laura Dominguez, to the PSNQLC to discuss regulations pertaining to electric vehicles and devices, along with the City's enforcement efforts and any additional regulations that may be necessary to aid in ensuring the safe operation of electric vehicles and devices for all.

Pursuant to the City of Miami Beach ("City") Code of Ordinances, it is unlawful to operate any motorized means of transportation, in, on, or upon any sidewalk or sidewalk areas in the City, except for (a) wheelchairs or other motorized means of transportation when used by disabled persons and (b) electric personal assistive mobility devices, where otherwise not prohibited, which are restricted to a maximum speed of eight (8) miles per hour. It is also unlawful for any person to engage in skateboarding, roller skating, and in-line skating at any time; to operate any motorized means of transportation at any time; or to engage in bicycling between 9:00 a.m. and 2:00 a.m., on Lincoln Road between Washington Avenue and Alton Road. Furthermore, it is unlawful to operate any motorized means of transportation at any time on the Beachwalk; the Lummus Park Promenade (Serpentine Walkway between 5 Street and 15 Street); the South Pointe Park Cutwalk (adjacent and parallel to Government Cut); the Marina Baywalk (adjacent and parallel to Biscayne Bay and south of 5 Street); the interior pathways within South Pointe Park and Collins Park; and the South Pointe Park Pier.

Beachwalk

The Beachwalk is an at-grade, paved, and highly utilized seven (7)-mile long shared-use path facility abutting the western limit of the dune vegetation system along the east coast of the City. The Beachwalk serves recreational, leisure, work and other trips throughout the City and is one of the most active public trails within the state of Florida and a component of the United States Atlantic Greenway Network extending from Florida to Maine. The Beachwalk's popularity, coupled with its constrained width, contributes to frequent conflicts among pedestrians, bicyclists, and other users sometimes resulting in crashes, including some with serious injuries. An additional concern is the intermixing of pedestrians and unauthorized motorized/electric devices, including electric stand-up scooters, electric bikes, and electric skateboards operating illegally on the Beachwalk. Although Section 70-67 of the City Code prohibits motorized means of transportation

on the Beachwalk, among other pedestrian facilities throughout the City, the growing popularity of these electric mobility devices poses a significant safety concern for pedestrians and an enforcement challenge for the Police Department.

In March 2020, pursuant to the recommendation of the Neighborhood and Quality of Life Committee (“NQLC”), various city departments, including Police, Communications, Facilities and Fleet Management, and Transportation and Mobility, collaborated to develop a holistic approach to address the pedestrian safety concerns on the Beachwalk through better signage and enhanced enforcement. This effort resulted in the installation of 142 new regulatory signs along the Beachwalk and at all Beachwalk entrance points to assist Police Officers and Park Rangers with enforcing applicable provisions of the City Code. In addition, the City installed 70 advisory signs along the Beachwalk to advise users that the area is a pedestrian-friendly zone where permitted/non-motorized devices such as bicycles, skates, and skateboards must slow down and yield to pedestrians (see images below).

Existing Advisory Signs on the Beachwalk



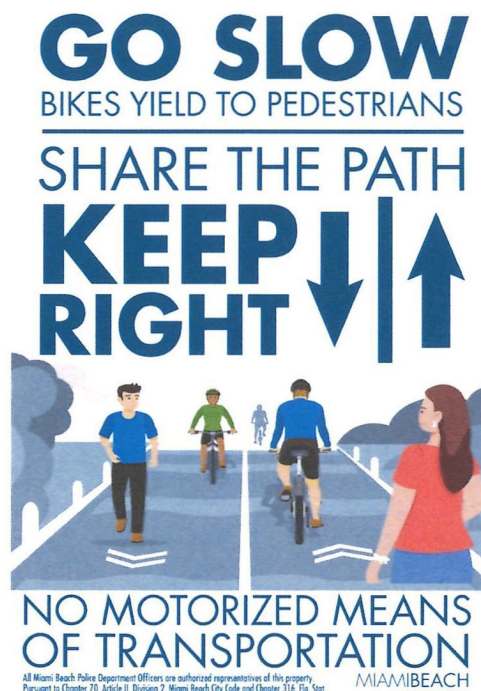
Existing Regulatory Signs on the Beachwalk



In March 2021, the Miami Beach Police Department initiated a daily Beachwalk pedestrian safety detail entitled "Clear Path". Since early 2022, Police Officers and Park Rangers have conducted regular enforcement of the Beachwalk, including enforcement of Section 70-67 of the City Code prohibiting motorized means of transportation on the Beachwalk.

In May 2022, to further enhance pedestrian safety on the Beachwalk, the Transportation and Mobility Department launched an initial pilot project consisting of segregating bicyclists and pedestrians between 15 Street and 24 Street (a typical 15' wide section of the beachwalk) through striping and signage. The initial pilot required bi-directional bicycle traffic to travel along an 8' wide path on the eastern side of the beachwalk. While the goal of the pilot program was to achieve the separation of pedestrians and bicyclists on the Beachwalk, based on data analysis and field observations, City staff concluded that the initial pilot was not practical and created significant safety concerns due to the high amount of pedestrians and bicyclists traveling in opposing directions within the same confined space which resulted in user non-compliance. User feedback regarding the initial pilot configuration was overwhelmingly negative, particularly from cyclists who felt that mode segregation was more unsafe than the original Beachwalk configuration. Users stated that the initial pilot project provided insufficient space to accommodate bicyclists traveling in both directions on only one side of the Beachwalk.

In light of staff's analysis, observations, and user feedback, the Transportation and Mobility Department discontinued the initial pilot configuration, and, in September 2022, launched a modified pilot within the same segment of the Beachwalk from 15 Street to 24 Street. The modified pilot maintained the white painted solid line along the centerline of the Beachwalk and painted new directional arrows and symbols in both directions guiding all users to keep right while walking and cycling. To supplement the pavement markings and reinforce the new configuration, the Transportation and Mobility Department worked with the Office of Marketing and Communications to design and install new contextual signage in accordance with the modified pilot configuration. Below is an image of the current signage within the pilot segment.



While the modified configuration is not intended to achieve the original goal of mode separation along the Beachwalk, it provides a safer configuration for pedestrians and bicyclists as compared to the original pilot configuration as it follows the basic rules of a two-way street where all traffic traveling in the same direction keeps to the right side of the facility. This modified pilot program remains in effect to date and has received generally positive feedback from users and support

from the Mid-Beach Neighborhood Association ("MBNA"). As a result of the current modified pilot's effectiveness, through the Fiscal Year 2023 budget process, the City Commission endorsed a funding allocation in the amount of \$200,000 to implement the pavement marking and signage enhancements throughout the entire length of the Beachwalk on a permanent basis. As further described below in the Analysis section of this Committee Memorandum, this work is anticipated to commence during summer 2024 with anticipated completion in fall 2024.

ANALYSIS

Under the leadership of Commissioner Tanya K. Bhatt, with the participation of the Administration, a multi-departmental working group, including a representative from the Mayor's Office and a City resident, is currently working on developing a comprehensive, multi-pronged, and unified approach to improve micromobility, bicycle, and pedestrian safety on the Beachwalk and other shared-use facilities as well as bicycle lanes throughout the City. The working group's focus areas and participating City department(s) are as follows:

- Crash Data/Statistics (Police)
- Enforcement of Current Regulations (Police/Park Rangers, Code Compliance)
- Beachwalk Safety Concerns and Recommendations (various city departments)
- Signage and Messaging (Marketing and Communications)
- Condition Survey of Existing Bicycle Lanes (Transportation and Mobility)
- Proposed Bicycle Lane Improvements and Safety Enhancements (Transportation and Mobility)

In addition, on Saturday, April 4, 2024, Commissioner Bhatt led a bicycle ride along the Beachwalk with key members of the working group and residents to experience first-hand the safety issues on the Beachwalk.

Below is a synopsis of each of the working group's focus areas, including relevant statistics, issues, opportunities, challenges, recommendations, and next steps, as appropriate.

Crash Data

Given the Beachwalk is classified as a recreational shared-use facility and not a vehicular roadway, during the working group's discussions, Police Department representatives articulated a concern regarding the inability to capture specific crash data as it relates to micromobility devices. Bicycle and pedestrian crashes are captured statewide via the Florida Traffic Crash Report (Attachment A), a state-issued form provided by the Department of Highway Safety and Motor Vehicles ("DHSMV"). Due to the automated nature of the form, specific information regarding crashes/incidents by specific location and micromobility devices throughout the City of Miami Beach is not currently available. Even as the DHSMV is considering modifying the standard report to include micromobility devices, data from the form would only apply to crashes with motor vehicles and not to incidents on the Beachwalk with pedestrians. The Police Department, therefore, is exploring the possibility of capturing these incident types in-house through digital changes to its departmentwide Offense Incident Report through which to better gauge and document reported bicycle, pedestrian, and micromobility crashes throughout the City.

For reference, below is the Florida Statute pertaining to micromobility:

316.2128 Micromobility devices, motorized scooters, and miniature motorcycles; requirements.—

(1) The operator of a motorized scooter or micromobility device has all of the rights and duties applicable to the rider of a bicycle under s. 316.2065, except the duties imposed by s. 316.2065(2), (3)(b), and (3)(c), which by their nature do not apply. However, this section may not be construed to prevent a local government, through the exercise of its powers under s. 316.008, from adopting an ordinance governing the operation of micromobility devices and motorized scooters on streets, highways, sidewalks, and sidewalk areas under the local government's jurisdiction.

Enforcement of Current Regulations

The Miami Beach Police Department and Park Ranger Service began tracking Uniform Traffic Citations, verbal warnings and written warnings related to the enforcement of the non-motorized Ordinance (70-67) on the Beachwalk in October of 2021. Beat officers throughout the City, officers assigned to the Redevelopment Agency (“RDA”), and Park Rangers have proactively addressed the illegal use of motorized vehicles on the Beachwalk daily and through various specialized details that have run concurrently since 2022. Data regarding these activities is provided below.

Enforcement Related to Section 70-67 (Prohibition of motorized means of transportation)												
	2021 (October - December)			2022			2023			2024 (January - June)		
	Park Rangers	Police Officers	RDA	Park Rangers	Police Officers	RDA	Park Rangers	Police Officers	RDA	Park Rangers	Police Officers	RDA
Uniform Traffic Citations	N/A	37	127	N/A	54	2	N/A	74	1	N/A	170	1
Written Warnings	3686	259	123	18	356	31	106	4	28	156	59	2
Verbal Warnings	(not tracked separately)	188	321	8966	1139	676	13652	919	308	1992	313	147

During the month of April 2024, the Police Department deployed a zero-tolerance campaign strictly enforcing the prohibited use of micromobility devices on the Beachwalk. The Police Department has also carried out social media campaigns to inform the public on the City Ordinance, reached out to hotels in order to educate tourists, as well as distributed flyers on the prohibited use of motorized/electric vehicle use on the Beachwalk.

Furthermore, from June 30, 2023 to June 30, 2024, the Code Compliance Department issued 16 violations for vegetation overgrowth (including hedges) on the Beachwalk between 24 Street and 61 Street. To date, the property owners cited have complied with these violations.

Beachwalk Safety Concerns and Recommendations

The working group has been discussing various Beachwalk safety issues and potential solutions. Following is a list of safety concerns identified by the working group and recommendations:

- Concern #1: Conflicts between bicyclists and pedestrians traveling along the Beachwalk.

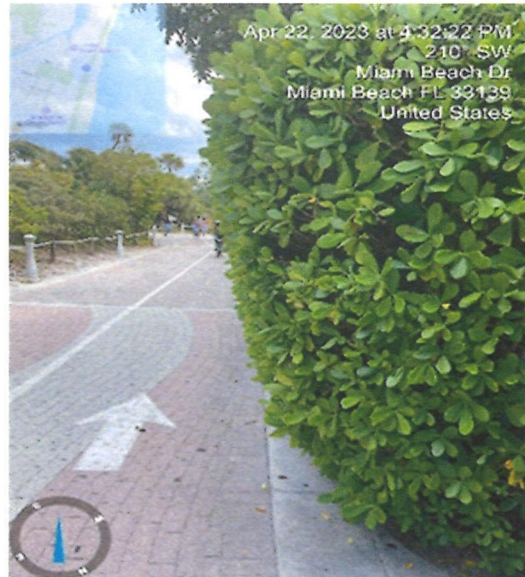
Recommendation #1 (In Progress): Building on the success of the existing modified pilot configuration along the Beachwalk from 15 Street to 24 Street, the Transportation and Mobility Department staff anticipates painting a continuous white line along the center of the Beachwalk with directional arrows on either side along the entire 7-mile length of the Beachwalk. Signage advising users to “KEEP RIGHT” (see below) will supplement the new striping and pavement markings. This work is anticipated to commence in late summer 2024 using one of the City’s pre-qualified contractors and be completed in fall 2024.



- Concern #2: Critical chokepoints along the Beachwalk result in conflicts and safety concerns among users.

Recommendation #2: The Administration will identify all critical chokepoint locations as well as opportunities for potential minor widening of the Beachwalk as feasible.

- Concern #3: Overgrown vegetation on private property encroaching onto the Beachwalk results in reduced effective width for Beachwalk users.

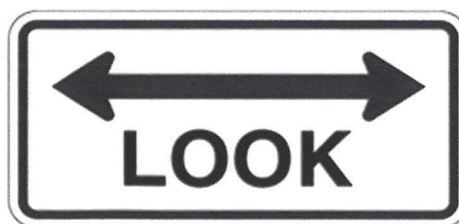


Recommendation #3: Explore new legislation requiring a private property setback from the Beachwalk and developing regulations governing the type of vegetation permitted for planting within the setback area.

- Concern #4: User conflicts due to limited sight visibility where private property egress and/or beach egress intersects the Beachwalk.



Recommendation #4: 1) Install signage and/or advance warning pavement markings (e.g. "LOOK") on the Beachwalk to alert users of approaching conflict zones.



2) At the May 15, 2024 City Commission meeting, Commissioner Tanya K. Bhatt sponsored a dual referral item (C4 AE) to the Land Use and Sustainability Committee ("LUSC") and the Planning Board to discuss an ordinance modifying the land development regulations governing maintenance of oceanfront properties facing the Beachwalk. Specifically, the proposed ordinance seeks to modify maximum allowable height of fencing, walls, gates, shrubbery, hedges, and trees to ensure clear and unobstructed sightlines for all who are traveling along, or entering/exiting the Beachwalk. The item is slated to be discussed at the July 9, 2024 LUSC meeting.

- Concern #5: Lack of street number signs at intersecting streets along the Beachwalk.

Recommendation #5: The Parking Department will manufacture and install street number signs along the Beachwalk at each intersecting street and beach access based on the working group's recommended sign design below.



- Concern #6: Ponding at various locations along the Beachwalk affects safety and mobility.



Recommendation #6: The Administration will identify locations where ponding occurs and develop a work plan with estimated costs and timelines to implement spot-drainage improvements at these locations. Should the fiscal impact require action by the City Commission, the Administration will request funding.

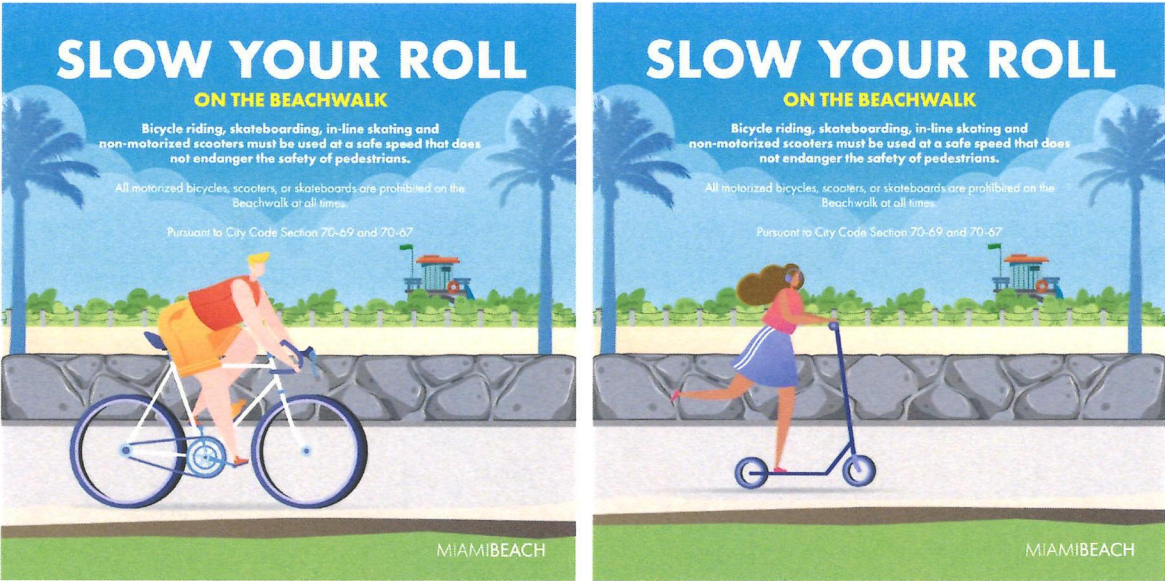
Signage and Messaging Recommendations

The working group recommends that the City remove all existing mobility signs along the Beachwalk which detract from the experience and are currently not providing much direction or warning and install standard black and white regulatory-type signs, including "SLOW DOWN" and "KEEP RIGHT" signs as depicted above and below.



Regulatory signs are easier to recognize and understand by people of all backgrounds and languages. In addition, the working group discussed the possibility of establishing a speed limit on the Beachwalk and installing speed limit signs; however, Police Department representatives expressed concerns with the inability to enforce a speed limit as most conventional bicycles are not equipped with speedometers, thus making it difficult for cyclists to be aware of their speed.

The working group also recommends launching an organic, digital campaign to advise Beachwalk users, including cyclists, skateboarders, in-line skaters, and non-motor scooters to “SLOW YOUR ROLL.” The new temporary decals will be placed on the pavement to reinforce that all motorized means of transportation are prohibited on the Beachwalk as depicted below.



A similar campaign targeted to the Lincoln Road pedestrian mall will include the installation of temporary decals on the pavement advising patrons to “WALK YOUR WHEELS” as depicted below.



In addition, the working group recommends replacing the existing regulatory signs on Lincoln Road (below) with a simpler regulatory sign which is easier to understand.

Existing Regulatory Signs on Lincoln Road



Proposed Regulatory Sign for Lincoln Road



The working group anticipates that the updated signage approach and messaging campaign will change behavior and enhance the safety of all Beachwalk users. Staff will communicate the

proposed signage changes with the Lincoln Road Business Improvement District. Costs for signage production and replacement/installation may be absorbed through the Transportation and Mobility Department's Fiscal Year 2023/2024 Operating Budget.

Condition Survey of Existing Bicycle Lanes

The Transportation and Mobility Department recently conducted an assessment of the current condition of all existing bike lanes (i.e. pavement markings and green paint) throughout the City. Based on the assessment, staff identified multiple locations which require restriping and/or repainting as a result of peeling, fading, and poor restoration following underground utility work. A draft report is anticipated to be completed in August 2024. The draft report will include the locations that require restriping and/or repainting as well as cost estimates. Funding for these improvements has not been identified, budgeted, or appropriated. In addition, the working group will explore ways of ensuring that proper bicycle facility restoration by contractors is completed.

Proposed Bicycle Lane Improvements and Safety Enhancements

The Transportation and Mobility Department conducted an evaluation of projects recommended in the adopted 2016 Bicycle-Pedestrian Master Plan ("BPMP") to identify current project status (i.e. completed, in-progress, funded/not started, not feasible, part of future neighborhood improvement/infrastructure project, and unfunded). Attachment B includes a BPMP Project Implementation Matrix.

It is important to note that 1) the BPMP is a visionary plan with a horizon year of 2035; 2) many pending BPMP projects are anticipated to have a significant impact to existing on-street parking; and 3) while several BPMP projects have been completed or are underway in various phases of development, many BPMP projects are pending construction as part of future large-scale stormwater drainage/neighborhood improvement projects (e.g. West Avenue, 17 Street, 22/23 Street, North Bay Road, North Shore D, Washington Avenue, among others) or future roadway improvement projects on State and County roadways to be undertaken by the Florida Department of Transportation ("FDOT") and Miami-Dade County Department of Transportation and Public Works (e.g. Collins Avenue, Alton Road, Dade Boulevard, Venetian Causeway, among others).

Pursuant to the working group's recommendation, Transportation and Mobility Department staff identified various pending BPMP projects which could potentially be undertaken in a relatively short timeframe and at a low cost. Following is a list of six (6) "low-hanging" BPMP projects for further consideration by the working group. It is important to note that greenways are defined in the BPMP as low-volume, low-speed, and thus, low-stress streets that are designed for safe bicycle travel (and do not include dedicated bicycle lanes).

1. Closing the bike lane gap on northbound Ocean Drive at 5 Street (traffic analysis in progress pursuant to City Commission direction, however, construction is unfunded).
2. BPMP Category 1 - Project No.30: Bicycle lane on 5 Street between Collins Avenue and Atlantic Way (construction is unfunded).
3. BPMP Category 3 - Project No. 6: Greenway on Michigan Avenue between 2 Street to 11 Street (construction is unfunded).
4. BPMP Category 3 - Project No.15: Greenway on Prairie Avenue between 44 Street to 47 Street (construction is unfunded).
5. BPMP Category 3 - Project No. 21: Greenway on 69 Street between Indian Creek Drive to Atlantic Way (construction is unfunded).
6. BPMP Category 3 - Project No. 25: Greenway on Royal Palm Avenue between 26 Street and 41 Street (construction is unfunded).

Solar-Powered Electronic Speed Feedback Devices

To deter cyclists speeding on the Beachwalk, the working group recommends that the Administration test, as a pilot program, the effectiveness of solar-powered electronic speed feedback devices - as depicted in the images below - at key locations on the Beachwalk. While the devices would not display a speed or speed limit (due to concerns from the Police Department

regarding enforcement), the devices will serve to alert bicyclists to “SLOW DOWN” and raise awareness while cycling on the Beachwalk. It is important to note that the below images are visual place-holders as the Administration is currently conducting research on the most suitable sign to install on the Beachwalk.



Based on City staff's observations and coordination with the Police Department and Park Rangers, the following locations have been identified as areas on the Beachwalk where conflicts between users are regularly occurring due to high activity or speeding:

- South Pointe Park
- 5 Street
- 10 Street
- 14 Court
- 17 Street
- Lincoln Road
- 21 Street
- 27 Street
- 53 Street
- 64 Street
- 73 Street
- 75 Street
- 77 Street
- 79 Street

The cost of purchasing and installing these types of devices would range from approximately \$10,000 to \$20,000 per device. Since posting a speed limit for bicycles on the Beachwalk is not

recommended by Police at this time due to challenges with enforcement, the working group recommends programming the electronic speed feedback device such that it would display a "SLOW DOWN" message if an approaching bicyclist is traveling at a rate of speed greater than what would be considered a reasonable speed limit for bicyclists on a shared-use path with pedestrians (i.e. 12 miles per hour). As such, any bicyclist traveling faster than 12 miles per hour while approaching the electronic speed feedback sign would trigger a "SLOW DOWN" message. It is worth noting that while these electronic signs can collect speed data, they do not collect volume data and do not differentiate between motorized and non-motorized mobility devices. The Transportation and Mobility Department staff is in discussions with various vendors to pilot, at no cost to the City, these devices at a couple of locations on the Beachwalk (potentially at Lincoln Road and at 77 Street) to gauge user compliance and effectiveness. It is important to note that these devices are often used as a temporary measure to educate and change user behavior and have utility beyond their use on the Beachwalk.

Speed, Volume, and Modal Data Collection Sensors

The working group acknowledged the importance of installing electronic sensors to collect speed and volume data in real-time of pedestrians, bicycles, and micromobility devices, in order to corroborate anecdotal information from users and make informed decisions and recommendations to enhance safety on the Beachwalk and other shared-use paths, as well as bicycle lanes throughout the City. In addition, it is essential for the data collection sensors to have the capability to differentiate among the various modes (pedestrians, bicycles, scooters, skateboards, in-line skates, etc.) and type of mobility devices (i.e. motorized and non-motorized).

To this end, the Transportation and Mobility Department recently purchased six (6) bicycle counters which will be installed on existing bicycle lanes in the City, including Ocean Drive, Venetian Causeway, and Meridian Avenue, in the next few months. Additional funding is being requested through the ongoing Fiscal Year 2024/2025 budget process for the purchase and installation of additional counters on bicycle lanes and shared-use paths throughout the City. It is worth noting that the FDOT recently installed a new bicycle/pedestrian counter on the Beachwalk at 54 Street as part of the Statewide Non-Motorized Traffic Monitoring Program. While the FDOT counter classifies pedestrians, bicyclists, and scooters, it does not differentiate between motorized and non-motorized mobility devices and does not collect speed data.

The working group also acknowledged the need to install sensors on the Beachwalk to collect speed, volume, and modal data. Furthermore, the working group determined that any data collection sensors to be installed on the Beachwalk should be wireless and non-intrusive in order to be effective. The Transportation and Mobility Department staff is currently conducting research to determine the type and number of data sensors to purchase and install along the Beachwalk.

An operating budget enhancement in the amount of \$175,000 has been recommended by the Administration as part of the ongoing budget process for Fiscal Year 2025 for the purchase and installation of six (6) data collection sensors and six (6) speed feedback signs throughout the Beachwalk.

FISCAL IMPACT STATEMENT

TBD

Does this Ordinance require a Business Impact Estimate?

(FOR ORDINANCES ONLY)

The Business Impact Estimate (BIE) was published on . See BIE at:

<https://www.miamibeachfl.gov/city-hall/city-clerk/meeting-notice/>

FINANCIAL INFORMATION

N/A

CONCLUSION

Under the leadership of Commissioner Tanya K. Bhatt, with the participation of the Administration, the micromobility safety working group, comprised of representatives from various City departments, the Mayor's Office, and a City resident, have been engaged in discussions to explore innovative ways to improve the safety of all users on the Beachwalk and other shared-use paths and bicycle lanes throughout the City. The goal of the working group is to develop a comprehensive and unified work plan with recommendations, including potential new legislation, for short-term and long-term improvements, cost estimates, and timelines for implementation.

This Committee Memorandum provides a status update on the working group's discussions, ideas, and recommendations to date; however, further discussions are necessary to continue to refine and finalize a comprehensive work plan. Additional updates will be provided to the PSNQLC at future meetings.

Applicable Area

Citywide

Is this a "Residents Right to Know" item, pursuant to City Code Section 2-17?

No

Is this item related to a G.O. Bond Project?

No

Was this Agenda Item initially requested by a lobbyist which, as defined in Code Sec. 2-481, includes a principal engaged in lobbying? No

If so, specify the name of lobbyist(s) and principal(s): N/A

Department

Transportation and Mobility

Sponsor(s)

Commissioner Tanya K. Bhatt

Co-sponsor(s)

Commissioner Laura Dominguez

Condensed Title

Discuss Regulations Pertaining to Electric Vehicles and Devices along with Enforcement Efforts

FLORIDA TRAFFIC CRASH REPORT

Attachment A – Florida Traffic Crash Report Form

LONG FORM ☐ SHORT FORM ☐ UPDATE ☐
(Shaded Areas)

TOTAL # OF VEHICLE SECTION(S) _____

TOTAL # OF PERSON SECTION(S) _____

TOTAL # OF NARRATIVE SECTION(S) _____

MAIL TO: DEPARTMENT OF HIGHWAY SAFETY & MOTOR VEHICLES
TRAFFIC CRASH RECORDS, NEIL KIRKMAN BUILDING
TALLAHASSEE, FL 32399-0537

CRASH DATE		TIME OF CRASH		DATE OF REPORT		REPORTING AGENCY CASE NUMBER		HSMV CRASH REPORT NUMBER		
CRASH IDENTIFIERS										
COUNTY CODE	CITY CODE	COUNTY OF CRASH			PLACE OR CITY OF CRASH			CHECK IF WITHIN CITY LIMITS <input type="checkbox"/>	TIME REPORTED	TIME DISPATCHED
TIME ON SCENE		TIME CLEARED SCENE		CHECK IF COMPLETED <input type="checkbox"/>	REASON (If Investigation NOT Complete)				Notified By: 1 Motorist <input type="checkbox"/> 2 Law Enforcement <input type="checkbox"/>	
ROADWAY INFORMATION (CHOOSE ONLY 1 OF 4 OPTIONS)										
CRASH OCCURRED ON STREET, ROAD, HIGHWAY					AT STREET ADDRESS # 1		AT LATITUDE		AND LONGITUDE	
FEET	MILES	N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W <input type="checkbox"/>	AT / FROM INTERSECTION WITH STREET, ROAD, HIGHWAY 3					OR FROM MILEPOST # 4		
Road System Identifier <input type="checkbox"/> 1 Interstate <input type="checkbox"/> 2 U.S. <input type="checkbox"/> 3 State <input type="checkbox"/> 4 County <input type="checkbox"/> 5 Local <input type="checkbox"/> 6 Turnpike/Toll <input type="checkbox"/> 7 Forest Road <input type="checkbox"/> 8 Private Roadway <input type="checkbox"/> 9 Parking Lot <input type="checkbox"/> 77 Other, Explain in Narrative			Type of Shoulder <input type="checkbox"/> 1 Paved <input type="checkbox"/> 2 Unpaved <input type="checkbox"/> 3 Curb		Type of Intersection <input type="checkbox"/> 1 Not at Intersection <input type="checkbox"/> 2 Four-Way Intersection <input type="checkbox"/> 3 T-Intersection <input type="checkbox"/> 4 Y-Intersection <input type="checkbox"/> 5 Traffic Circle <input type="checkbox"/> 6 Roundabout <input type="checkbox"/> 7 Five-Point, or More <input type="checkbox"/> 77 Other, Explain in Narrative					
CRASH INFORMATION (CHECK IF PICTURES TAKEN) <input type="checkbox"/>										
Light Condition <input type="checkbox"/> 1 Daylight <input type="checkbox"/> 2 Dusk <input type="checkbox"/> 3 Dawn <input type="checkbox"/> 4 Dark-Lighted <input type="checkbox"/> 5 Dark-Not Lighted <input type="checkbox"/> 6 Dark-Unknown <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown		Weather Condition <input type="checkbox"/> 4 Fog, Smog, Smoke <input type="checkbox"/> 5 Sleet/Hail/Freezing Rain <input type="checkbox"/> 6 Blowing Sand, Soil, Dirt <input type="checkbox"/> 7 Severe Crosswinds <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 1 Clear <input type="checkbox"/> 2 Cloudy <input type="checkbox"/> 3 Rain		Roadway Surface Condition <input type="checkbox"/> 5 Oil <input type="checkbox"/> 6 Mud, Dirt, Gravel <input type="checkbox"/> 7 Sand <input type="checkbox"/> 8 Water (standing/moving) <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown <input type="checkbox"/> 1 Dry <input type="checkbox"/> 2 Wet <input type="checkbox"/> 4 Ice/Frost		School Bus Related <input type="checkbox"/> 1 No <input type="checkbox"/> 2 Yes, School Bus Directly Involved <input type="checkbox"/> 3 Yes, School Bus Indirectly Involved		Manner of Collision/Impact <input type="checkbox"/> 4 Sideswipe, Same Direction <input type="checkbox"/> 5 Sideswipe, Opposite Direction <input type="checkbox"/> 6 Rear to Side <input type="checkbox"/> 7 Rear to Rear <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown <input type="checkbox"/> 1 Front to Rear <input type="checkbox"/> 2 Front to Front <input type="checkbox"/> 3 Angle		
First Harmful Event <input type="checkbox"/>		Non-Collision <input type="checkbox"/> 1 Overturn/Rollover <input type="checkbox"/> 2 Fire/Explosion <input type="checkbox"/> 3 Immersion <input type="checkbox"/> 4 Jackknife <input type="checkbox"/> 5 Cargo/Equipment Loss or Shift <input type="checkbox"/> 6 Fell/Jumped From Motor Vehicle <input type="checkbox"/> 7 Thrown or Falling Object <input type="checkbox"/> 8 Ran into Water/Canal <input type="checkbox"/> 9 Other Non-Collision		Collision Non-Fixed Object <input type="checkbox"/> 10 Pedestrian <input type="checkbox"/> 11 Pedalcycle <input type="checkbox"/> 12 Railway Vehicle (train, engine) <input type="checkbox"/> 13 Animal <input type="checkbox"/> 14 Motor Vehicle in Transport <input type="checkbox"/> 15 Parked Motor Vehicle <input type="checkbox"/> 16 Work Zone/Maintenance Equipment <input type="checkbox"/> 17 Struck By Falling, Shifting Cargo <input type="checkbox"/> 18 Other Non-Fixed Object		Collision with Fixed Object <input type="checkbox"/> 19 Impact Attenuator/Crash Cushion <input type="checkbox"/> 20 Bridge Overhead Structure <input type="checkbox"/> 21 Bridge Pier or Support <input type="checkbox"/> 22 Bridge Rail <input type="checkbox"/> 23 Culvert <input type="checkbox"/> 24 Curb <input type="checkbox"/> 25 Ditch <input type="checkbox"/> 26 Embankment <input type="checkbox"/> 27 Guardrail Face <input type="checkbox"/> 28 Guardrail End <input type="checkbox"/> 29 Cable Barrier <input type="checkbox"/> 30 Concrete Traffic Barrier <input type="checkbox"/> 31 Other Traffic Barrier <input type="checkbox"/> 32 Tree (standing) <input type="checkbox"/> 33 Utility Pole/Light Support <input type="checkbox"/> 34 Traffic Sign Support <input type="checkbox"/> 35 Traffic Signal Support <input type="checkbox"/> 36 Other Post, Pole or Support <input type="checkbox"/> 37 Fence <input type="checkbox"/> 38 Mailbox <input type="checkbox"/> 39 Other Fixed Object (wall, building, tunnel, etc.)		First Harmful Event Location <input type="checkbox"/> 1 On Roadway <input type="checkbox"/> 2 Off Roadway <input type="checkbox"/> 3 Shoulder <input type="checkbox"/> 4 Median <input type="checkbox"/> 6 Gore <input type="checkbox"/> 7 Separator <input type="checkbox"/> 8 In Parking Lane or Zone <input type="checkbox"/> 9 Outside Right-of-way <input type="checkbox"/> 10 Roadside <input type="checkbox"/> 88 Unknown		
First Harmful Event Relation to Junction <input type="checkbox"/> 5 Railway Grade Crossing <input type="checkbox"/> 14 Entrance/Exit Ramp <input type="checkbox"/> 15 Crossover - Related <input type="checkbox"/> 16 Shared-Use Path or Trail <input type="checkbox"/> 17 Acceleration/Deceleration Lane <input type="checkbox"/> 18 Through Roadway <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown <input type="checkbox"/> 1 Non-Junction <input type="checkbox"/> 2 Intersection <input type="checkbox"/> 3 Intersection-Related <input type="checkbox"/> 4 Driveway/Alley Access Related		Contributing Circumstances: Road <input type="checkbox"/> 9 Worn, Travel-Polished Surface <input type="checkbox"/> 10 Road Surface Condition (wet, icy, snow, slush, etc.) <input type="checkbox"/> 11 Obstruction in Roadway <input type="checkbox"/> 12 Debris <input type="checkbox"/> 13 Traffic Control Device Inoperative, Missing or Obscured <input type="checkbox"/> 14 Non-Highway Work <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown <input type="checkbox"/> 1 None <input type="checkbox"/> 4 Work Zone (construction/maintenance/utility) <input type="checkbox"/> 6 Shoulders (none, low, soft, high) <input type="checkbox"/> 7 Rut, Holes, Bumps		Contributing Circumstances: Environment <input type="checkbox"/> 1 None <input type="checkbox"/> 2 Weather Conditions <input type="checkbox"/> 3 Physical Obstruction(s) <input type="checkbox"/> 4 Glare <input type="checkbox"/> 5 Animal(s) in Roadway <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown						
Work Zone Related <input type="checkbox"/> 1 No <input type="checkbox"/> 2 Yes <input type="checkbox"/> 88 Unknown		Crash in Work Zone <input type="checkbox"/> 1 Before the First Work Zone Warning Sign <input type="checkbox"/> 2 Advance Warning Area <input type="checkbox"/> 3 Transition Area <input type="checkbox"/> 4 Activity Area <input type="checkbox"/> 5 Termination Area		Type of Work Zone <input type="checkbox"/> 1 Lane Closure <input type="checkbox"/> 2 Lane Shift/Crossover <input type="checkbox"/> 3 Work on Shoulder or Median <input type="checkbox"/> 4 Intermittent or Moving Work <input type="checkbox"/> 77 Other, Explain in Narrative		Workers in Work Zone <input type="checkbox"/> 1 No <input type="checkbox"/> 2 Yes <input type="checkbox"/> 88 Unknown		Law Enforcement in Work Zone <input type="checkbox"/> 1 No <input type="checkbox"/> 2 Officer Present <input type="checkbox"/> 3 Law Enforcement Vehicle Only Present		
WITNESSES										
NAME		ADDRESS		CITY & STATE		ZIP CODE				
NAME		ADDRESS		CITY & STATE		ZIP CODE				
NAME		ADDRESS		CITY & STATE		ZIP CODE				
NON VEHICLE PROPERTY DAMAGE										
VEHICLE #	PERSON #	PROPERTY DAMAGE – OTHER THAN VEHICLE	EST. AMOUNT	OWNER'S NAME <input type="checkbox"/> (Check if Business)	ADDRESS	CITY & STATE	ZIP CODE			
VEHICLE #	PERSON #	PROPERTY DAMAGE – OTHER THAN VEHICLE	EST. AMOUNT	OWNER'S NAME <input type="checkbox"/> (Check if Business)	ADDRESS	CITY & STATE	ZIP CODE			

VEHICLE #		Check if Commercial		REPORTING AGENCY CASE NUMBER		HSMV CRASH REPORT NUMBER						
1 Vehicle in Transport 2 Parked Motor Vehicle 3 Working Vehicle		VEHICLE LICENSE NUMBER		STATE	REGISTRATION EXPIRES	Check if Permanent Registration	VIN					
Hit and Run 1 No 2 Yes 88 Unknown		YEAR	MAKE	MODEL	STYLE	COLOR	DAMAGE: 1 Disabling 2 Functional 3 None 4 Minor 88 Unknown	EST. AMOUNT				
INSURANCE COMPANY			INSURANCE POLICY NUMBER		Towed due to Damage: 1 No 2 Yes	VEHICLE REMOVED BY		1 Rotation 2 Owner Request 3 Driver 4 Other, Explain in Narrative				
NAME OF VEHICLE OWNER		(Check if Business)		CURRENT ADDRESS		CITY & STATE		ZIP CODE				
TRAILER #	LICENSE NUMBER	STATE	REGISTRATION EXPIRES	Check if Permanent Registration	VIN	YEAR	MAKE	LENGTH	AXLES			
TRAILER #	LICENSE NUMBER	STATE	REGISTRATION EXPIRES	Check if Permanent Registration	VIN	YEAR	MAKE	LENGTH	AXLES			
VEHICLE TRAVELING		N	S	E	W	Off-Road	Unknown	ON STREET, ROAD, HIGHWAY		AT EST. SPEED	POSTED SPEED	TOTAL LANES
HAZ. MAT. RELEASED 1 No 2 Yes 88 Unknown		HAZ. MAT. PLACARD 1 No 2 Yes 88 Unknown		HAZ. MAT. NUMBER		HAZ. MAT. CLASS		Area of Initial Impact		Most Damaged Area		
MOTOR CARRIER NAME				US DOT NUMBER				18 Undercarriage 19 Overturn 20 Windshield 21 Trailer		18 Undercarriage 19 Overturn 20 Windshield 21 Trailer		
MOTOR CARRIER ADDRESS				CITY & STATE				ZIP CODE		PHONE NUMBER		

Vehicle Body Type 1 Passenger Car 2 Passenger Van 3 Pickup 7 Motor Home 8 Bus 11 Motorcycle 12 Moped 13 All Terrain Vehicle (ATV)		15 Low Speed Vehicle 16 (Sport) Utility Vehicle 17 Cargo Van (10,000 lbs (4,536 kg) or less) 18 Motor Coach 19 Other Light Trucks (10,000 lbs (4,536 kg) or less) 20 Medium/Heavy Trucks (more than 10,000 lbs (4,536 kg)) 21 Farm Labor Vehicle 77 Other, Explain in Narrative 88 Unknown		Trafficway 1 Two-Way, Not Divided 2 Two-Way, Not Divided, with a Continuous Left Turn Lane 3 Two-Way, Divided, Unprotected (painted >4 feet) Median 4 Two-Way, Divided, Positive Median Barrier 5 One-Way Trafficway 88 Unknown		Commercial Motor Vehicle Configuration 1 Vehicle 10,000 lbs or less Placarded for Hazardous Materials 2 Single-Unit Truck (2-axle and GVWR more than 10,000 lbs (4,536 kg)) 3 Single-Unit Truck (3 or more axles) 4 Truck Pulling Trailer(s) 5 Truck Tractor (bobtail) 6 Truck Tractor/Semi-Trailer 7 Truck Tractor/Double Truck		Trailer Type 1 Single Semi Trailer 2 Tandem Semi Trailer 3 Tank Trailer 4 Saddle Mount/Trailer 5 Boat Trailer 6 Utility Trailer 7 House Trailer		Cargo Body Type 3 Van/Enclosed Box 4 Hopper 5 Pole-Trailer 6 Cargo Tank 7 Flatbed 8 Dump 9 Concrete Mixer 10 Auto Transport 11 Garbage/Refuse 12 Log		Emergency Vehicle Use 1 No 2 Yes 88 Unknown	
Comm/Non-Commercial 1 Interstate Carrier 2 Intrastate Carrier 3 Not in Commerce/Government 4 Not in Commerce/Other Truck		Most Harmful Event 1 Overturn/Rollover 2 Fire/Explosion 3 Immersion 4 Jackknife 5 Cargo/Equipment Loss or Shift 6 Fell/Jumped From Motor Vehicle 7 Thrown or Falling Object 8 Ran into Water/ Canal 9 Other Non-Collision		Collision with Non-Fixed Object 10 Pedestrian 11 Pedalcycle 12 Railway Vehicle (train, engine) 13 Animal 14 Motor Vehicle in Transport 15 Parked Motor Vehicle 16 Work Zone/Maintenance Equipment 17 Struck By Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle 18 Other Non-Fixed Object		Collision Fixed Object 19 Impact Attenuator/Crash Cushion 20 Bridge Overhead Structure 21 Bridge Pier or Support 22 Bridge Rail 23 Culvert 24 Curb 25 Ditch 26 Embankment 27 Guardrail Face 28 Guardrail End		Vehicle Maneuver Action 1 Straight Ahead 3 Turning Left 4 Backing 5 Turning Right 6 Changing Lanes 8 Parked 10 Making U-Turn 11 Overtaking/ Passing 13 Stopped in Traffic 14 Slowing 15 Negotiating a Curve 16 Leaving Traffic Lane 17 Entering Traffic Lane 77 Other, Explain in Narrative 88 Unknown		Traffic Control Device For This Vehicle 1 No Controls 4 School Zone Sign/ Device 5 Traffic Control Signal 6 Stop Sign 7 Yield Sign		Vehicle Defects 1 None 2 Brakes 3 Tires 4 Lights (head, signal, tail) 6 Steering 7 Wipers 9 Exhaust System 10 Body, Doors 11 Power Train 12 Suspension 13 Wheels 14 Windows/ Windshield 15 Mirrors 16 Truck Coupling/ Trailer Hitch/ Safety Chains 77 Other, Explain in Narrative 88 Unknown	
Sequence of Events 1st 2nd 3rd 4th		Roadway Grade 1 Level 2 Hillcrest 3 Uphill 4 Downhill 5 Sag (bottom)		Roadway Alignment 1 Straight 2 Curve Right 3 Curve Left		Special Function of Motor Vehicle 1 No Special Function 2 Farm Vehicle 3 Police 7 Taxi 8 Military 9 Ambulance 10 Fire Truck 11 Farm Labor Transport 12 School Bus 13 Transit/Commuter Bus 14 Intercity Bus 15 Charter/Tour Bus 16 Shuttle Bus 17 Farm Labor Bus 88 Unknown							

VIOLATIONS				
PERSON #	NAME OF VIOLATOR	FL STATUTE NUMBER	CHARGE	CITATION NUMBER
PERSON #	NAME OF VIOLATOR	FL STATUTE NUMBER	CHARGE	CITATION NUMBER
PERSON #	NAME OF VIOLATOR	FL STATUTE NUMBER	CHARGE	CITATION NUMBER

PERSON # <input style="width: 50px;" type="text"/>				REPORTING AGENCY CASE NUMBER				HSMV CRASH REPORT NUMBER																											
1 Driver <input type="checkbox"/> 2 Non-Motorist <input type="checkbox"/> 3 Passenger <input type="checkbox"/>		VEHICLE #		NAME				PHONE NUMBER		Check if Recommend <input type="checkbox"/> Driver Re-exam <input type="checkbox"/>																									
CURRENT ADDRESS (Number and Street)						CITY & STATE				ZIP CODE																									
DATE OF BIRTH		SEX: 1 Male <input type="checkbox"/> 2 Female <input type="checkbox"/> 88 Unknown <input type="checkbox"/>		DRIVER LICENSE NUMBER		STATE		EXPIRES		INJURY SEVERITY (INJ) 1 None <input type="checkbox"/> 2 Possible <input type="checkbox"/> 3 Non-incapacitating <input type="checkbox"/> 4 Incapacitating <input type="checkbox"/> 5 Fatal (within 30 days) 6 Non-Traffic Fatality																									
DRIVER																																			
DL Type <input type="checkbox"/> 1 A 2 B 3 C <input type="checkbox"/> 4 D/Chauffeur <input type="checkbox"/> 5 E/Operator <input type="checkbox"/> 6 E/Oper - Rest <input type="checkbox"/> 7 None		Required Endorsements <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 No Req. Endorsement		Driver's Actions at Time of Crash <div style="display: flex; justify-content: space-between;"> <div> 1st <input type="checkbox"/> 1 No Contributing Action <input type="checkbox"/> 2 Operated MV in Careless or Negligent Manner <input type="checkbox"/> 3 Failed to Yield Right-of-Way <input type="checkbox"/> 4 Improper Backing <input type="checkbox"/> 6 Improper Turn <input type="checkbox"/> 10 Followed too Closely <input type="checkbox"/> 11 Ran Red Light <input type="checkbox"/> 12 Drove too Fast for Conditions <input type="checkbox"/> 13 Ran Stop Sign <input type="checkbox"/> 15 Improper Passing <input type="checkbox"/> 17 Exceeded Posted Speed <input type="checkbox"/> 21 Wrong Side of Wrong Way <input type="checkbox"/> 25 Failed to Keep in Proper Lane </div> <div> 3rd <input type="checkbox"/> 26 Ran off Roadway <input type="checkbox"/> 27 Disregarded other Traffic Sign <input type="checkbox"/> 28 Disregarded Other Road Markings <input type="checkbox"/> 29 Over-Correcting/Over-Steering <input type="checkbox"/> 30 Swerved or Avoided : Due to Wind, Slippery Surface, MV, Object, Non-Motorist in Roadway, etc. <input type="checkbox"/> 31 Operated MV in Erratic, Reckless or Aggressive Manner <input type="checkbox"/> 77 Other Contributing Action </div> </div>				Condition At Time of Crash <input type="checkbox"/> 1 Apparently Normal <input type="checkbox"/> 3 Asleep or Fatigued <input type="checkbox"/> 5 Ill (sick) or Fainted <input type="checkbox"/> 6 Seizure, Epilepsy, Blackout <input type="checkbox"/> 7 Physically Impaired <input type="checkbox"/> 8 Emotional (depression, angry, disturbed, etc.) <input type="checkbox"/> 9 Under the Influence of Medications/Drugs/Alcohol <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown																											
Driver Distracted By <input type="checkbox"/> 1 Not Distracted <input type="checkbox"/> 2 Electronic Communication Devices (cell phone, etc.) <input type="checkbox"/> 3 Other Electronic Device (navigation device, DVD player)		<input type="checkbox"/> 4 Other Inside the Vehicle (explain in narrative) <input type="checkbox"/> 5 External Distraction (outside the vehicle, explain in narrative) <input type="checkbox"/> 6 Texting <input type="checkbox"/> 7 Inattentive <input type="checkbox"/> 88 Unknown		Driver Vision Obstructions <input type="checkbox"/> 1 Vision Not Obscured <input type="checkbox"/> 2 Inclement Weather <input type="checkbox"/> 3 Parked/Stopped Vehicle <input type="checkbox"/> 4 Trees/Crops/Bushes <input type="checkbox"/> 5 Load on Vehicle <input type="checkbox"/> 6 Building/Fixed Object <input type="checkbox"/> 7 Signs/Billboards <input type="checkbox"/> 8 Fog <input type="checkbox"/> 9 Smoke <input type="checkbox"/> 10 Glare <input type="checkbox"/> 77 All Other, Explain in Narrative				DRIVER OR PASSENGER <div style="display: flex; justify-content: space-between;"> <div> Motor Vehicle Seating Position: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Seat</th> <th>Row</th> <th>Other</th> </tr> <tr> <td>1 Left</td> <td>1 Front</td> <td>1 Not Applicable</td> </tr> <tr> <td>2 Middle</td> <td>2 Second</td> <td>2 Sleeper Section of Truck Cab</td> </tr> <tr> <td>3 Right</td> <td>3 Third</td> <td>3 Other Enclosed Cargo Area</td> </tr> <tr> <td>77 Other (explain in narrative)</td> <td>4 Fourth</td> <td>4 Unenclosed Cargo Area</td> </tr> <tr> <td>88 Unknown</td> <td>77 Other Row</td> <td>5 Trailing Unit</td> </tr> <tr> <td></td> <td>88 Unknown</td> <td>6 Riding on Motor Vehicle Exterior (non-trailing unit)</td> </tr> <tr> <td></td> <td></td> <td>88 Unknown</td> </tr> </table> </div> <div> LOCATION: SEAT ROW OTHER (LOC) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div> </div>		Seat	Row	Other	1 Left	1 Front	1 Not Applicable	2 Middle	2 Second	2 Sleeper Section of Truck Cab	3 Right	3 Third	3 Other Enclosed Cargo Area	77 Other (explain in narrative)	4 Fourth	4 Unenclosed Cargo Area	88 Unknown	77 Other Row	5 Trailing Unit		88 Unknown	6 Riding on Motor Vehicle Exterior (non-trailing unit)			88 Unknown	DRIVER OR PASSENGER <div style="display: flex; justify-content: space-between;"> <div> Helmet Use (HU) <input type="checkbox"/> 1 DOT-Compliant Motorcycle Helmet <input type="checkbox"/> 2 Other Helmet <input type="checkbox"/> 3 No Helmet </div> <div> Eye Protection (EP) <input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Not Applicable </div> <div> Restraint Systems (RS) <input type="checkbox"/> 1 Not Applicable <input type="checkbox"/> 2 None Used - Motor Vehicle Occupant <input type="checkbox"/> 3 Shoulder and Lap Belt Used <input type="checkbox"/> 4 Shoulder Belt Only Used <input type="checkbox"/> 5 Lap Belt Only Used <input type="checkbox"/> 6 Restraint Used - Type Unknown <input type="checkbox"/> 7 Child Restraint System - Forward Facing <input type="checkbox"/> 8 Child Restraint System - Rear Facing <input type="checkbox"/> 9 Booster Seat <input type="checkbox"/> 10 Child Restraint Type Unknown <input type="checkbox"/> 77 Other, Explain in Narrative </div> </div>	
Seat	Row	Other																																	
1 Left	1 Front	1 Not Applicable																																	
2 Middle	2 Second	2 Sleeper Section of Truck Cab																																	
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	88 Unknown	6 Riding on Motor Vehicle Exterior (non-trailing unit)																																	
		88 Unknown																																	
NON-MOTORIST																																			
Non-Motorist Description <input type="checkbox"/> 1 Pedestrian <input type="checkbox"/> 2 Other Pedestrian (wheelchair, person in a building, skater, pedestrian conveyance, etc.) <input type="checkbox"/> 3 Bicyclist <input type="checkbox"/> 4 Other Cyclist <input type="checkbox"/> 5 Occupant of Motor Vehicle Not in Transport (parked, etc.) <input type="checkbox"/> 6 Occupant of a Non-Motor Vehicle Transportation Device <input type="checkbox"/> 7 Unknown Type of Non-Motorist				Non-Motorist Location At Time of Crash <input type="checkbox"/> 1 Intersection - Marked Crosswalk <input type="checkbox"/> 2 Intersection - Unmarked Crosswalk <input type="checkbox"/> 3 Intersection - Other <input type="checkbox"/> 4 Midblock - Marked Crosswalk <input type="checkbox"/> 5 Travel Lane - Other Location <input type="checkbox"/> 6 Bicycle Lane <input type="checkbox"/> 7 Shoulder/Roadside <input type="checkbox"/> 8 Sidewalk <input type="checkbox"/> 9 Median/Crossing Island <input type="checkbox"/> 10 Driveway Access <input type="checkbox"/> 11 Shared-Use Path or Trail <input type="checkbox"/> 12 Non-Trafficway Area <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown				Action Prior to Crash <input type="checkbox"/> 1 Crossing Roadway <input type="checkbox"/> 2 Waiting to Cross Roadway <input type="checkbox"/> 3 Walking/Cycling Along Roadway with Traffic (in or adjacent to travel lane) <input type="checkbox"/> 4 Walking/Cycling Along Roadway Against Traffic (in or adjacent to travel lane) <input type="checkbox"/> 5 Walking/Cycling on Sidewalk <input type="checkbox"/> 6 In Roadway -- Other (working, playing, etc.) <input type="checkbox"/> 7 Adjacent to Roadway (e.g., shoulder, median) <input type="checkbox"/> 8 Going to or from School (K-12) <input type="checkbox"/> 9 Working in Trafficway (incident response) <input type="checkbox"/> 10 None <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown																											
Safety Equipment <input type="checkbox"/> 1 None <input type="checkbox"/> 2 Helmet <input type="checkbox"/> 3 Protective Pads Used (elbows, knees, shins, etc.) <input type="checkbox"/> 4 Reflective Clothing (jacket, backpack, etc.) <input type="checkbox"/> 5 Lighting <input type="checkbox"/> 6 Not Applicable <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown				Non-Motorist Actions/Circumstances <div style="display: flex; justify-content: space-between;"> <div> 1st <input type="checkbox"/> 1 No Improper Action <input type="checkbox"/> 2 Dart/Dash <input type="checkbox"/> 3 Failure to Yield Right-of-Way <input type="checkbox"/> 4 Failure to Obey Traffic Signs, Signals, or Officer <input type="checkbox"/> 5 In Roadway Improperly (standing, lying, working, playing) <input type="checkbox"/> 6 Disabled Vehicle Related (working on, pushing, leaving/approaching) </div> <div> 2nd <input type="checkbox"/> 7 Entering/Exiting Parked/Standing Vehicle <input type="checkbox"/> 8 Inattentive (talking, eating, etc.) <input type="checkbox"/> 9 Not Visible (dark clothing, no lighting, etc.) </div> </div>				<input type="checkbox"/> 10 Improper Turn/Merge <input type="checkbox"/> 11 Improper Passing <input type="checkbox"/> 12 Wrong-Way Riding or Walking <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown																											
ALCOHOL/DRUG/EMS																																			
SUSPECTED ALCOHOL USE: <input type="checkbox"/> 1 No <input type="checkbox"/> 2 Yes <input type="checkbox"/> 88 Unknown		ALCOHOL TESTED: <input type="checkbox"/> 1 Test Not Given <input type="checkbox"/> 2 Test Refused <input type="checkbox"/> 3 Test Given <input type="checkbox"/> 88 Unknown, if Tested		ALCOHOL TEST TYPE: <input type="checkbox"/> 1 Blood <input type="checkbox"/> 2 Breath <input type="checkbox"/> 3 Urine <input type="checkbox"/> 77 Other, Explain in Narrative		ALCOHOL TEST RESULT: <input type="checkbox"/> 1 Pending <input type="checkbox"/> 2 Completed <input type="checkbox"/> 88 Unknown		BAC <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		SUSPECTED DRUG USE: <input type="checkbox"/> 1 No <input type="checkbox"/> 2 Yes <input type="checkbox"/> 88 Unknown																									
DRUG TESTED: <input type="checkbox"/> 1 Test Not Given <input type="checkbox"/> 2 Test Refused <input type="checkbox"/> 3 Test Given <input type="checkbox"/> 88 Unknown, if Tested		DRUG TEST TYPE: <input type="checkbox"/> 1 Blood <input type="checkbox"/> 3 Urine <input type="checkbox"/> 77 Other, Explain in Narrative		DRUG TEST RESULT: <input type="checkbox"/> 1 Positive <input type="checkbox"/> 2 Negative <input type="checkbox"/> 3 Pending <input type="checkbox"/> 88 Unknown																															
SOURCE OF TRANSPORT TO MEDICAL FACILITY <input type="checkbox"/> 1 Not Transported <input type="checkbox"/> 2 EMS <input type="checkbox"/> 3 Law Enforcement <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown				EMS AGENCY NAME OR ID				EMS RUN NUMBER		MEDICAL FACILITY TRANSPORTED TO																									
ADDITIONAL PASSENGERS																																			
PERSON #		VEHICLE #		NAME		DATE OF BIRTH		INJ	SEX	LOC: S	R	O	EJECT	HU	EP	ABD	RS																		
CURRENT ADDRESS (Number and Street)						CITY & STATE				ZIP CODE																									
SOURCE OF TRANSPORT TO MEDICAL FACILITY <input type="checkbox"/> 1 Not Transported <input type="checkbox"/> 2 EMS <input type="checkbox"/> 3 Law Enforcement <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown				EMS AGENCY NAME OR ID				EMS RUN NUMBER		MEDICAL FACILITY TRANSPORTED TO																									
PERSON #		VEHICLE #		NAME		DATE OF BIRTH		INJ	SEX	LOC: S	R	O	EJECT	HU	EP	ABD	RS																		
CURRENT ADDRESS (Number and Street)						CITY & STATE				ZIP CODE																									
SOURCE OF TRANSPORT TO MEDICAL FACILITY <input type="checkbox"/> 1 Not Transported <input type="checkbox"/> 2 EMS <input type="checkbox"/> 3 Law Enforcement <input type="checkbox"/> 77 Other, Explain in Narrative <input type="checkbox"/> 88 Unknown				EMS AGENCY NAME OR ID				EMS RUN NUMBER		MEDICAL FACILITY TRANSPORTED TO																									

[illegible]

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Bike Miami Beach Master Plan Implementation Matrix

Category 1: Filling in the gaps

Project Information											
Project Number	Project Street	Project Identification	Beach Area	Project Limits	Public ROW	Pavement Width	Posted Speed Limit	Daily Volume	Type	Order of magnitude cost	TOTAL Project Length
1	Atlantic Trail	SB Short Term Item 12	South beach	Between 5 Street and 3 Street		15'	NA		Shared path		2224 ft / .42 MI
2	Atlantic Trail		Middle beach	Between 24th st to 29th st					Protected bike lane		
3	Atlantic Trail		Middle beach	Between 30th st to Alison Park					Protected bike lane		
4	72 & 73 St	NB Short Term Item 7	North beach	Between Collins Ave. and Dickens Ave.	74'	35' Typical	25 mph	NA	Protected bike lane	\$31,000	1,800 FT / 0.35 MI
		NB Short Term Item 7		Between Atlantic Trail and Dickens Avenue	74'	56'	NA	NA	Protected bike lane		1,800 FT / 0.35 MI
5	63 St	MB Short Term Item 1	Middle beach	Between Atlantic Trail and Indian Creek Dr.	80'	60' Typical	35 mph		Protected bike lane		
6	West Ave	SB Short Term Item 7	South beach	Between 20th St. And 5th St.	70'	51' Typical	25 mph	12,000 ADT	Protected bike lane		7,600 FT / 1.43 MI
7	Meridian Ave	SB Short Term Item 2	South beach	Between Dade Boulevard and 16 Street	70'	58'	NA		protected bike lane		2480 ft / .47 MI
8	MacArthur Causeway	SB Short Term Item 10	South beach	Between 5th st intersection and Fisher Island Ferry	90'	80'	NA		Protected bike lane		7523 ft / 1.42 MI
9	Indian Creek Dr	NB Short Term Item 10	North beach	Between Abbott and 63 st	92' typical	74'	30 mph	NA	Protected bike lane		2753 ft / .52 MI
10	21 St	SB Short Term Item 1	South beach	Between Atlantic Trail and Washington Avenue			NA		Protected bike lane		3641 ft/ .69 MI
11	63 St	MB Short Term Item 1	Middle beach	Between Alton Rd. and Indian Creek Dr.	80'	60' Typical	35 mph	32,950 ADT	Protected bike lane		2,000 FT / 0.4 MI
12	81 St	NB Short Term Item 3	North beach	Between east end to Crespi Blvd then north to 82 st.	60'	42'	NA	NA	Greenway		1920 ft / .36 MI
13	77 St	NB Short Term Item 3	North beach	Between Collins Ave and Dickens Ave	50'	35'	15 mph school zone	NA	Greenway		1637 ft / .31 MI
14	Convention Center Drive	SB Short Term Item 3	South beach	Between 17 st and Dade Blvd.	100'	80'			Bike lane		1647 ft / .31 MI
15	51 St	MB Short Term Item 5	Middle beach	Between Alton Rd. and Pine Tree Dr.	70'	28' Typical	25 mph		bike lane		2,000 FT / 0.4 MI
16	Alton Road	MB Short Term Item 6	Middle beach	Between 51 and Lakeview Drive	48'	20'			shared path		
		MB Short Term Item 6		Between Lakeview Drive and North Bay Road	48'	20'			shared path		2076 ft / .39 MI
17	28 St	MB Short Term Item 16	Middle beach	Between Prairie and Pine Tree Dr.	94'	74'			Shared Path		
18	Tatum Waterway Dr	NB Short Term Item 2	North beach	Between 77st and 81 st	48'	35'	15 mph school zone	NA	Greenway		1787 ft / .34 MI
19	Chase Ave	MB Short Term Item 11	Middle beach	Between Prairie ave and Alton Road Junction to Julia Tuttle	40'	30'	NA		Shared path		2143 ft / .09 MI
20	Pine Tree Dr/La Gorce Dr	MB Short Term Item 4	Middle beach	Between 63 Street and 51 Street	71'	36' Typical	35 mph		protected bike lane		6,000 FT / 1.1 MI
					74'	35' Typical	35 mph	4,800 ADT	protected bike lane		6,000 FT / 1.1 MI
21	N. Michigan Ave	MB Short Term Item 7	Middle beach	Between Dade Blvd to Alton Rd.	64'	30'	NA		Greenway		3787 ft / .72 MI
22	Alton Road @ N. Bay Road Intersection	MB Short Term Item 8	Middle beach	Alton Rd. @ N. Bay rd. intersection			30 mph		Protected bike lane		
23	11 St	SB Short Term Item 8	South beach	Between West Avenue and Atlantic Way	60'	42'	NA		Greenway		3620ft/.69 MI
24	Meridian Ave	SB Short Term Item 8	South beach	South of 16th st.	50'	36'	NA		Greenway		6496 ft / 1.24 MI
25	Byron Ave	NB Short Term Item 2	North beach	Between Tatum Waterway Drive and 73 Street	80'	68'	25 mph	NA			3,000 FT / 0.05 MI
26	Pine Tree Dr	MB Short Term Item 10	Middle beach	Between 51st and 23rd st	100'	58'	NA		Greenway		8597 ft / 1.63 MI
27	Parkview Island Path	NB Short Term	North beach	Between 72 Street and 77 Street			NA		Shared Path		
28	N. Bay Road	MB Short Term Item 13	Middle beach	Between Chase Ave and Alton Rd.	64'	20'	25 mph		Greenway		5355 ft / 1.01 MI
29	South Pointe Dr		South beach	Ocean Drive to Atlantic Way					Bike lane		
30	5 St		South beach	Between Collins Ave to Atlantic Way					Bike lane		

Bike Miami Beach Master Plan Implementation Matrix

Project Information											
Project Number	Project Street	Project Identification	Beach Area	Project Limits	Public ROW	Pavement Width	Posted Speed Limit	Daily Volume	Type	Order of magnitude cost	TOTAL Project Length
1	Washington Ave	SB Long Term Item 1	South beach	Dade Blvd. to S. Pointe Dr.			NA		Protected bike lane		10908 ft / 2.07 MI
2	Dade Blvd	MB Short Term Item 18	Middle beach	Purdy Ave. and Pine Tree	70'	54'			shared path		5473 ft / 1.04 MI
3	41 St	MB Long Term Item 4	Middle beach	Pine Tree Drive and Julia Tuttle junction	98'	68'	NA		Protected bike lane		4458 ft / .85 MI
4	71 St	MB Long Term Item 5	North beach	Atlantic Trail and Abbot Ave	74'	48'	NA		From Sharrows to Protected bike lane		2438 ft / .46 MI
5	16 St	SB Long Term Item 5	South beach	Between Bay walk and Collins Ave	66'	48' Typical	25 mph		From Bike Lane to Protected Bike lane		4786 ft / .91 MI
6	5 St	SB Long Term Item 8	South beach	Between MacArthur entrance and Atlantic Trail	66'	48' Typical	35 mph	67,050 ADT	Protected bike lane		2880 ft / .55 MI
7	41 St	MB Short Term Item 12	Middle beach	Between Indian Creek and Pine Tree Dr.	98'	68'	NA		Shared path		797 ft / .15 MI
8	Normandy Dr (westbound)	NB Short Term Item 9	North beach	Between Biarritz Drive and Bay Drive	80'	54'	NA		Protected bike lane		2438 ft / .46 MI
9	71 St (eastbound)	NB Long Term Item 4	North beach	Between Biarritz Drive and Bay Drive			NA		Protected bike lane		5460 ft / 1.04 MI
10	S. Pointe Dr	SB Short Term Item 11	South beach	Between Atlantic Trail and Alton Rd.	80'	68'	NA		From Bike Lane to Protected Bike lane		1539 ft / .29 MI
11	Dickens Ave	NB Cat 2 -	North beach	Between 71 Street and Tatum Waterway Drive			25 mph		From Bike Lane to Protected Bike lane		
12	71 St	NB Long Term Item 4	North beach	71 st from Biarritz Dr to city limits	74'	48'	NA		Protected bike lane		6271 ft / 1.19 MI
13	Normandy Dr		North Beach	Between Biarritz Dr. to city limits					Protected bike lane		
14	Indian Creek Dr	MB Long Term Item 7	Middle beach	Between 41 st and 26 st	60'	48'	NA		protected bike lane		3871 ft / .73 MI
15	Alton Road	MB Short Term Item 19	Middle beach	Between North Michigan and Chase	102'	78'			From Bike Lane to Shared path		696 ft / .93 MI
16	Julia Tuttle Causeway	MB Long Term Item 3	Middle beach	Between city limits and extending into Alton @ 41 st junction	114'	110'	55 mph		From Bike Lane to Protected Bike lane		7773 ft / 1.47 MI
17	Euclid Ave	SB Long Term Item 6	South beach	Between 15th st and 2nd st	66'	48' Typical	25 mph		From Bike Lane to Protected Bike lane		5452 ft / 1.03 MI
18	Indian Creek Drive	NB Long Term Item 6	North beach	Between Abbott Avenue to Dickens Avenue	92' typical	74'	NA		From Bike Lane to Protected Bike lane		
19	Byron Ave	NB Short Term Item 2	North beach	Between Tatum Waterway Drive and 73 Street	80'	68'	25 mph	NA			3,000 FT / 0.05 MI
20	N. Bay Road	MB Short Term Item 13	Middle beach	North Bay Road between Chase and Sunset Drive.	64'	20'	25 mph		Greenway		5355 ft / 1.01 MI
21	Alton Road @ 5 St intersection		South beach	Alton @ 5th st intersection					Protected bike lane		
22	47 St		Middle beach	Alton Rd to North Bay Rd					Bike lane		
23	Alton Road		South beach	South Pointe to 5th street					Protected bike lane		
24	42 St		Middle beach	Between Sheridan and Pine Tree					Bike lane		

Category 2: Improvements to Existing Facilities

Bike Miami Beach Master Plan Implementation Matrix

Project Information										
Project Number	Project Street	Project Identification	Beach Area	Project Link	Public ROW	Paved Shoulder Width	Paved Shoulder Limit	Daily Volume	Type	Order of magnitude cost
1	Harding Ave	NB Short Term Item 6	North beach	73 st to north end city limits (86 st.)	56'	44'	30 mph	NA	Protected bike lane	5254 ft / 1 MI
		NB Long Term Item 7	North beach	Between city limit (north) to Indian Creek	56'	44'	30 mph		Protected bike lane	7053 ft / 1.34 MI
2	Collins Ave		North beach	Between city limit (north) to Indian Creek					Protected bike lane	
3	17 St	SB Short Term Item 4	South beach	From Atlantic to West Ave	50'	48'			greenway	4700 ft / .89 MI
4	Lincoln Road	SB Short Term Item 5	South beach	East of Washington Ave			NA		shared space	1020 ft / .19 MI
5	10 St	SB Short Term Item 8	South beach	Between Bay walk and Atlantic Way	52'	38'	NA		Greenway	3786 ft / .72 MI
6	Michigan Ave	SB Short Term Item 8	South beach	Between 11th st and 2nd st	52'	48'	NA		Greenway	3878 ft / .73 MI
7	Pennsylvania Ave	SB Short Term Item 8	South beach	Between 7th st and 17th st	50'	38'	NA		Greenway	5475 ft / 1.04 MI
8	2 st	SB Short Term Item 8	South beach	Between Ocean Dr and Michigan Ave	50'	36'-30'	NA		Greenway	1767 ft / .34 MI
9	Pine Tree Dr	NB Long Term Item 2	Middle beach	Between 51st and Dade Blvd	100'	58'	NA		protected bike lane	10706 ft / 2.03 MI
10	Fairway Dr	NB Short Term Item 4	North beach	Bay Dr @ 71st to Fairway Dr to Calais Dr.	34'	22'	NA	NA	Shared Path	8235 ft / 1.56 MI
11	Bay Dr	NB Short Term Item 8	North beach	Bay Dr @ 71st (east) to Bay Dr @ 71st (west)	34'	22'	30 mph	NA	Greenway	6265 ft / 1.21 MI
12	13 St	SB Short Term Item 8	South beach	West from Flamingo park to Bay Walk east from Flamingo park to Atlantic Ave			NA		Greenway	
13	15 St	SB Short Term Item 8	South beach	Between Washington and West ave	66'	52'	NA		Greenway	3456 ft / .65 MI
14	6 St	SB Short Term Item 9	South beach	Between Washington Ave and West Ave	48'	38'	NA		Greenway	2268 ft / .43 MI
15	Prairie Ave	NB Short Term Item 9	Middle beach	Between 44st to 47 st	48'	26'	NA		Greenway	2935 ft / .55 MI
16	20 St	NB Short Term Item 17	Middle beach	Between Purdy and N. Michigan	64'	50'			greenway	1375 ft / .26 MI
17	Collins Ave	NB Short Term Item 6	North beach	73 st to North end city limits (86 st.)	60'	48'	30 mph	NA	Protected bike lane	5257 ft / 1 MI
		NB Long Term Item 1	Middle beach	Between 63rd st to 41st	50'	44'	35 mph		protected bike lane	11401 ft / 2.16 MI
18	Ocean Dr	NB Long Term Item 2	South beach	Between S. Pointe Drive continuous to Middle Beach	78'	42'	NA		Protected bike lane	11979 ft / 2.27 MI
		SB Long Term Item 10	South beach	Between 15th St and 5th St	61'	36' Typical	25 mph	9,600 ADT		5,000 FT / 0.94 MI
19	Byron Ave		North beach	South of 81st to 73rd st.	90'	58'	25 mph	NA	Greenway	1947 ft / .37 MI
20	Maurice Gibb Memorial Park	NB Long Term Item 10	Middle beach	West of Sunset Harbour Dr			NA		Shared Path	716 ft / .14 MI
21	69 St	NB Long Term Item 8	North beach	Indian Creek to Atlantic Way	74'	54' - 44'	NA		Greenway	1109 ft / .21 MI
22	Hawthorne Ave	NB Long Term Item 2	North beach	Between 77th st and the north end of Stillwater park	50'	36'	30 mph		Greenway	3246 ft / .61 MI
23	Crespi Blvd	NB Long Term Item 2	North beach	Between Hawthorne ave and 65th st	50'	36'	30 mph		Greenway	2816 ft / .53 MI
24	Purdy Ave	NB Short Term Item 17	Middle beach	Between Venetian and 20st	70'	35'			greenway	1309 ft / .25 MI
25	Royal Palm Ave	NB Long Term Item 6	Middle beach	Between 26 st and 41 st	70'	20'	NA		greenway	2887 ft / .55 MI
26	Bay Walk			Between 5th st to 16th st					Shared path	
27	Atlantic Trail			Between 24th st to 28th st					Shared Path	
28	Atlantic Trail			30th st and Allison Park					Shared Path	
29	85 St		North Beach	Atlantic Trail to Stillwater Drive					Greenway	
30	6 St		South beach	Between West Ave and Atlantic					Greenway	
31	Drexel Ave		South beach	Between 17th st to 12th st					Greenway	
32	Lincoln Ln North		South Beach	Between Washington and 17th St					Greenway	

Category 3: Aspirational

LEGEND	
	Completed
	In Progress
	Funded, Not Started
	Not Feasible
	Impact to Parking
	Part of Neighborhood/Infrastructure
	Unfunded
	No Color

The background of the slide is a photograph of a paved path, likely a bike lane or pedestrian walkway, lined with palm trees. Several people are seen riding bicycles along the path, which stretches into the distance under a clear sky.

MICROMOBILITY SAFETY

Public Safety and Neighborhood Quality of Life Committee

July 10, 2024

MIAMI BEACH

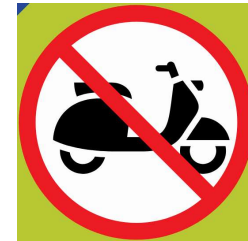
Background – Beachwalk

Sec. 70-67(c) of the City Code

- It is unlawful to operate any motorized means of transportation at any time:
 - The Beachwalk
 - The Lummus Park Promenade (Serpentine Walkway between 5 Street and 15 Street)
 - The South Pointe Park Cutwalk (adjacent and parallel to Government Cut)
 - The Marina Baywalk (adjacent and parallel to Biscayne Bay and south of 5 Street)
 - The interior pathways within South Pointe Park and Collins Park
 - The South Pointe Park Pier

Sec. 70-67(d) of the City Code

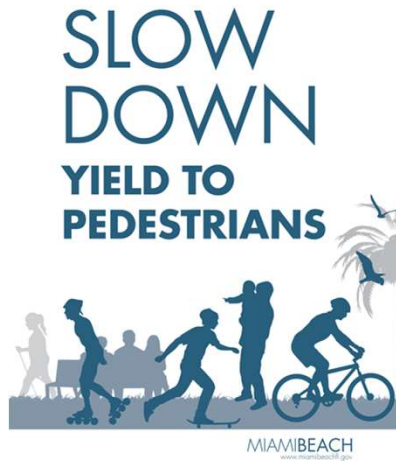
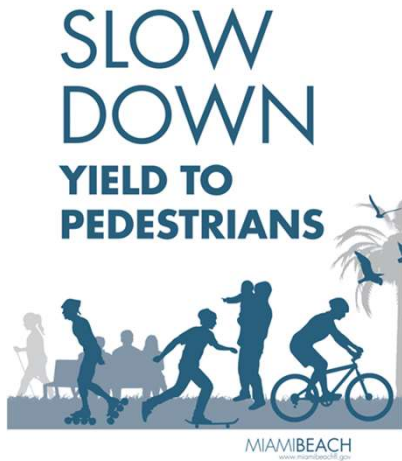
- It is unlawful to operate any motorized means of transportation on any sidewalk in the City.



Signage – Beachwalk

Concern

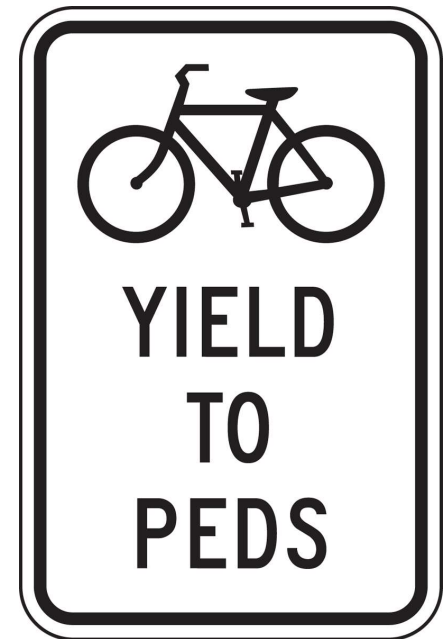
- Existing advisory and regulatory signs along the Beachwalk detract from the experience and are not easy to understand.



Signage – Beachwalk

Recommendation

- Removing all existing advisory and regulatory signs along the Beachwalk and install standard black and white regulatory-type signs.



Signage – Beachwalk

Concern

- Conflicts between bicyclists and pedestrians traveling along the Beachwalk.

Recommendation

- Painting a continuous white line along the center of the 7-mile Beachwalk with directional arrows on either side.
- Signage advising users to “KEEP RIGHT” will supplement the new striping and pavement markings.



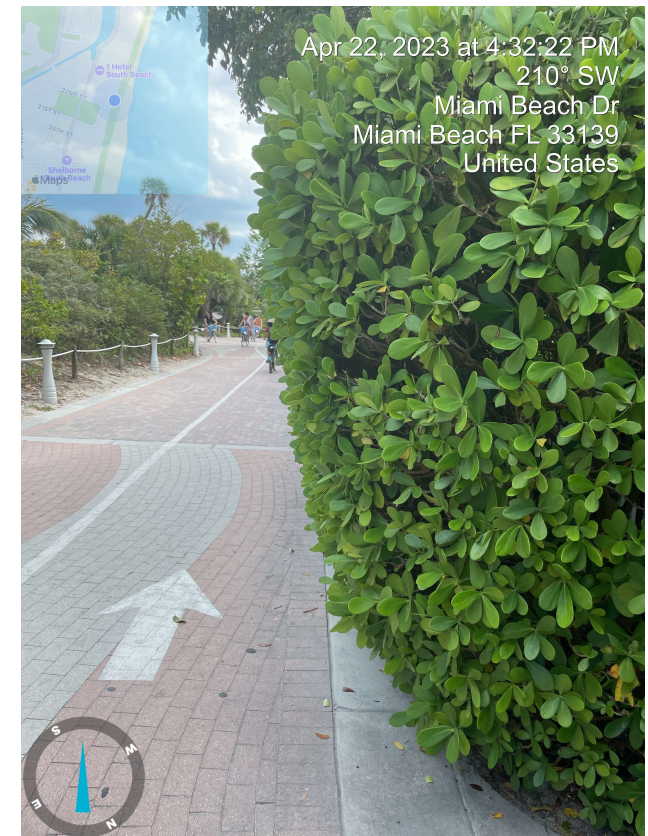
Signage – Beachwalk

Concern

- Overgrown vegetation on private property encroaching onto the Beachwalk results in reduced effective width for Beachwalk users.

Recommendation

- Explore new legislation requiring a private property setback from the Beachwalk and developing regulations governing the type of vegetation permitted for planting within the setback area.



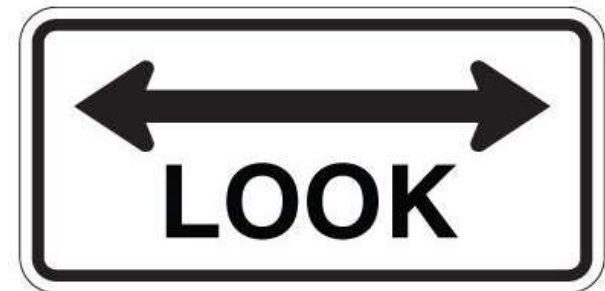
Signage – Beachwalk

Concern

- User conflicts due to limited sight visibility where private property egress and/or beach egress intersects the Beachwalk.

Recommendation

- Install signage and/or advance warning pavement markings (e.g. “LOOK”) on the Beachwalk to alert users of approaching conflict zones.
- Proposed Ordinance sponsored by Commissioner Bhatt on July 9, 2024 LUSC meeting to limit allowable height of fencing, walls, gates, shrubbery, hedges, and trees of properties fronting the Beachwalk.



Signage – Beachwalk

Concern

- Lack of street number signs at intersecting streets along the Beachwalk.

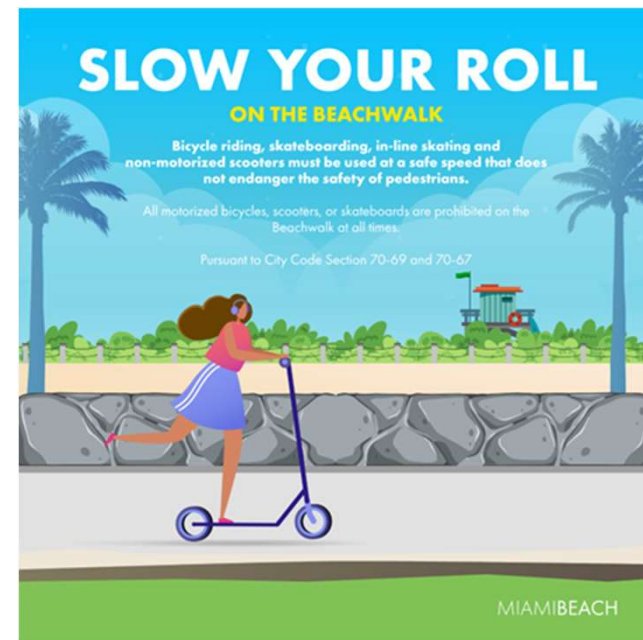
Recommendation

- Install street number signs along the Beachwalk at each intersecting street and beach access.



Digital Campaign – Beachwalk

- Launching an organic, digital campaign to advise Beachwalk users to “SLOW YOUR ROLL.”
- Temporary decals on the pavement will reinforce that all motorized means of transportation are prohibited on the Beachwalk.



Background – Lincoln Road

Sec. 70-67(a) of the City Code

- It is unlawful to:
 - Engage in skateboarding, roller skating, and in-line skating on Lincoln Road at any time
 - Operate any motorized means of transportation on Lincoln Road at any time
 - Engage in bicycling between 9 a.m. and 2 a.m. on Lincoln Road



Signage – Lincoln Road

Concern

- Existing regulatory signs along Lincoln Road detract from the experience and are not providing much direction or warning.

Recommendation

- Removing all existing regulatory signs along Lincoln Road and install standard black and white regulatory-type signs



Existing Regulatory Signs on Lincoln Road



Proposed Regulatory Sign for Lincoln Road

Digital Campaign – Lincoln Road

- A similar campaign targeted to the Lincoln Road pedestrian mall will include the installation of temporary decals on the pavement advising patrons to “WALK YOUR WHEELS.”



Enforcement Data and Statistics – Beachwalk

Concern

- Inability to capture specific crash data as it relates to micromobility devices since the Beachwalk is classified as a recreational shared-use facility and not a vehicular roadway.

Recommendation

- Exploring the possibility of capturing these incident types in-house through digital changes to its departmentwide Offense Incident Report through which to better gauge and document reported bicycle, pedestrian, and micromobility crashes throughout the City.

Enforcement Related to Section 70-67 (Prohibition of motorized means of transportation)												
	2021 <i>(October - December)</i>			2022			2023			2024 <i>(January - June)</i>		
	Park Rangers	Police Officers	RDA	Park Rangers	Police Officers	RDA	Park Rangers	Police Officers	RDA	Park Rangers	Police Officers	RDA
Uniform Traffic Citations	N/A	37	127	N/A	54	2	N/A	74	1	N/A	170	1
Written Warnings	3686	259	123	18	356	31	106	4	28	156	59	2
Verbal Warnings	(not tracked separately)	188	321	8966	1139	676	13652	919	308	1992	313	147

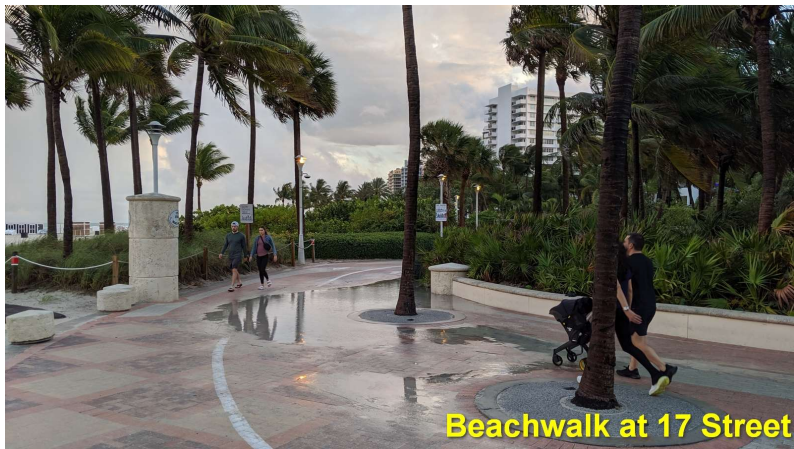
Facilities and Infrastructure – Beachwalk

Concern

- Ponding at various locations along the Beachwalk affects safety and mobility.

Recommendation

- Identify locations where ponding occurs and develop a work plan with estimated costs and timelines to implement spot-drainage improvements.
 - Should the fiscal impact require action by the City Commission, the Administration will request funding.



Facilities and Infrastructure – Beachwalk

Concern

- Critical chokepoints along the Beachwalk result in conflicts and safety concerns among users.

Recommendation

- Identify all critical chokepoint locations as well as opportunities for potential minor widening of the Beachwalk as feasible.

Concern

- Bicycle facilities requiring restriping and/or repainting as a result of peeling, fading, and poor restoration following of underground utility work.

Recommendation

- Identify all locations that require restriping and/or repainting as well as cost estimates.
- Explore ways of ensuring that proper bicycle facility restoration by contractors is completed.

Facilities and Infrastructure – Beachwalk

Solar-Powered Electronic Speed Feedback Devices

Concern

- Bicyclist speeding on the Beachwalk.

Recommendation

- Pilot Program to test the effectiveness of solar-powered electronic speed feedback devices.
 - The devices will serve to alert bicyclists to “SLOW DOWN” and raise awareness while cycling on the Beachwalk.

Speed, Volume and Modal Data Collection Sensors

- Install electronic sensors to collect speed and volume data in real-time of pedestrians, bicycles, and micromobility devices.



Facilities and Infrastructure – Citywide

Proposed Bicycle Lane Improvements

- Transportation and Mobility Department staff identified various pending BPMP projects:
 - Closing the bike lane gap on northbound Ocean Drive at 5 Street (traffic analysis in progress pursuant to City Commission direction, however, construction is unfunded).
 - BPMP Category 1 - Project No.30: Bicycle lane on 5 Street between Collins Avenue and Atlantic Way (construction is unfunded).
 - BPMP Category 3 - Project No. 6: Greenway on Michigan Avenue between 2 Street to 11 Street (construction is unfunded).
 - BPMP Category 3 - Project No.15: Greenway on Prairie Avenue between 44 Street to 47 Street (construction is unfunded).
 - BPMP Category 3 - Project No. 21: Greenway on 69 Street between Indian Creek Drive to Atlantic Way (construction is unfunded).
 - BPMP Category 3 - Project No. 25: Greenway on Royal Palm Avenue between 26 Street and 41 Street (construction is unfunded).
- Greenways are defined in the BPMP as low-volume, low-speed, and thus, low-stress streets that are designed for safe bicycle travel (and do not include dedicated bicycle lanes)

Next Steps

- Explore new legislation requiring a private property setback from the Beachwalk and developing regulations governing the type of vegetation permitted for planting within the setback area.
- Exploring the possibility of capturing bicycle, pedestrian, and micromobility crashes throughout the City through digital changes to its departmentwide Offense Incident Report.
- Identify locations where ponding occurs and develop a work plan with estimated costs and timelines to implement spot-drainage improvements.
- Identify all critical chokepoint locations along the Beachwalk as well as opportunities for potential minor widening as feasible.
- Identify all locations that require restriping and/or repainting as well as cost estimates.
- Explore ways of ensuring that proper bicycle facility restoration by contractors is completed.
- Refine low-hanging BPMP projects.

An aerial photograph of a coastal area. A red and white paved path runs diagonally from the bottom left towards the top left. To the right of the path is a grassy dune area with some palm trees. Further right is a sandy beach that meets the ocean. The ocean is a deep blue-green color with white waves breaking near the shore. In the background, some buildings and more palm trees are visible on the left side.

Thank You