

RESOLUTION NO. 2017-30039

A RESOLUTION OF THE MAYOR AND CITY COMMISSION AMENDING BOTH THE CITY'S PUBLIC WORKS MANUAL, AND THE CITY'S 2011 STORMWATER MANAGEMENT MASTER PLAN (PLAN) TO INCORPORATE MODIFICATIONS TO THE STANDARDS FOR THE CONSTRUCTION OF NEW ROADS, STORMWATER SYSTEMS, AND DEVELOPMENTS IN ORDER TO INCREASE THE LEVEL OF PROTECTION TO PROTECT FROM A 10 YEAR/24 HOUR STORM EVENT; AND WHICH MODIFICATIONS ARE ATTACHED HERETO AS COMPOSITE EXHIBIT A.

WHEREAS, over the past several years, the City enacted several measures which created the City's Stormwater Management Master Plan (Plan) [Resolution 2012-28068, November 14, 2012], and subsequently adopted several standards that have been incorporated into the Plan; and

WHEREAS, the Plan is intended to be a guide for improving the City's stormwater management system performance for the next 20 years, while taking into consideration potential sea level rise over the next 20-years and the impacts sea level rise would have on the City's stormwater infrastructure; and

WHEREAS, the Plan also contemplates a 50-year planning horizon relating to seawall heights, and increasing heights of sea walls due to the sea level rise projections; and

WHEREAS, on February 12, 2014, the City adopted Resolution 2014-28499, which approved the recommendation of the Flooding Mitigation Committee to amend the Plan so as to modify the design criteria for the water level in Biscayne Bay, to be increased from 0.5 Ft-NAVD to 2.7 Ft-NAVD for all tidal boundary conditions; and

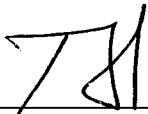
WHEREAS, on September 28, 2017, the Mayor's Blue Ribbon Panel on Flooding and Sea Level Rise voted to make a recommendation to the City Commission to amend the Plan, and the City's Public Works Manual, so as to increase the City's stormwater level of service for roadways, such that the future crown of road is not overtopped (flooded) during a 10 year/24 hour design storm event, which modification, if adopted by the Mayor and City Commission, would modify the existing standard in the Plan from having the roadway service level support for solely a 5 year/24 hour design storm event.; and

WHEREAS, the Mayor's Blue Ribbon Plan on Flooding and Sea Level Rise, and the City Administration support the modification to the City's Plan.

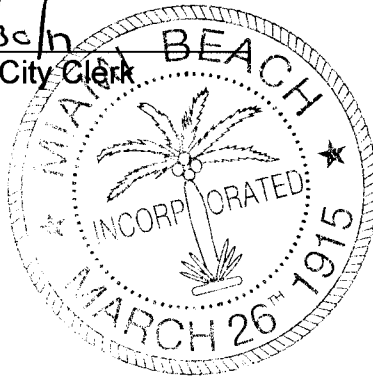
NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, that the Mayor and City Commission amend both the Public Works Manual, and the City's 2011 Stormwater Management Master Plan to incorporate modifications to the standards for the construction of new roads, stormwater systems, and developments; which standards would incorporate higher elevations in order to reduce the risk of flooding; and which documents are attached hereto as Composite Exhibit A.

PASSED and ADOPTED this 18 day of October, 2017.

ATTEST:



Rafael E. Granado, City Clerk





Philip Levine, Mayor

APPROVED AS TO
FORM & LANGUAGE
& FOR EXECUTION



City Attorney

10-2-17
Date

MIAMI BEACH

COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission
FROM: Jimmy L. Morales, City Manager
DATE: October 18, 2017

SUBJECT: A RESOLUTION OF THE MAYOR AND CITY COMMISSION AMENDING BOTH THE CITY'S PUBLIC WORKS MANUAL, AND THE CITY'S 2011 STORMWATER MANAGEMENT MASTER PLAN (PLAN) TO INCORPORATE MODIFICATIONS TO THE STANDARDS FOR THE CONSTRUCTION OF NEW ROADS, STORMWATER SYSTEMS, AND DEVELOPMENTS IN ORDER TO INCREASE THE LEVEL OF PROTECTION TO PROTECT FROM A 10 YEAR/24 HOUR STORM EVENT; AND WHICH MODIFICATIONS ARE ATTACHED HERETO AS COMPOSITE EXHIBIT A.

RECOMMENDATION

ANALYSIS

Over the past several years, the City enacted several measures which created the City's Stormwater Management Master Plan (Plan) [Resolution 2012-28068, November 14, 2012], and subsequently adopted several standards that have been incorporated into the Plan.

The Plan is intended to be a guide for improving the City's stormwater management system performance for the next 20 years, while taking into consideration potential sea level rise over the next 20 years and the impacts sea level rise would have on the City's stormwater infrastructure.

The Plan also contemplates a 50 year planning horizon relating to seawall heights, and increasing heights of sea walls due to the sea level rise projections.

On February 12, 2014, the City adopted Resolution 2014-28499, which approved the recommendation of the Flooding Mitigation Committee to amend the Plan so as to modify the design criteria for the water level in Biscayne Bay to be increased from 0.5 Ft-NAVD to 2.7 Ft-NAVD for all tidal boundary conditions.

On June 8, 2016, the City adopted Resolution 2016-29454, which approved the recommendation of the City's consultant, AECOM, to amend the Plan, specifically Section 2.5.3 to include future crown road elevation of 3.7 feet NAVD and a level of service such that the crown of the roadway is not overtopped during a 5 year / 24 hour design storm event with a 1.25 safety factor using the South Florida Water Management District (SFWMD) nomograph or 6 in ches times 1.25 for a total of 7.5 inches of rain.

On September 28, 2017, the Mayor's Blue Ribbon Panel on Flooding and Sea Level Rise voted to

make a recommendation to the City Commission to amend the Plan, and the City's Public Works Manual, so as to further increase the City's stormwater level of service for roadways, such that the future crown of road is not overtopped (flooded) during a 10 year/24 hour design storm event using the SFWMD nomograph or 7 inches times 1.25, which equates to 8.75 inches of rainfall as opposed to 7.5 inches of rain previously adopted.

The Mayor's Blue Ribbon Plan on Flooding and Sea Level Rise, and the City Administration support the modification to the Plan.

CONCLUSION

The Administration recommends that the Mayor and City Commission of the City of Miami Beach, Florida accept the recommendation of the City Manager to amend the 2011 Stormwater Management Master Plan.

Legislative Tracking

Public Works

Sponsor

Commissioner Joy Malakoff & Co-sponsored by Commissioner John Elizabeth Aleman

ATTACHMENTS:

Description

- FA Reso - Stormwater Master Pan
- Exhibit A

EXHIBIT A

ADDENDUM 2 TO THE CITY OF MIAMI BEACH STORMWATER (MANAGEMENT) MASTER PLAN FINAL REPORT

The following amendments to the following sections of the 2011 SWMP are hereby amended and incorporated by reference into the 2011 SWMP, as follows:

2.5.3 Proposed Level of Service (LOS)

As shown, CDM evaluated design storm events and joint tidal event periods to evaluate stormwater system performance and the project needs and costs to achieve various levels of service. The various evaluations for LOS indicated a point of diminishing returns at the 2 to 3 year storm event level.

Therefore, the City and CDM formulated options to best protect public safety and property with available funding. The 5-year, 24-hour design storm of 7.5 inches of rainfall was also investigated due to current LOS standards. As an example, a 5 year LOS in the Flamingo Park Lummus Avenue project area would cost approximately \$80 million, and the City available budget for this project area is approximately \$35 million.

Based on the supplied information herein, the City should determine whether an adjustment in the design storm is prudent as it relates to the future evaluation of LOS.

"Future crown of road" and *"future back of sidewalk elevations"* shall be 3.7 feet, NAVD, unless exempt due to hardship as determined by the Director of Public Works.

For land development purposes. *"future grade"* shall be a minimum of 3.7 feet NAVD.

The stormwater level of service for roadways such that the *"future crown of road"* is not overtopped (flooded) during the ~~5~~10 year / 24 hour design storm event shall be constructed utilizing the following parameters:

- South Florida Water Management District nomograph with 1.25 safety factor.
- The rainfall distribution shall be the SCS Type III.
- The Unit Hydrograph peaking factor shall be 150.