

20 2 0 - 3 1 3 1 6
RESOLUTION NO. _____

A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING BLUE-GREEN STORMWATER INFRASTRUCTURE CONCEPT PLAN (THE "PLAN") AND INCORPORATING THE PLAN AS AN AMENDMENT TO THE CITY'S STORMWATER MASTER PLAN, AS SET FORTH IN THIS RESOLUTION; AND PROVIDED, HOWEVER, THAT FUNDING FOR EACH INDIVIDUAL PROJECT SHALL BE SUBJECT TO PRIOR APPROVAL OF THE CITY COMMISSION.

WHEREAS, Jacobs Engineering has worked with City staff to develop an Integrated Water Management Plan, inclusive of three reports that further refine the City's existing Stormwater Management Plan; and

WHEREAS, these reports developed by Jacobs Engineering are: 1) the Blue-Green Stormwater Infrastructure Concept Plan, dated February 28, 2020; 2) the Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects, dated February 28, 2020; and 3) the Neighborhood Project Prioritization – Methodology and Results, dated April 1, 2020; and

WHEREAS, the development of these documents was necessary to set the basis for the implementation of design criteria for City projects, and these City projects may be executed using different delivery methods such as Design-Build (DB) or the more traditional Design-Bid-Build (DBB); and

WHEREAS, throughout the development of these three reports, Jacobs Engineering has gathered feedback from the community, the Administration, and, most recently, the City Commission at its Resilience Retreat on January 27, 2020; and

WHEREAS, all three reports support the City's Resilience Strategy by reducing flood risks in ways that increase environmental protection and create social and economic value for the residents of, and visitors to, the City; and

WHEREAS, the City Commission's approval of the Blue-Green Infrastructure Concept Plan will allow the City to begin incorporating the new design criteria for the recommended 56 prioritized neighborhood projects.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, hereby, accept the Jacobs Engineering Blue-Green Stormwater Infrastructure Concept Plan (the "Plan") and incorporate the Plan as an amendment to the City's Stormwater Master Plan, and provided, however, that funding for each individual project shall be subject to prior approval of the City Commission.

PASSED and ADOPTED this 24 day of July, 2020.

ATTEST:



6/24/2020
RAFAEL E. GRANADO, CITY CLERK



DAN GELBER, MAYOR

**APPROVED AS TO
FORM & LANGUAGE
& FOR EXECUTION**





City Attorney

6-19-22

Date

MIAMI BEACH

COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City
Commission

FROM: Jimmy L. Morales, City Manager

DATE: July 24, 2020

- SUBJECT: 1. A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AS IT RELATES TO AND SPECIFICALLY AMENDING THE CITY'S STORMWATER MASTER PLAN, INCORPORATING THE BLUE-GREEN STORMWATER INFRASTRUCTURE CONCEPT PLAN REPORT.
2. A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AS IT RELATES TO AND SPECIFICALLY AMENDING THE CITY'S STORMWATER MASTER PLAN, INCORPORATING THE ROAD ELEVATION STRATEGY AND RECOMMENDED SEA LEVEL RISE/TIDAL FLOOD ADAPTATION PROJECTS REPORT.
3. A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AS IT RELATES TO AND SPECIFICALLY AMENDING THE CITY'S STORMWATER MASTER PLAN, INCORPORATING THE NEIGHBORHOOD PROJECT PRIORITIZATION – METHODOLOGY AND RESULTS REPORT.

RECOMMENDATION

The Administration recommends accepting the Miami Beach Integrated Water Management prepared by Jacobs Engineering, and adopting the three reports, respectively: 1) Blue-Green Stormwater Infrastructure Concept Plan; 2) Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects; and 3) Neighborhood Project Prioritization – Methodology and Results; with such reports to be incorporated as an amendment to the City's Stormwater Master Plan.

BACKGROUND/HISTORY

Jacobs Engineering has worked with City staff to develop an Integrated Water Management Plan, inclusive of three reports that further refine the City's existing Stormwater Management Strategy.

These reports are: 1) The Blue-Green Stormwater Infrastructure Concept Plan, dated February 28, 2020; 2) Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects, dated February 28, 2020; and 3) Neighborhood Project Prioritization – Methodology and Results, dated April 1, 2020. Throughout the development of these three reports, Jacobs Engineering has gathered feedback from the community, the Administration, and, most recently, the City Commission at its Resilience Retreat on January 27, 2020.

ANALYSIS

The following summarizes the plans, guidelines, and results of the three Jacobs Engineering reports. These reports, if approved, will set the basis for the implementation of design criteria packages (DCP) for City projects. The three reports included:

1. A Blue-Green Stormwater Infrastructure Concept Plan
<http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Blue-Green-Stormwater-Infrastructure-Concept-Plan.pdf>
2. Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects
<http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Road-Elevation-Strategy.pdf>
3. Neighborhood Project Prioritization – Methodology and Results.
<http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Neighborhood-Project-Prioritization.pdf>

All three reports support the City's Resilience Strategy by reducing flood risks in ways that increase environmental protection and create social and economic value for the residents of, and visitors to, the City.

The City Commission's approval of the three reports will amend the City's Stormwater Master Plan and will allow the City to begin implementation of DCPs for the recommended 56 prioritized neighborhood projects.

1. Blue-Green Stormwater Infrastructure (BGSi) Concept Plan

This report will guide the City's integration of blue-green stormwater practices into existing planning and capital improvement projects. These practices, selected for application specifically in Miami Beach, include bioretention, rainwater harvesting, restored/constructed wetlands (including floating wetlands), stormwater planters and other practices that can be implemented on commercial property, residential property, public facilities/spaces and transportation corridors. The intent is to increase the scale of implementation to realize the following benefits:

- Improve the water quality of the stormwater being discharged to Biscayne Bay
- Support flood reduction efforts by improved management of stormwater runoff from smaller, more frequent storm events
- Enhance the landscape with aesthetically pleasing practices guided by landscape architecture and innovative urban designs that provide social and economic value in locally relevant and neighborhood-specific ways.

2. Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation Projects

The new policy for Road Elevations in the City is based on updated Sea Level Rise (SLR) projections and provides flexibility to accommodate harmonization of elevated roads with adjacent private property. The policy is designed to reduce the likelihood of sunny day flooding of road surfaces, groundwater elevation causing poor pavement performance, and to provide harmonization with surrounding land uses (perhaps with green infrastructure). The final recommended policy is as follows:

- A flexible and tailored approach for varying City conditions and needs that is not "one size fits all"
- Emergency Roads: The edge of the road needs to be above 4.8 feet in elevation (NAVD88 is used for all elevations in the new policy).
- Major and Local Roads: The edge of road needs to be above 3.9 feet in elevation
- For all roads, the bottom of road base needs to be above 2.9 feet in elevation
- Flexibility is provided for situations where these minimum road elevation requirements cannot be harmonized with adjacent private property. When lower road elevations are allowed, they are accompanied by upgraded road-base materials to protect road reliability and service life from groundwater impacts.

The Commission's approval of the updated Road Elevation Strategy will cause the prior policy to be replaced by this updated and flexible policy to guide future road elevation projects. As part of this policy update, Jacobs Engineering identified 64

areas in the City that will require road elevation improvements; these are factored into the prioritization of neighborhood projects.

3. Neighborhood Project Prioritization – Methodology and Results.

A comprehensive portfolio of 56 neighborhood projects was developed and prioritized using a methodology that was vetted with community stakeholders, the READY Team and the City Commission. Neighborhood projects were prioritized based on following management objectives:

- Flood risk reduction
- Addressing critical water and sewer system needs and service supply reliability
- Population served by the project
- Minimization of community disruption by consolidation of construction activities

A total of 560 individual capital infrastructure projects from the City's water, sewer, stormwater and transportation master plans and other planning documents (i.e., Blueways, GO Bond and the current CIP program) were evaluated to determine the degree to which each supports the above management objectives. A total of 401 projects were included in the final prioritization, which includes 64 new road elevation projects developed by Jacobs Engineering based on the new Road Elevation Strategy.

The City Commission's approval of the Neighborhood Prioritization, including the 56 neighborhood projects, will empower the City to develop DCP's for each project and begin implementation.

Community Engagement

Public meetings have been conducted to present the Blue-Green Stormwater Infrastructure Concept Plan, Road Elevation Strategy and Neighborhood Project Prioritization reports, and to collect and include public comments and concerns. These were conducted both to inform the community about the actions the City is taking to adapt to climate change, and to solicit public input. Additionally, in the case of green infrastructure, the community was made aware of actions they can take that help adapt to climate change and protect the environment

Results from the 2019 Resident Survey show that 50% of residents rated efforts to manage stormwater drainage and flooding as excellent or good. In order to continue maintaining excellent standards in this area, the City recommends accepting the three Jacobs Engineering reports.

CONCLUSION

The Administration recommends accepting the Miami Beach Integrated Water Management prepared by Jacobs Engineering, and adopting the three reports, respectively: 1) Blue-Green Stormwater Infrastructure Concept Plan; 2) Road Elevation Strategy and Recommended Sea Level Rise/Tidal Flood Adaptation

Projects; and 3) Neighborhood Project Prioritization – Methodology and Results; with such reports to be incorporated as an amendment to the City's Stormwater Master Plan.

Applicable Area

Citywide

Is this a Resident Right to Know item?

Yes

Does this item utilize G.O. Bond Funds?

No

Legislative Tracking

Public Works



Miami Beach Integrated Water Management
Blue-Green Stormwater Infrastructure Concept Plan

Final
February 28, 2020
City of Miami Beach
RFQ 2018-312-KB





Miami Beach Integrated Water Management

Road Elevation Strategy and Recommended Sea Level Rise/ Tidal Flood Adaptation Projects

Final

February 28, 2020

City of Miami Beach

RFQ 2018-312-KB





Miami Beach Integrated Water Management

Neighborhood Project Prioritization – Methodology and Results

Final

April 1, 2020

City of Miami Beach

RFQ 2018-312-KB



MIAMI BEACH

COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission
FROM: Jimmy L. Morales, City Manager
DATE: July 24, 2020

SUBJECT: A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE JACOBS ENGINEERING MIAMI BEACH INTEGRATED WATER MANAGEMENT PLAN AND AMENDING THE CITY'S STORMWATER MASTER PLAN, CONSISTING OF THREE DOCUMENTS: BLUE-GREEN STORMWATER INFRASTRUCTURE CONCEPT PLAN, ROAD ELEVATION STRATEGY AND RECOMMENDED SEA LEVEL RISE/TIDAL FLOOD ADAPTATION PROJECTS, AND NEIGHBORHOOD PROJECT PRIORITIZATION – METHODOLOGY AND RESULTS.

RECOMMENDATION

The Administration recommends accepting the Miami Beach Integrated Water Management prepared by Jacobs Engineering, including their professional recommendation for the City's blue green infrastructure strategy, road elevation strategy, and neighborhood project sizing and prioritization, as an amendment to the City's Stormwater Master Plan dated 2011.

BACKGROUND/HISTORY

Jacobs Engineering has worked with City staff to develop an Integrated Water Management Plan, inclusive of three documents that further refine the City's existing Stormwater Management Strategy.

These documents include Blue-Green Stormwater Infrastructure Concept Plan, dated February 28, 2020; Road Elevation Strategy and Recommended Sea Level Rise/ Tidal Flood Adaptation Projects, dated February 28, 2020; and Neighborhood Project Prioritization – Methodology and Results, dated April 1, 2020.

Throughout the development of these three documents Jacobs Engineering has gathered feedback from the community, the Administration, and, most recently, the City Commission at the Resilience Retreat on January 27, 2020.

ANALYSIS

The following summarizes the plans, guidelines, and results of the three Jacobs Engineering tasks in the Integrated Water Management Plan. These tasks were necessary to set the basis for the implementation of design criteria packages (DCP) for City projects. The three tasks

included:

- A Blue-Green Stormwater Infrastructure Concept Plan
<http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Blue-Green-Stormwater-Infrastructure-Concept-Plan.pdf>
- An updated Road Elevation Strategy
<http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Road-Elevation-Strategy.pdf>
- A Prioritization of Neighborhood Projects
<http://www.miamibeachfl.gov/wp-content/uploads/2020/07/Neighborhood-Project-Prioritization.pdf>

All three tasks support the City's Resilience Strategy by reducing flood risks in ways that increase environmental protection and create social and economic value for the residents of, and visitors to, the City.

The Commission's approval of the plans, guidelines, and results will allow the City to begin implementation of DCPs for the recommended 56 prioritized neighborhood projects.

Blue-Green Stormwater Infrastructure (BGSi) Concept Plan

This Concept Plan will guide the City's integration of blue-green stormwater practices into existing planning and capital improvement projects. These practices, selected for application specifically in Miami Beach, include bioretention, rainwater harvesting, restored/constructed wetlands (including floating wetlands), stormwater planters and other practices that can be implemented on commercial property, residential property, public facilities/spaces and transportation corridors. The intent is to increase the scale of implementation to realize the following benefits:

- Improve the water quality of the stormwater being discharged to Biscayne Bay
- Support flood reduction efforts by improved management of stormwater runoff from smaller, more frequent storm events
- Enhance the landscape with aesthetically pleasing practices guided by landscape architecture and innovative urban designs that provide social and economic value in locally relevant and neighborhood-specific ways.

The Commission's approval of the Blue Green Stormwater Infrastructure Concept Plan will finalize these guidelines and plans for the City to integrate these practices into the master planning and capital improvement projects.

Road Elevation Strategy

The new policy for Road Elevations in the City is based on updated Sea Level Rise (SLR) projections and provides flexibility to accommodate harmonization of elevated roads with adjacent private property. The policy is designed to reduce the likelihood of sunny day flooding of road surfaces, groundwater elevation causing poor pavement performance, and to provide harmonization with surrounding land uses (perhaps with green infrastructure). The final recommended policy is as follows:

- A flexible and tailored approach for varying City conditions and needs that is not “one size fits all”
- Emergency Roads: The edge of the road needs to be above 4.8 feet in elevation (NAVD88 is used for all elevations in the new policy).
- Major and Local Roads: The edge of road needs to be above 3.9 feet in elevation
- For all roads, the bottom of road base needs to be above 2.9 feet in elevation
- Flexibility is provided for situations where these minimum road elevation requirements cannot be harmonized with adjacent private property. When lower road elevations are allowed, they are accompanied by upgraded road-base materials to protect road reliability and service life from groundwater impacts.

The Commission’s approval of the updated Road Elevation Strategy will cause the prior policy to be replaced by this updated and flexible policy to guide future road elevation projects. As part of this policy update, Jacobs Engineering identified 64 areas in the City that will require road elevation improvements; these are factored into the prioritization of neighborhood projects.

Neighborhood Project Prioritization

A comprehensive portfolio of 56 neighborhood projects was developed and prioritized using a methodology that was vetted with community stakeholders, the READY Team and the City Commission. Neighborhood projects were prioritized based on following management objectives:

- Flood risk reduction
- Addressing critical water and sewer system needs and service supply reliability
- Population served by the project
- Minimization of community disruption by consolidation of construction activities

A total of 560 individual capital infrastructure projects from the City’s water, sewer, stormwater and transportation master plans and other planning documents (i.e., Blueways, GO Bond and the current CIP program) were evaluated to determine the degree to which each supports the above management objectives. A total of 401 projects were included in the final prioritization; which includes 64 new road elevation projects developed by Jacobs Engineering based on the new Road Elevation Strategy.

Capital projects across all planning areas were bundled into neighborhood projects to minimize community impacts from construction activities and in preparation for development of DCPs. DCP development will include the addition of Blue-Green Stormwater Infrastructure per the Concept Plan and urban design elements to increase the social and economic benefits of these projects.

The Commission’s approval of the Neighborhood Prioritization, including the 56 neighborhood projects, will empower the City to develop DCPs for each project and begin implementation.

Community Engagement

Public meetings have been conducted to present the Blue-Green Stormwater Infrastructure Concept Plan, Road Elevation Strategy and Neighborhood Project Prioritization methodology and to collect and include public comments and concerns in these final tasks. These were

conducted to both inform the community about the actions the City is taking to adapt to climate change and to solicit community input. Additionally, in the case of green infrastructure, the community was made aware of actions they can take that help adapt to climate change and protect the environment

Results from the 2019 Resident Survey show that 50% of residents rated efforts to manage stormwater drainage and flooding as excellent or good. In order to continue maintaining excellent standards in this area, the City recommends accepting the Jacobs Engineering Miami Beach Integrated Water Management.

CONCLUSION

The Administration recommends accepting the Miami Beach Integrated Water Management prepared by Jacobs Engineering, including their professional recommendation for the City's blue green infrastructure strategy, road elevation strategy, and neighborhood project sizing and prioritization, as an amendment to the City's Stormwater Master Plan dated 2011.

Applicable Area

Citywide

Is this a Resident Right to Know item?

Yes

Does this item utilize G.O. Bond Funds?

No

Legislative Tracking

Public Works