

C7 AK A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, APPROVING THE FINAL DRAFT 63RD STREET BASCULE BRIDGE TRAFFIC STUDY ("TRAFFIC STUDY") RECOMMENDATIONS AND AUTHORIZING THE CITY MANAGER TO SUBMIT A FORMAL REQUEST TO THE UNITED STATES COAST GUARD TO CONSIDER THE IMPLEMENTATION OF MODIFICATIONS TO THE 63RD STREET BRIDGE OPENING SCHEDULE AS RECOMMENDED IN THE TRAFFIC STUDY.



COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission

FROM: Rickelle Williams, Interim City Manager

DATE: June 26, 2024

TITLE: A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, APPROVING THE FINAL DRAFT 63RD STREET BASCULE BRIDGE TRAFFIC STUDY ("TRAFFIC STUDY") RECOMMENDATIONS AND AUTHORIZING THE CITY MANAGER TO SUBMIT A FORMAL REQUEST TO THE UNITED STATES COAST GUARD TO CONSIDER THE IMPLEMENTATION OF MODIFICATIONS TO THE 63RD STREET BRIDGE OPENING SCHEDULE AS RECOMMENDED IN THE TRAFFIC STUDY.

RECOMMENDATION

The City Administration ("Administration") recommends that the Mayor and City Commission ("City Commission") adopt the Resolution.

BACKGROUND/HISTORY

The 63 Street bascule bridge is a drawbridge located near the east end of State Road ("SR") 907/63 Street between Allison Road and Indian Creek Drive. The operations and maintenance of the 63 Street bridge are under the jurisdiction of the Florida Department of Transportation ("FDOT"). FDOT engages a private contractor to provide bridge tender services. The bridge tender is responsible for controlling bridge activity and maintaining bridge activity logs.

The United States Coast Guard ("USCG") has the authority to establish and regulate drawbridges operations, including the 63 Street bascule bridge, pursuant to the USCG Bridge Regulations found in Title 33 of the Code of Federal Regulations ("CFR"), Chapter 1, Subchapter J, Part 114 -118.

As such, the current schedule of the 63 Street bridge, as approved by the USCG, is as follows:

- From 7 a.m. to 7 p.m., Monday through Friday, the bridge will open on the hour and half hour (only if there is demand).
- From 7:10 a.m. to 9:55 a.m. and from 4:05 p.m. to 6:59 p.m., Monday through Friday, except on federal holidays, the bridge will not open for the passage of vessels, except emergency vessels or tug/tow vessels.
- From 7 a.m. to 7 p.m., on Saturdays and Sundays, the bridge will open on the hour and half-hour (only if there is demand), except on federal holidays when the bridge will operate on demand. Outside of those hours, on Saturdays and Sundays, the bridge operates on demand.

ANALYSIS

The Transportation and Mobility Department engaged Kimley-Horn and Associates, Inc. ("Consultant"), one of the City's pre-qualified rotational transportation consultants, to conduct the 63rd Street Bascule Bridge Traffic Study ("Traffic Study") to evaluate the impact of the current

schedule of the 63 Street bridge on the surrounding roadway network and to identify and evaluate potential modifications to the schedule to reduce vehicular traffic congestion in the area. Under the current weekday schedule, the bridge opens every 30 minutes during the non-restricted hours. With an average bridge opening and closing duration of approximately seven (7) to eight (8) minutes during the non-restricted hours, there is insufficient time (approximately 22 minutes only) for the congestion along 63 Street, Alton Road, and Indian Creek Drive to dissipate and for the corridors to recover before the next bridge opening occurs. The residual vehicular queues combined with the incremental queues from each subsequent bridge opening exacerbate traffic congestion and create traffic gridlock conditions in the area that lasts for extended periods of time on a daily basis. Furthermore, the weekend bridge opening schedule currently ends at 7 p.m. Beyond that time, the bridge opens on demand; however, due to high amounts of maritime activity on weekends beyond 7 p.m., frequent bridge openings are occurring which create traffic congestion in the area.

The Consultant collected vehicle and vessel volumes and queuing data to analyze the impact of the current bridge schedule and proposed schedule changes on both roadway and maritime traffic. The data was collected at nine (9) locations (Attachment A) as part of the Traffic Study. Intersection turning movement counts were collected for three (3) weekdays (Wednesday through Friday) and two (2) weekend days (Saturday and Sunday). Following is a list of intersections analyzed as part of the Traffic Study:

- Indian Creek Drive and Abbott Avenue
- Indian Creek Drive and Harding Avenue/67 Street
- Indian Creek Drive and 65 Street
- Indian Creek Drive/Collins Avenue and 5875 Block
- 63 Street and Indian Creek Drive
- 63 Street and Collins Avenue
- 63 Street and Allison Road
- 63 Street and Pine Tree Drive
- 63 Street and La Gorce Drive

Based on the Consultant's analysis, the Traffic Study found that certain modifications to the current schedule of the 63 Street bridge would reduce vehicular traffic congestion in the area. Attachment B includes the Executive Summary of the Traffic Study.

Below is the proposed bridge schedule as recommended in the Traffic Study:

- From 7 a.m. to 7 p.m., Monday through Friday, the bridge would open on the hour (only if there is demand). Outside of those hours, Monday through Friday, the bridge would operate on demand. Note this recommendation represents a modification to the current bridge schedule consisting of opening on the hour (i.e. every 60 minutes) rather than on the hour and half hour (i.e. every 30 minutes).
- From 7:10 a.m. to 9:55 a.m. and from 4:05 p.m. to 6:59 p.m., Monday through Friday, except on federal holidays, the bridge would not open for the passage of vessels, except emergency vessels or tug/tow vessels. Note these are the current restricted hours; thus, no change to the current restricted hours is recommended during this time period.
- From 7 a.m. to 9 p.m., on Saturdays and Sundays, the bridge will open on the hour and half-hour (only if there is demand), except on federal holidays when the bridge will operate on demand. Outside of those hours, on Saturdays and Sundays, the bridge operates on demand. Note this recommendation represents an extension of the current bridge schedule during this time period by two (2) hours (from 7 p.m. to 9 p.m.).

The Traffic Study found that while implementing the proposed hourly opening schedule during the non-restricted hours would increase the vehicular queues on the surrounding roadway corridors, it is anticipated that there will be sufficient time between sequential bridge openings for queuing vehicles to travel across the bridge and for congestion to dissipate, thereby reducing the total travel time for all vehicles crossing the bridge in a one (1) hour period during the non-restricted

hours, as compared to the current conditions. Since the bridge would open once every hour, rather than twice an hour, during the non-restricted times, the Traffic Study found that the time lost as a result of a bridge opening is expected to decrease from approximately 15 minutes per vehicle to 10.5 minutes per vehicle, thus increasing vehicle throughput and capacity along Alton Road, 63 Street, and Indian Creek Drive and allowing vehicular traffic to dissipate and flow more efficiently through the area. Furthermore, extending the weekend opening schedule from 7 p.m. to 9 p.m. is anticipated to reduce bridge openings during this time period as compared to the current on demand condition.

FDOT has reviewed the Traffic Study and provided minor comments that have been addressed by the Consultant. If the City Commission endorses the recommendations of the Traffic Study and adopts this Resolution, the City Manager will transmit the Resolution via letter request to the USCG to consider the implementation of the proposed modifications to the current schedule of the 63 Street bridge.

USCG Process

Based on recent communications with the USCG, if a permanent change to a drawbridge operating schedule is desired, at a minimum, the following information must be provided: 1) name of the person or entity requesting a change to the regulation; 2) name and location of the drawbridge; 3) an explanation of the problem and how the proposed schedule change would solve the problem; and 4) state the proposed schedule change.

The USCG may request additional information from the 63 Street bridge owner, in this case FDOT, to assist in making a determination that may include a vehicle traffic study, bridge tender logs and/or local maritime economic development. Once the request is received, the USCG will evaluate the available information and make a determination. If the USCG determines that a change to the current schedule is not needed, the USCG will provide a letter stating the reason(s) for the denial. If the USCG determines that a change to the current schedule is needed, the USCG will begin the federal rulemaking process which can take one (1) to two (2) years.

FISCAL IMPACT STATEMENT

N/A

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-notices/>

FINANCIAL INFORMATION

N/A

CONCLUSION

The Administration is committed to continue working with the FDOT and USCG to reduce the traffic congestion caused by the frequency of the 63 Street drawbridge openings and improve residents' quality of life.

The Administration supports the recommendations of the Traffic Study to modify the current schedule of the 63 Street bridge to decrease the frequency of weekday bridge openings, during the non-restricted hours, from every 30 minutes to once per hour and, furthermore, to extend the current weekend opening schedule from 7 p.m. to 9 p.m.. These recommendations are intended to reduce travel time and delay and improve traffic flow in the area.

Should the City Commission adopt this Resolution approving the recommendations of the Traffic Study, the City Manager will transmit the Resolution via letter request to the USCG for consideration of the proposed modifications to the current schedule of the 63 Street drawbridge.

The Administration will provide periodic updates on this matter via Letter To Commission (“LTC”).

Applicable Area

Citywide

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

Yes

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



Traffic Operations Analysis

W 63RD STREET BASCULE BRIDGE CITY OF MIAMI BEACH, FLORIDA

Kimley»Horn

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December 2023
Revised May 2024
040223409

Traffic Operations Analysis

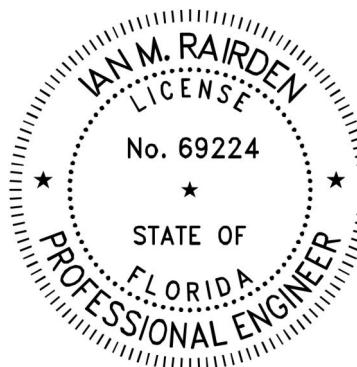
W 63RD STREET BASCULE BRIDGE CITY OF MIAMI BEACH, FLORIDA

Prepared for:

The City of Miami Beach

Prepared by:

Kimley-Horn and Associates, Inc.



This item has been digitally signed and sealed by Ian M. Rairden, PE, on May 17, 2024.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Kimley»Horn

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May 2024
040223409

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Plantation, FL 33324

EXECUTIVE SUMMARY

The City of Miami Beach is proposing to modify the bridge opening schedule for the bascule bridge located along W 63rd Street /SR 907/Alton Road (hereafter referred to as W 63rd Street) between Allison Road and Indian Creek Drive in Miami Beach, Florida. Currently, the W 63rd Street bascule bridge operates under a regulated schedule by the United States Coast Guard. The W 63rd Street bridge currently operates on a fixed schedule from 7:00 A.M. to 7:00 P.M. as noted in the table below. The City of Miami Beach is contemplating modifications to the bridge schedule in order to reduce vehicular traffic congestion in the area. The contemplated changes include restricting weekday and weekend bridge openings to on the hour only instead of on the hour and half hour and modifying the weekend evening schedule (between 7:00 P.M. to 9:00 P.M.) from on demand to scheduled operation, on the hour and half hour when there is demand. The table below summarizes the proposed bridge operation schedule changes. Analyses were performed to determine whether reducing the frequency of the bridge opening during non-peak traffic periods would be beneficial to reducing vehicular traffic congestion in the area.

Existing and Proposed Bridge Operation Schedule				
Analysis Scenario	Existing Schedule	Max # Boat Openings per Hour	Proposed Schedule	Max # Boat Openings per Hour
Weekday ⁽¹⁾	On the Hour/Half Hour 7 A.M. to 7 P.M. ⁽¹⁾	2	On the Hour 7 A.M. to 7 P.M. ⁽¹⁾	1
	On Demand 7 P.M. to 7 A.M.	No Limit	On Demand 7 P.M. to 7 A.M.	No Limit
Weekend – Day	On the Hour/Half Hour 7 A.M. to 7 P.M.	2	On the Hour 7 A.M. to 7 P.M.	1
	On Demand 7 P.M. to 9 P.M.	No Limit	On the Hour/Half Hour 7 P.M. to 9 P.M.	2
	On Demand 9 P.M. to 7 A.M.	No Limit	On Demand 9 P.M. to 7 A.M.	No Limit

Note: ⁽¹⁾ The bridge will not open for the passage of vessels on weekdays, from 7:10 A.M. to 9:55 A.M and from 4:05 P.M. to 6:59 P.M., except for the passage of emergency vessels or tug/tow vessels.

The *SYNCHRO* results of the intersection capacity analysis indicate that all study intersections are expected to operate at adopted levels of service D+20% or better during the study hours under all analysis conditions with the exception of the intersection representing the bridge. Based on the analysis, overall delay is expected to improve under weekend (Saturday) afternoon and weekend (Saturday) evening proposed schedule; however, queues worsen under weekday (Friday)

afternoon, weekend (Saturday) afternoon, and weekend (Saturday) evening proposed schedules scenarios. However, as the *SYNCHRO* software does not account for interaction between adjacent intersections in the model, results did not fully reflect field conditions. Therefore, SimTraffic, a microsimulation software package within *SYNCHRO*, was utilized for more detailed results.

A SimTraffic microsimulation model was developed to analyze queues as a result of the bascule bridge opening. After calibrating to the data collected, the models were adjusted to peak season volumes which were factored up to reflect the higher traffic volumes experienced in Miami Beach during the winter and spring months. The results of the analysis indicated that the vehicular queues and delay are not expected to be significantly improved for the weekday or weekend afternoon proposed schedule with the contemplated modifications. However, vehicular queues and delays are expected to significantly improve with the proposed schedule modification for weekend evening. The proposed weekend evening bridge opening restrictions decreases delay by over 7.5 minutes per vehicle along the west leg and over 4.0 minutes per vehicle along the north leg. The proposed weekend evening schedule is expected to decrease average vehicular queues by approximately 119 vehicles along the west leg and approximately 29 vehicles along the north leg, as well as maximum queues by approximately 144 vehicles along the west leg and approximately 9 vehicles along the north leg.

The results of the network-wide analysis indicated that the number of vehicles entering and exiting the network and the total network travel time improves for the weekday afternoon and weekend evening proposed schedules (i.e., congestion improves) and worsens for the weekend afternoon proposed schedule (i.e., congestion worsens). The proposed weekday afternoon and weekend evening bridge opening restrictions allows more vehicles to travel through the network and reduces the total travel time on the network for all vehicles during the study hour. This is consistent with the results of the queuing and delay analyses along the north and west legs.

RECOMMENDATIONS

Therefore, it is recommended that the proposed modifications to the weekday mid-day and weekend night schedules be implemented to reduce vehicular traffic congestion in the area. The table below summarizes the recommended bridge operation schedule changes.

Existing and Recommended Bridge Operation Schedule				
Analysis Scenario	Existing Schedule	Max # Boat Openings per Hour	Proposed Schedule	Max # Boat Openings per Hour
Weekday ⁽¹⁾	On the Hour/Half Hour 7 A.M. to 7 P.M. ⁽¹⁾	2	On the Hour 7 A.M. to 7 P.M. ⁽¹⁾	1
	On Demand 7 P.M. to 7 A.M.	No Limit	On Demand 7 P.M. to 7 A.M.	No Limit
Weekend – Day	On the Hour/Half Hour 7 A.M. to 7 P.M.	2	On the Hour/Half Hour 7 A.M. to 7 P.M.	2
	On Demand 7 P.M. to 9 P.M.	No Limit	On the Hour/Half Hour 7 P.M. to 9 P.M.	2
	On Demand 9 P.M. to 7 A.M.	No Limit	On Demand 9 P.M. to 7 A.M.	No Limit

Note: ⁽¹⁾ The bridge will not open for the passage of vessels on weekdays, from 7:10 A.M. to 9:55 A.M and from 4:05 P.M. to 6:59 P.M., except for the passage of emergency vessels or tug/tow vessels.

Additionally, due to maintenance, testing, and trainings, the bridge is noted to open with no boats passing through during various points throughout the day. It is recommended to limit non-essential openings to the non-peak hours such as evenings or night when vehicular volumes are the lowest.

RESOLUTION NO. _____

A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, APPROVING THE FINAL DRAFT 63RD STREET BASCULE BRIDGE TRAFFIC STUDY ("TRAFFIC STUDY") RECOMMENDATIONS AND AUTHORIZING THE CITY MANAGER TO SUBMIT A FORMAL REQUEST TO THE UNITED STATES COAST GUARD TO CONSIDER THE IMPLEMENTATION OF MODIFICATIONS TO THE 63RD STREET BRIDGE OPENING SCHEDULE AS RECOMMENDED IN THE TRAFFIC STUDY.

WHEREAS, the 63 Street bascule bridge is a drawbridge located near the east end of State Road ("SR") 907/63 Street between Allison Road and Indian Creek Drive. The operations and maintenance of the 63 Street bridge are under the jurisdiction of the Florida Department of Transportation ("FDOT"). FDOT engages a private contractor to provide bridge tender services. The bridge tender is responsible for controlling bridge activity and maintaining bridge activity logs; and

WHEREAS, the United States Coast Guard ("USCG") has the authority to establish and regulate drawbridges operations, including the 63 Street bascule bridge, pursuant to the USCG Bridge Regulations found in Title 33 of the Code of Federal Regulations ("CFR"), Chapter 1, Subchapter J, Part 114 -118; and

WHEREAS, the current schedule of the 63 Street bridge, as approved by the USCG, is as follows:

- From 7 a.m. to 7 p.m., Monday through Friday, the bridge will open on the hour and half hour (only if there is demand);
- From 7:10 a.m. to 9:55 a.m. and from 4:05 p.m. to 6:59 p.m., Monday through Friday, except on federal holidays, the bridge will not open for the passage of vessels, except emergency vessels or tug/tow vessels;
- From 7 a.m. to 7 p.m., on Saturdays and Sundays, the bridge will open on the hour and half-hour (only if there is demand), except on federal holidays when the bridge will operate on demand. Outside of those hours, on Saturdays and Sundays, the bridge operates on demand; and

WHEREAS, the Transportation and Mobility Department engaged Kimley-Horn and Associates, Inc. ("Consultant"), one of the City's pre-qualified rotational transportation consultants, to conduct the 63rd Street Bascule Bridge Traffic Study ("Traffic Study") to evaluate the impact of the current schedule of the 63 Street bridge on the surrounding roadway network and to identify and evaluate potential modifications to the schedule to reduce vehicular traffic congestion in the area; and

WHEREAS, under the current weekday schedule, the bridge opens every 30 minutes during the non-restricted hours. With an average bridge opening and closing duration of approximately seven (7) to eight (8) minutes during the non-restricted hours, there is insufficient time (approximately 22 minutes only) for the congestion along 63 Street, Alton Road, and Indian Creek Drive to dissipate and for the corridors to recover before the next bridge opening occurs; and

WHEREAS, the residual vehicular queues combined with the incremental queues from each subsequent bridge opening exacerbate traffic congestion and create traffic gridlock conditions in the area that lasts for extended periods of time on a daily basis; and

WHEREAS, the weekend bridge opening schedule currently ends at 7 p.m. Beyond that time, the bridge opens on demand; however, due to high amounts of maritime activity on weekends beyond 7 p.m., frequent bridge openings are occurring which create traffic congestion in the area; and

WHEREAS, based on the Consultant's analysis, the Traffic Study found that certain modifications to the current schedule of the 63 Street bridge would reduce vehicular traffic congestion in the area; and

WHEREAS, the proposed bridge schedule as recommended in the Traffic Study is as follows:

- From 7 a.m. to 7 p.m., Monday through Friday, the bridge would open on the hour (only if there is demand). Outside of those hours, Monday through Friday, the bridge would operate on demand. Note this recommendation represents a modification to the current bridge schedule consisting of opening on the hour (i.e. every 60 minutes) rather than on the hour and half hour (i.e. every 30 minutes);
- From 7:10 a.m. to 9:55 a.m. and from 4:05 p.m. to 6:59 p.m., Monday through Friday, except on federal holidays, the bridge would not open for the passage of vessels, except emergency vessels or tug/tow vessels. Note these are the current restricted hours; thus, no change to the current restricted hours is recommended during this time period;
- From 7 a.m. to 9 p.m., on Saturdays and Sundays, the bridge will open on the hour and half-hour (only if there is demand), except on federal holidays when the bridge will operate on demand. Outside of those hours, on Saturdays and Sundays, the bridge operates on demand. Note this recommendation represents an extension of the current bridge schedule during this time period by two (2) hours (from 7 p.m. to 9 p.m.); and

WHEREAS, the Traffic Study found that while implementing the proposed hourly opening schedule during the non-restricted hours would increase the vehicular queues on the surrounding roadway corridors, it is anticipated that there will be sufficient time between sequential bridge openings for queuing vehicles to travel across the bridge and for congestion to dissipate, thereby reducing the total travel time for all vehicles crossing the bridge in a one (1) hour period during the non-restricted hours, as compared to the current conditions; and

WHEREAS, since the bridge would open once every hour, rather than twice an hour, during the non-restricted times, the Traffic Study found that the time lost as a result of a bridge opening is expected to decrease from approximately 15 minutes per vehicle to 10.5 minutes per vehicle, thus increasing vehicle throughput and capacity along Alton Road, 63 Street, and Indian Creek Drive and allowing vehicular traffic to dissipate and flow more efficiently through the area. Furthermore, extending the weekend opening schedule from 7 p.m. to 9 p.m. is anticipated to reduce bridge openings during this time period as compared to the current on demand condition; and

WHEREAS, based on recent communications with the USCG, if a permanent change to a drawbridge operating schedule is desired, at a minimum, the following information must be provided: 1) name of the person or entity requesting a change to the regulation; 2) name and

location of the drawbridge; 3) an explanation of the problem and how the proposed schedule change would solve the problem; and 4) state the proposed schedule change; and

WHEREAS, the USCG may request additional information from the 63 Street bridge owner, in this case FDOT, to assist in making a determination that may include a vehicle traffic study, bridge tender logs and/or local maritime economic development. Once the request is received, the USCG will evaluate the available information and make a determination. If the USCG determines that a change to the current schedule is not needed, the USCG will provide a letter stating the reason(s) for the denial. If the USCG determines that a change to the current schedule is needed, the USCG will begin the federal rulemaking process which can take one (1) to two (2) years; and

WHEREAS, The Administration supports the recommendations of the Traffic Study to modify the current schedule of the 63 Street bridge to decrease the frequency of weekday bridge openings, during the non-restricted hours, from every 30 minutes to once per hour and, furthermore, to extend the current weekend opening schedule from 7 p.m. to 9 p.m.; and

WHEREAS, these recommendations are intended to reduce travel time and delay and improve traffic flow in the area; and

WHEREAS, the City Manager will transmit the Resolution via letter request to the USCG for consideration of the proposed modifications to the current schedule of the 63 Street drawbridge.

NOW, THEREFORE, BE IT DULY RESOLVED BY THE MAYOR AND THE CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, that the Mayor and City Commission approve the final draft 63rd Street Bascule Bridge Traffic Study ("Traffic Study") recommendations and authorize the City Manager to submit a formal request to the United States Coast Guard to consider the implementation of modifications to the 63rd Street bridge opening schedule as recommended in the Traffic Study.

PASSED and ADOPTED this 26th day June, 2024.

ATTEST:

Steven Meiner, Mayor

Rafael E. Granado, City Clerk

(sponsored by Commissioner Tanya K. Bhatt)

APPROVED AS TO
FORM & LANGUAGE
& FOR EXECUTION



City Attorney

6/18/2024

Date