

**RESOLUTION NO.            2020-31434**

**A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE LAND USE AND SUSTAINABILITY COMMITTEE'S RECOMMENDATION AND DIRECTING STAFF TO PROCEED WITH OPTION 2, AS SET FORTH IN THIS RESOLUTION, FOR THE COMPLETION OF THE ROADWAY CONSTRUCTION OF THE VENETIAN ISLANDS BID PACKAGE 13C, RIGHT-OF-WAY NEIGHBORHOOD IMPROVEMENT PROJECT.**

**WHEREAS**, on September 9, 2009, pursuant to Request for Qualifications (RFQ) No. 42-08/09, the Mayor and City Commission adopted Resolution No. 2009-27161, approving and authorizing the Mayor and City Clerk to execute a Professional Services Agreement with Schwebke-Shiskin & Associates, Inc. (SS&A); and

**WHEREAS**, SS&A was tasked to provide professional services for the design, bid, award, field inspection, and construction administration of the Venetian Island Bid Package 13c, Right-Of-Way Neighborhood Improvement Project (Project); and

**WHEREAS**, on March 13th, 2013, pursuant to Invitation to Bid (ITB) No. 49-11/12, for the Right-of-Way Infrastructure Improvement Program – Venetian Islands Bid Package 13C, the City Commission adopted Resolution No. 2013-28163, recommending the award of a construction contract to Lanzo Construction Co. Florida, (Lanzo) in the amount of \$11,373,491 including contingency; and

**WHEREAS**, the scope of work included, site preparation, earthwork, demolition, storm drainage, roadway paving, sidewalks, concrete valley gutters, watermain installation and street lighting on the islands of San Marino, Di Lido and Rivo Alto; and

**WHEREAS**, the Notice to Proceed (NTP2) for construction was issued November 4, 2013; and

**WHEREAS**, between February 2014 and January 2016, the City's Storm Water Management Master Plan was revised, following the recommendations of the Mayor's Blue-Ribbon Panel on Flooding and Sea Level Rise and of the Flooding Mitigation Committee; and

**WHEREAS**, an enhanced stormwater system criteria was implemented in the Project, and revisions to the design were made by SS&A that included an upgraded stormwater system with no road raising consideration due to the advanced construction stage of the project; and

**WHEREAS**, the revised design included installation of six new stormwater pump stations within existing easements in the three islands and the installation of the pumps at these proposed locations, was heavily opposed by the residents and required several months of research and negotiations to achieve approval; and

**WHEREAS**, consequently, various change orders were issued to Lanzo's contract, incorporating an upgraded stormwater system with upsize pipes and six new stormwater pump stations with all related equipment and structures, as well as other unforeseen conditions; and

**WHEREAS**, the contractor encountered unsuitable materials (muck) during excavation activities, an unforeseen condition, and the project team determined that the appropriate mitigation was to implement a revised road restoration detail, by using a mixture of the existing and new subgrade materials to be used as a subgrade and installing Geosynthetic Grid (GEOGRID) between the limerock base and the subgrade; and

**WHEREAS**, this decision was made in consideration of the load capacity restrictions of the Venetian Causeway bridges, implemented in 2014 by Miami-Dade County and FDOT, which affected the allowable weight loads the trucks could haul for subgrade and base materials, reducing the truck load capacity by 40%, making removal and import of large amounts of materials impractical; and

**WHEREAS**, all drainage, watermain, sewer and lighting work has been completed, including all six (6) stormwater pump stations and the restoration of the easements, and the remaining contractual scope of work includes the placement of the final lift of asphalt; and

**WHEREAS**, the total construction contract amount to date, including added scope and all other changes is \$28,671,330; and

**WHEREAS**, installation of the first lift of asphalt began in San Marino Island on May 20, 2015 and within the first month of installation, cracks became evident and following the installation of the first lift of asphalt on the other two islands, similar cracks developed in varying degrees; and

**WHEREAS**, Lanzo was notified of the pavement failures and they attempted to correct the issue by applying a crack filler designed for asphalt repairs and Lanzo also applied a micro-resurfacing layer on some areas in San Marino Island; and

**WHEREAS**, the project did not include raising of the roads and the final road elevations range from 1.06' to 4.86' NAVD in San Marino Island, from 1.86' to 6.16' NAVD in DiLido Island and from 2.06' to 3.46' NAVD in Rivo Alto Island; and

**WHEREAS**, during construction of the roadway system, the project's Resident Project Representative (RPR), SS&A, issued Lanzo more than sixty (60) notices of non-compliance, where more than fifteen of the notices related to improper mixing of subgrade materials, placement of asphalt during wet conditions, and improper handling of backfill material; and

**WHEREAS**, SS&A and the City did not accept Lanzo's attempted asphalt repairs, as they did not address the cause of the premature asphalt cracking and in order to determine the underlying cause, and following SS&A's recommendations, the City tasked the project's geotechnical firm, Universal Engineering (Universal), with performing geotechnical testing on the roadway of all three Islands; and

**WHEREAS**, test results common to all three islands, as provided by Universal, indicated that some areas of the roadway have less than the required overall limerock base and stabilized subgrade thickness; and

**WHEREAS**, additionally, results in some areas showed the migration of silt into the limerock base, thereby reducing the pavement assembly strength; and

**WHEREAS**, at the City's direction, SS&A analyzed Universal's geotechnical data and was directed to submit a roadway design with a design life of 20 years and SS&A determined that additional testing was required and hired the professional services of a third-party geotechnical consultant, NV5; and

**WHEREAS**, NV5 conducted the additional testing and prepared a report that included alternatives ranging from full-depth section replacement, to partial replacement and/or reworking of the existing materials and as a result, SS&A proposed a roadway remediation design which incorporates several assemblies varying from total road reconstruction to simply placing an asphalt overlay; and

**WHEREAS**, upon review of all tests reports and recommendations, City staff has identified four options to proceed with the completion of the project:

Option No.1

Proceed with SS&A's proposed restoration, which includes full-depth section replacement in some areas, partial replacement and/or reworking of the existing materials, in other areas, and provides a pavement design life of 20 years. This option is highly invasive and causes considerable impact to the residents. In addition, it does not address sea level rise impacts to the road base, requiring reconstruction to address the road raising, prior to the end of the design life of the road. Estimated cost is nearly \$3 Million. The work could be completed in 6 months;

Option No. 2

Milling the existing 1-inch lift of asphalt, scarifying the base rock, rework the base rock where needed and placement of 2 or more inches of new asphalt matching the proposed elevation on the original plans. The three islands would be added to the City's Road Elevation Strategy and Neighborhood Project Prioritization program, for a future roadway improvement project. This option is less invasive than option No.1 and provides a uniform restoration process to the pavement of all three islands. This option will add an estimated pavement life of several years. Estimated cost \$2,4 Million. The work could be completed within 4 months;

Option No. 2B

Milling the existing 1-inch lift of asphalt on sections of the roadway and overlaying with 2 inches of new asphalt the entire roadway matching the proposed elevation on the original plans. The three islands would be added to the City's Road Elevation Strategy and Neighborhood Project Prioritization program, for a future roadway improvement project. This option is the least invasive and less impactful to the residents providing an estimated pavement life of several years. Estimated cost \$1 Million. The work could be completed within 3 months;

Option No. 3

Proceed with full reconstruction of the roadway, raising the roads to the current or new criteria. This could entail re-design of the stormwater system to meet the determined criteria, in addition to the road raising and harmonization efforts, ultimately resulting in a lengthy construction process and costs in excess of \$10 million; and

**WHEREAS**, the data obtained indicates that the roadway failure is attributable to the construction deficiencies, and among other things, exacerbated by the interaction of the high ground water table with the roadway assembly; and

**WHEREAS**, the City is currently withholding \$1,361,429 in retainage and approximately \$1,355,000 remaining in the contract for work not performed, for a total of approximately \$2,716,900, and the retainage is the portion of the contract price intentionally withheld until the work is substantially complete to assure the contractor will satisfy its obligations and complete a construction project; and

**WHEREAS**, City staff has met with and presented the options to representatives from the Venetian Islands Homeowner's Association (VIHA), and VIHA agreed with staff that Option 2 is reasonable in addressing some of their concerns; and

**WHEREAS**, on September 22, 2020, City staff presented the three options detailed above for the completion of the Project to the Land Use and Sustainability Committee (LUSC); and

**WHEREAS**, the different options were discussed, and the Venetian Islands Homeowner's Association, represented by their president, expressed their support for Option 2; and

**WHEREAS**, the LUSC asked staff to bring a Resolution to the full City Commission in support of Option 2, with the direction to encourage the City Administration to start working on finalizing the plan and begin work as soon as possible; and

**WHEREAS**, the Administration recommends that the City Commission approve the Resolution.

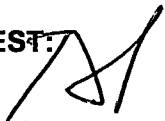
**NOW, THEREFORE, BE IT DULY RESOLVED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA** that the Mayor and City Commission hereby accept the Land Use and Sustainability Committee's recommendation and direct City Administration to proceed with Option 2, as set forth in this Resolution, for the completion of the roadway construction of the Venetian Islands Bid Package 13C, Right-of-Way Neighborhood Improvement Project.

**PASSED and ADOPTED** this 14 day of October, 2020.



Dan Gelber, Mayor

ATTEST:



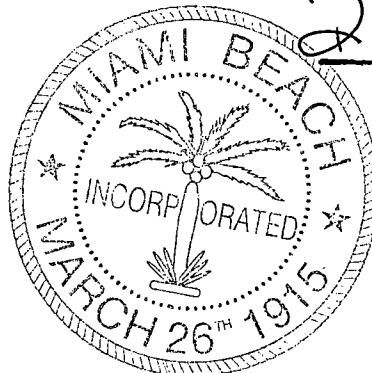
10/26/2020

Rafael E. Granado, City Clerk

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

  
City Attorney

10-6-20  
Date



# MIAMI BEACH

## COMMISSION MEMORANDUM

TO: Honorable Mayor and Members of the City Commission  
FROM: Jimmy L. Morales, City Manager  
DATE: October 14, 2020

SUBJECT: A RESOLUTION OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, ACCEPTING THE LAND USE AND SUSTAINABILITY COMMITTEE'S RECOMMENDATION AND DIRECTING STAFF TO PROCEED WITH OPTION 2 FOR THE COMPLETION OF THE ROADWAY CONSTRUCTION OF THE VENETIAN ISLANDS BID PACKAGE 13C, RIGHT-OF-WAY NEIGHBORHOOD IMPROVEMENT PROJECT.

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### **RECOMMENDATION**

The Administration recommends proceeding with Option 2.

### **BACKGROUND/HISTORY**

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consideration due to the advanced construction stage of the project. The revised design included installation of six new stormwater pump stations within existing easements in the three islands. The installation of the pumps at these proposed locations, was heavily opposed by the residents and required several months of research and negotiations to achieve approval. Consequently, various change orders were issued to Lanzo's contract, incorporating an upgraded stormwater system with upsize pipes and six new stormwater pump stations with all related equipment and structures, as well as other unforeseen conditions.

The contractor encountered unsuitable materials (muck) during excavation activities, an unforeseen condition. The project team determined that the appropriate mitigation was to implement a revised road restoration detail, by using a mixture of the existing and new subgrade materials to be used as a subgrade and installing Geosynthetic Grid (GEOGRID) between the limerock base and the subgrade. This decision was made in consideration of the load capacity restrictions of the Venetian Causeway bridges, implemented in 2014 by Miami-Dade County and FDOT, which affected the allowable weight loads the trucks could haul for subgrade and base materials, reducing the truck load capacity by 40%, making removal and import of large amounts of materials impractical.

Currently, all drainage, watermain, sewer and lighting work has been completed, including all six (6) stormwater pump stations and the restoration of the easements. The remaining contractual scope of work includes the placement of the final lift of asphalt. The total construction contract amount to date, including added scope and all other changes is \$28,671,330.

## **ANALYSIS**

Installation of the first lift of asphalt began in San Marino Island on May 20, 2015. Within the first month of installation, cracks became evident. Following the installation of the first lift of asphalt on the other two islands, similar cracks developed in varying degrees. Lanzo was notified of the pavement failures and they attempted to correct the issue by applying a crack filler designed for asphalt repairs. They also applied a micro-resurfacing layer on some areas in San Marino Island.

The project did not include raising of the roads. The final road elevations range from 1.06' to 4.86' NAVD in San Marino Island, from 1.86' to 6.16' NAVD in DiLido Island and from 2.06' to 3.46' NAVD in Rivo Alto Island.

During construction of the roadway system, the project's Resident Project Representative (RPR), SS&A, issued Lanzo more than sixty (60) notices of non-compliance, where more than fifteen of the notices related to improper mixing of subgrade materials, placement of asphalt during wet conditions, and improper handling of backfill material.

SS&A and the City did not accept Lanzo's attempted asphalt repairs, as they did not address the cause of the premature asphalt cracking. In order to determine the underlying cause, and following SS&A's recommendations, the City tasked the project's geotechnical firm, Universal Engineering (Universal), with performing geotechnical testing on the roadway of all three Islands.

Test results common to all three islands, as provided by Universal, indicated that some areas of the roadway have less than the required overall limerock base and stabilized subgrade

thickness. Additionally, results in some areas showed the migration of silt into the limerock base, thereby reducing the pavement assembly strength.

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### **CONCLUSION**

The Administration recommends acceptance of the Land Use and Sustainability Committee recommendation to proceed with the completion of the project by implementing option 2.

### **Applicable Area**

South Beach

**Is this a "Residents Right to Know" item, pursuant to City Code Section 2-14?**

Yes

**Does this item utilize G.O. Bond Funds?**

No

### **Legislative Tracking**

Capital Improvement Projects

### **ATTACHMENTS:**

#### **Description**

- Resolution