

PROJECT PROGRESS REPORT

SW DRAINAGE IMPROVEMENT PROJECT

October 30, 2017

Presented by the Department of Public Works

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1. EXECUTIVE SUMMARY

This report provides a status update on the City's SW Drainage Improvement Project, which is being funded through the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) and the City of Hallandale Beach. The project cost is funded with 75% Federal share through FEMA and 25% local municipality share through the City Stormwater Utility fund.

2. BACKGROUND

The initial grant application for the Hazard Mitigation Grant Program (HMGP) (**Exhibit 1 – Resolution 2006-33**) was submitted by the City of Hallandale Beach on September 15, 2006 and included design for the drainage for the NE quadrant.

This grant was available after Hurricane Wilma. The grant agreement for design and permitting for the NE Quadrant was executed in September 2009. The construction agreement was executed in June 2011 (**Exhibit 2**) and has been modified five (5) times (**Exhibit 3 to 7 – Modifications 1 thru 5**) and see detail below for scope of work changes, time extensions, and additional funding. It should be noted that the scope of work was expanded in June 2011, to include drainage improvements in the SW quadrant, per Amendment #4 of the agreement. Amendment #4 for the grant for the SW section was to expire on December 31, 2014.

Construction of the NE Quadrant Drainage Improvement Project was completed in December 2014, and approvals were finalized by the permitting agencies and the Florida Department of Emergency Management in March 2015. Amendment # 5 of the agreement was approved to provide an extension until March 31, 2015 for the NE Quadrant only for the close out of the project.

For further detail, since 2011, the grant agreement has been modified five (5) times for scope of work changes, time extensions, and additional funding. The breakdown of the modifications and total grant funding are explained below and shown in Table1.

- **Modification 1** was made to include portions of the SW Quadrant drainage basin;
- **Modification 2** extended the end date of the grant;
- **Modification 3** was made to allow additional soils testing, since preliminary tests in the SW showed that soils were not suitable for deep injection wells. As a result additional soil testing was authorized and suitable areas in the SW Quadrant were found;

- **Modification 4** was made to increase funding for construction of the NE Quadrant because the bid prices were significantly higher than the cost estimate used to determine the initial funding;
- **Modification 5** was made to extend the construction end date for the NE quadrant to March 31, 2015.

Table 1: Hazard Mitigation Grant Program (HMGP) Grant Agreement and Amendments Breakdown

	Federal Share - FEMA Grant (Labor and Materials)	FEMA Grant (Administrative Cost)	Local Share City Funds	End Date for Grant
Agreement for design services for NE Quadrant	\$270,000	\$9,591	\$90,000	09/30/2009
Original Agreement for Construction	\$4,366,566	\$58,221	\$1,445,517	12/06/2012
Modification 1	\$11,240,771	\$104,538	\$3,746,924	12/06/2012
Modification 2	\$11,240,771	\$104,538	\$3,746,924	12/06/2012
Modification 3	\$13,541,748	\$119,878	\$4,513,916	12/31/2014
Modification 4	\$15,311,122	\$131,674	\$5,103,707	12/31/2014
Modification 5	\$15,311,122	\$131,674	\$5,103,707	03/31/2015

The HMGP grant for the Southwest quadrant of the City expired on December 31, 2014. Although requested well in advance, City staffs were unable to obtain an extension of the grant prior to its expiration. Notwithstanding, staff worked in conjunction with our federal lobbyist firm, Alcalde & Fay, along with support from local and state elected officials, in order to obtain an extension for the grant. The City's extension request outlined a 52-month schedule to complete the project design and construction.

On May 25, 2016, staff received a response letter from FEMA (**Exhibit 8**) regarding the HMGP extension. FEMA approved a phased Period of Performance extension that included a period of 24 months, from the date of the letter, for the project design, permitting and construction bid process (predevelopment). In accordance with FEMA's guidelines, if these activities are completed within 24 months (May 25, 2018), FEMA will continue the Period of Performance extension to include project construction for an additional 28 months.

The total FEMA grant for both the NE and SW is \$15,311,122. The local share is \$5,103,707 (25%) for a total project cost of \$20,414,829. In addition to the HMGP grant, the City is eligible for an additional \$131,674 in reimbursable cost for the administration of the project.

The SW Quadrant Drainage Improvement Project has a remaining fund balance in the HMGP grant of \$7,274,228 after the closing of the NE Quadrant project. The local match for the SW Quadrant project is \$2,424,742, for a total of \$9,698,970. Of this amount, \$1,010,000 is allocated to Calvin Giordano & Associates (CGA) for the design, permitting and construction bid and award process. The fund balance for the City's reimbursable administration cost is \$70,178.

The HMGP contract (DEM No. 17HM-3B-11-16-02-213), which includes design, permitting, construction and the bid award process, was executed by the City of Hallandale Beach and the Florida Division of Emergency Management (FDEM) on August 9, 2016 (**Exhibit 9**). It does not include funding for the necessary oversight by CGA during construction.

Once FEMA approved the new schedule, a professional services contract in the amount of \$782,395 was awarded by the City Commission on July 1, 2016, to CGA to provide design, permitting, bidding and award assistance for the SW Drainage Improvement Project. In order to meet the proposed schedule, staff recommended the continued use of CGA due to the firm's familiarity with the project, the grant requirements and the extensive permitting required by Broward County and the Florida Department of Environmental Protection. This contract was awarded based on Chapter 23 – Procurement Code, Section 23-6 Award of Contract, and Section 23-8 Unique Circumstances by Resolution No. 2016-103 (**Exhibit 10**).

3. SW QUADRANT EXISTING DRAINAGE MANAGEMENT SYSTEM

The Southwest Quadrant project is bounded on the north by Hallandale Beach Boulevard, on the east by Dixie Highway, on the south by SW 11th Street (county line) and on the west by I-95. Roadway elevations in this area vary from 1.77-feet NAVD-88 to 11.51-feet with predominantly residential land uses. The existing stormwater management system in this quadrant is comprised of isolated exfiltration trench systems within the higher elevation areas and a more comprehensive collection system in the proximity of the Schaffer Canal. An exfiltration trench is a subsurface system consisting of a conduit such as perforated pipe surrounded by artificial aggregate, which temporarily stores and absorbs stormwater runoff. **The exfiltration trench system is not discharged to surface water, such as a canal and lake.** There are also eight (8) man-made lakes with a total area of approximately twenty-nine (29) acres located in the western portion of this quadrant. Several areas in this quadrant consist of independent sub-basins with no physical connections to adjacent sub-basins. These areas consist mainly of isolated exfiltration trench systems installed to alleviate nuisance flooding. Although, there are eight (8) man-made lakes in this quadrant, there is limited connectivity between them.

In the recent past, the City of Hallandale Beach has taken steps to alleviate nuisance flooding areas throughout this quadrant. Beginning in the early 2000's the City began applying for Community Development Block Grants (CDBG), which are federal funds administrated by Broward County, which may be used for drainage improvements. CDBG funded Public Works Improvement projects included retrofitting/upgrades to the gravity storm drainage systems, construction of new stormwater facilities such as gravity or French drains systems, regrading and sodding of swales to improve water quality, construction of new sidewalks and asphalt pavement construction / restoration in the location that were in need of drainage improvements. The improvements have been useful for low intensity storm events, but the funds are not sufficient to address the larger issues resulting from higher intensity storm events. Hence, the need for the SW Quadrant drainage project to become the backbone of a system that will expand over the years as funds become available either from the Stormwater Utility or other sources as determined by the City Commission.

The Schaffer Canal is the main discharge point for the entire SW Quadrant. Two (2) sets of culverts currently exist within this canal, **first a pair of forty-eight-inch (48") Reinforced Concrete Pipes (RCP) are located at the SW 9th Street and SW 4th Avenue** intersection and the second culvert is a single one-hundred-twenty-inch (120") Corrugated Metal Pipe (CMP) that discharges to Miami Dade County. The twin 48" pipes have been installed at a relatively high elevation that restricts flows until the water surface rises high enough to submerge the culverts. The 120" CMP discharges into a series of ditches and lakes in Miami Dade-County which ultimately drain into the Oleta River. The Oleta River is a tidal influenced waterbody which eventually outfalls into the Intercoastal Waterway (Biscayne Bay). Since Biscayne Bay is an area of critical water quality protection, any discharges require substantial oversight by permitting agencies. Further complicating the project, stormwater that the City of Hallandale Beach discharges could cause additional flooding in already flood prone areas in Miami-Dade County.

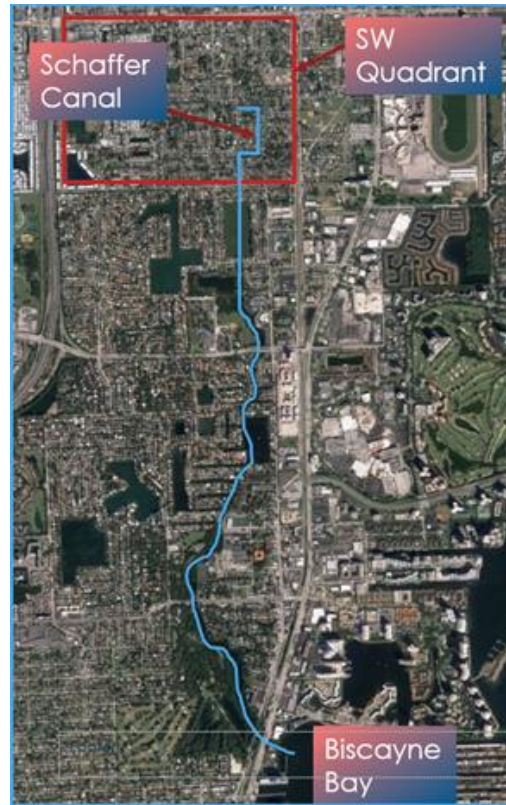


The water levels within the ditches and lakes upstream of the Oleta River are regulated by a **control structure, which is located west of Dixie Highway at the end of NE 207th Street**. The main function of the structure is to control the salinity and tidal influence on the upstream ditches and lakes. The control structure has a flap gate on the downstream side of the structure and a float controlled sluice gate on the upstream side. The Miami-Dade County Stormwater Utility



Planning Division is currently re-valuating the need for this structure, due to a recent mangrove replenishment project completed along the banks of the Oleta River downstream of the control structure.

The increase in plant life along the river will be evaluated to determine if these mangroves reduce the salinity and tidal influence upstream. The sluice gate portion of the control structure has remained in the open position since the completion of the mangrove replenishment project. The operational controls of the sluice gate will not be known until the analysis has been completed and any proposed changes have been approved by the South Florida Water Management District (SFWMD) and Florida Department of Environmental Protection (FDEP).



The SW drainage project cannot wait until this analysis and any related changes are approved.

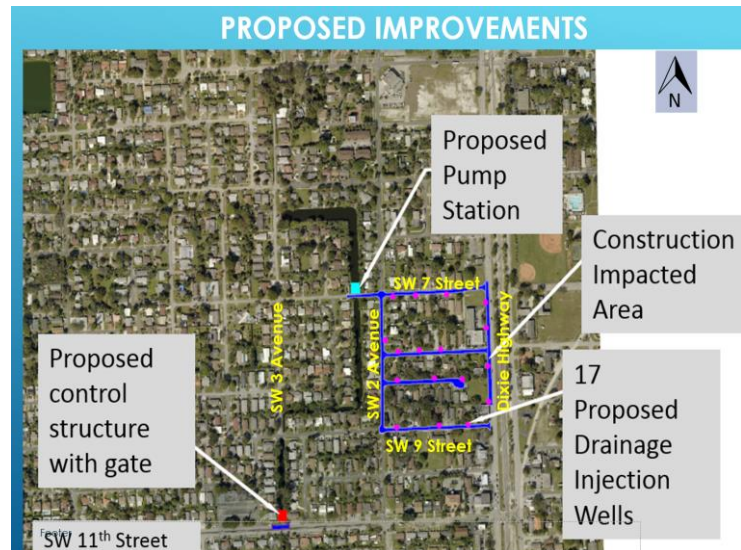
Based on the recent study completed in 2016 by Craven, Thompson and Associates known as the Basis of Design Report (BODR), several surface water management options were investigated and discussed with the appropriate permitting agencies. A collection system improvement to facilitate the conveyance of stormwater toward the existing outfall located at SW 11th Street between SW 4th Terrace and SW 3rd Avenue was investigated. These improvements were presented to Miami-Dade County, Stormwater Utility Division. According to Miami-Dade County, “the residential neighborhood downstream of this outfall experiences flooding and has multiple repetitive loss claims. Due to the existing flooding problem, Miami –Dade County took the position that the City of Hallandale Beach cannot increase discharges into this area in an effort to prevent even greater flooding in Miami-Dade County” (**Exhibit 11**). In summary, the proposed drainage improvements in the BODR in the SW Quadrant were estimated in 2015 at \$21,000,000 (**Exhibit 12**).

Due to the FEMA grant total funding availability, staff and the design team from CGA analyzed an innovative stormwater management project to improve the overall flood conditions in the SW Quadrant watershed area resulting in the following project:

4. SW DRAINAGE IMPROVEMENTS PROJECT

4.1 Project Location

The proposed project is located in the Southwest Quadrant and is limited by the area bounded on the east by South Dixie Highway, on the west by SW 8th Avenue, on the south by SW 11th Street, and on the north by Hallandale Beach Boulevard.



4.2 Existing Drainage Patterns

The Schaffer Canal is the primary receiving water within the project limits. There are a number of storm pipe networks or conveyance systems that outfall into the Schaffer Canal. Isolated catch basins and segments of exfiltration trenches have been constructed throughout the SW Quadrant in recent years. The ultimate receiving water body is the Intercostal Waterway via an existing outfall pipe under SW 11th Street (County line road), downstream canals and the Oleta River.

4.3 Existing Drainage Conditions

The performance of the proposed drainage improvement project will be directly impacted by the condition of the existing underground storm pipes. Within the past year all drainage pipes were inspected, cleaned and televised by EnviroWaste, the City pipe-cleaning contractor. Several storm pipe failures were identified and a preliminary cost estimate was determined for these repairs. The approximate cost is \$300,000 and staff is working on making the necessary repairs. The repairs are expected to be completed within two years and will be paid for by the Stormwater Utility fund. Staff now inspects all drainage structures on a regular basis to determine condition and cleaning needs. This has not been done in the past.

4.5 Project Description

The proposed SW Drainage Improvements project includes construction of one duplex pump station with two 35,000 gallon per minute (GPM) pumps on the canal at SW 7th Street that will discharge from the Schaffer Canal into seventeen (17) pressurized

stormwater injection wells via the proposed force main network. To give an example of the pumping capacity, the average home swimming pool (12-ft X 24-ft) contains 10,800 gallons, which means that the two pumps could empty the pool in 9 seconds. Said another way, in 25 minutes the pumps are able to lower the Schaffer canal by two-feet. Additionally, the existing 96" culvert under SW 11th Street will be retrofitted with a gate control structure to prevent backflow from Miami-Dade into the proposed system. A generator to service the pump station in the event of power outage will also be provided. The pump station, control structure and generator will all have landscaping enhancements to minimize the visual impacts of these structures to the community. Sidewalks and driveways disturbed by the construction of the force mains and drainage wells will be replaced.

Essentially this means that excess water unable to be handled by the canal during heavy rain events will be pumped out and injected into the wells. This approach is necessary due to the size of the canal which has limited capacity due to the limitations imposed by the permitting agencies to the south to avoid flooding in Miami-Dade County and residential development very close to the Schaffer canal which makes widening too costly.

The following streets impacted by the installation of force mains and drainage wells will be fully milled and resurfaced:

- SW 7th Street from SW 2nd Avenue to Dixie Highway
- SW 8th Street from SW 2nd Avenue to Dixie Highway
- SW 8th Court from SW 2nd Avenue to the dead end
- SW 9th Street from SW from SW 2nd Avenue to Dixie Highway

These components are the backbone of the system allowing for future SW neighborhood drainage improvement projects to be linked to the backbone system. By pumping water from the canal and injecting the water into the deep wells, the capacity of the canal is increased which allows for water to drain more quickly from the existing drainage structures to the canal minimizing flooding conditions.

4.6 Level of Service

The ultimate goal of this project, as regulated by FEMA grant requirements, is to reduce the number of house floodings from major storm events and also reduce the duration of street flooding conditions.

According to the Broward County drainage criteria, surface water management systems shall have sufficient capacity so that no street flooding (roadway crown) shall occur during the 10-year frequency storm events and no structure flooding shall occur during the 100-

year frequency storm events. For better understanding the term “100-year flood” is used to simplify the definition of a flood that statistically has a 1-percent chance of occurring in any given year. Likewise the term 10-year flood is used for a flood that statistically has a 10-percent chance of occurring in any given year.

Furthermore the intensity and duration of a storm is also important to understand. For example the FEMA grant requires that the project shall be designed for a 100-year flood event for a period of 72 hours. This translates to approximately a depth of 17 inches of rainwater produced during three days. These definitions do not mean that the storm occurs only once in a 100 years or 10 years respectively which is a common misperception.

It is also important to mention that this project cannot guarantee this level of service on every street in the SW area since not every street has the necessary piping to convey the storm water to Schaffer Canal. As stated above, due to the limited grant funding this project is the backbone of a system allowing for future SW neighborhood drainage improvement projects. With the FY 17/18 increase of the Stormwater Utility rate fee for an Equivalent Unit Rate (ERU) to \$88.44 /ERU, funds should be available in future years to continue necessary construction to add additional streets each year and to maintain the drainage system. The determination regarding use of CRA funds for future projects can be made if necessary and if Stormwater Utility funds are not available. This was discussed during the FY 17/18 Budget adoption process.

4.7 Design Consideration

As a result of the difficulties with the NE Quadrant Drainage project, changes were made to the approach to the SW Drainage Project. The major items are noted below with an explanation of the issue during the NE project and the change that was made for the SW project.

5. SW PROJECT DESIGN EXTRA EFFORT VS. NE PROJECT

5.1 Survey

- **NE** – Photogrammetry utilized, no field surveying of drainage structures and no tree survey or documentation.
- **SW** - Full topographic and tree survey of the area impacted was included and completed for the SW project, including drainage structure rims and pipe invert elevations, canal elevations, and tree type location, size and condition.

5.2 Florida Power & Light (FPL) coordination

- **NE** – The City stated they would handle the FPL coordination in the bid documents and therefore the contractor did not have any responsibility for the coordination or timeframe, which ultimately resulted in approximately four months in delays to the construction period of the project.
- **SW** – Communication and meetings have already occurred. FPL has completed the design for re-routing their poles and overhead wires around the proposed pump station location. FPL will invoice the City and will be complete with their work prior to the successful contractor's mobilization. FPL has also been notified of the need to de-energize (temporarily discontinue the power supply) for a limited number of their overhead lines in order to install the injection wells on South Dixie Highway and are working on a plan. A follow up meeting was held in October. This pre-planning should alleviate the delays experienced in the NE project.

5.3 Geotechnical Information

- **NE** – Soil borings were only completed at the proposed pump station for structural design purposes. The bid did not contain a line item for “unsuitable material removal or disposal” and did not have a means for the contractor to pay for the “clean fill” that was needed once the unsuitable material was removed, which resulted in a substantial change order for approximately \$1,000,000 and months of delay.
- **SW** - Soil borings were completed every 300'-600' in locations of proposed pipe or structures to determine if unsuitable material was present. The report will be included in the bid along with the estimated quantity and bid line items for unsuitable material removal and disposal along with suitable replacement material.

5.4 Utility pothole locations/soft digs

- **NE** – The number of utility test holes (soft digs) was limited by budget and due to the large area of improvements, not enough locations were checked. This resulted in underground utility conflicts for the unknown locations and depths. Furthermore, project delays were encountered and a substantial change order for approximately \$200,000 was necessary.
- **SW** - Soft digs have been performed at potential conflict locations to confirm the utility type and location. The proposed stormwater force main has been designed around the utility, where possible, or the utility will be reconstructed to accommodate the new force main. This minimizes the “unknown field conditions” and related change orders.

5.5 Hydrogeological Information

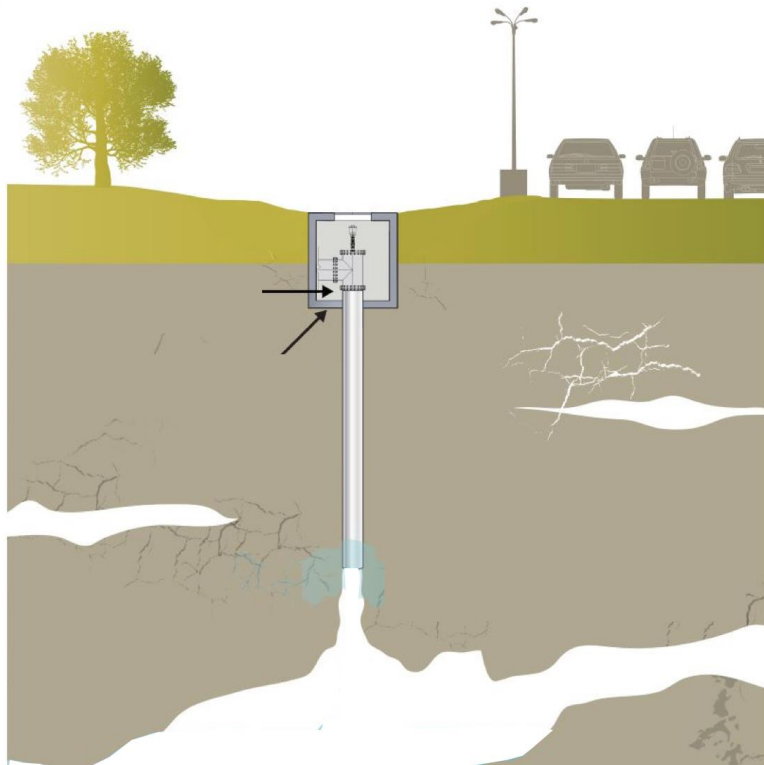
- **NE** – Estimated well capacities were derived from nearby projects and no site specific capacity tests were completed. This resulted in a substantial change order in the amount of \$170,000 and four weeks delay for the installation of the drainage wells at a deeper depth of approximately 150 feet to 200 feet than the estimated original depth at approximately 80 feet.
- **SW** – Site specific hydrogeologic investigation has been completed to determine the depth and anticipated capacities of the injection wells. This allows for an estimated volume of water each well will handle and allows for determining the total number of 17 wells needed for the system.



Drainage Injection Wells

Under each storm drain, a well will be installed to push storm water into void areas under the aquifer.

17 wells will inject 3500 GPM into wells 120ft deep



5.6 Landscape architecture plans

- **NE** – The City stated it would handle the landscaping and therefore no tree inventory or enhancements to the existing landscaping were included in the design plans. This resulted in a separate contract award for \$1,520,179 (\$1,287,823 for contract base bid, \$100,000 early completion maximum incentive and \$132,356 contingency amount) for the corridor project that is now under construction. It

should be noted here that this amount includes complete street and roadway improvements. These costs were not eligible for the FEMA grant.

- **SW** – The design scope includes the preparation of landscape plans to track tree removal/replacement as well as to enhance the areas impacted. The landscaping items are included in the final plans for the construction.

5.7 Baffle/Trash Structures

- **NE** – The baffle structure design requires City workers to clean the trash racks which is not a best practice during a large storm event. This concern is being retrofitted currently for \$48,000 and additional improvements will be evaluated in the future if funds are available.
- **SW** – The design includes an advanced self-cleaning trash rack at the SW pump station that will operate periodically to ensure the screen is clear allowing for maximum flow to the pumps.

6. ONGOING VALUE ENGINEERING DURING ANALYSIS AND DESIGN

6.1 Pump station and drainage well locations

- Numerous pump and pipe routing locations throughout the project area were investigated prior to finalizing the design of the pump station.
- Based on existing underground utilities, available (Right of Way) R/W and well locations, the proposed locations are the most cost effective and least intrusive.
- R/W acquisition to install the pump station and generator was explored in the preliminary design phase – property information was checked by the City and the R/W acquisition process was discussed with FEMA. Due to the lengthy, expensive and complicated process, the Florida Department of Emergency Management (FDEM our liaison to FEMA) advised that the City not pursue the R/W acquisition considering our project timeline.



6.2 ANALYSIS OF DESIGN CAPACITY VS. OVERALL VALUE TO THE BASIN

- During preliminary engineering, a graph was produced using hydraulic modeling to determine the peak flood stage vs. the pumping capacity for a 100-year/72 hour storm event, which constitutes 17 inches of rainfall in 3 days. This is a FEMA's design criterion because this type and duration storm event is modeled to establish FEMA Minimum Finished Floor Elevations. This criteria impacts FEMA's flood maps, the availability of flood insurance and the cost of that insurance.
- The flood stage was compared to nearly all Finished Floor Elevations in the basin.
- The total pump capacity point was determined by doing a cost benefit analysis of increasing pump size cost vs. value to the overall basin. This considers the cost of the larger pumps, larger pump building, larger diameter pipes and overall greater cost and impact to the neighborhood.
- The proposed system protects the neighborhood in major storm events and does not necessarily eliminate all ponding and small areas of standing water after heavy rain events.

It is important to understand that the 10-year and 100-year storms will drain quickly but residents should not be under the impression that there will never be water accumulated in the project area. This project is about how fast the water will be removed by the new system.

6.3 Generator alternatives were explored to reduce the cost

- Natural gas
 - TECO Gas does not have enough supply available without increasing the pipe distribution network leading to the pump station.
- Smaller permanent generator with the ability to supplement with a temporary generator
 - Does not work from a pump operation or electrical components standpoint, as this would not allow the two pumps to properly alternate.
 - Smaller generator to only runs one pump. This would drastically reduce the capacity of the overall system.

6.4 Control Structure Alternatives

- Three (3) design alternatives were investigated with the structural engineer in an analysis to reduce the overall footprint and cost of the control structure. Due to the existing R/W alignment and canal width, the selected alternative is the most economical and efficient.
- The chosen control structure design is necessary to maintain proper flow and function of the discharge to Miami Dade and ultimately the Intercoastal Waterway (Biscayne Bay) while also providing the opportunity to isolate the canal from tidal influence and Miami Dade influence since all of the areas to the south of Hallandale Beach along this canal utilize this canal to drain their stormwater to Biscayne Bay.
- The connection to Miami Dade is important to maintaining a healthy canal. If we permanently close the connection, this would not allow for “flushing” of the canal water and it would become stagnant.

6.5 Pipe sizing

- The proposed pipe sizes were reviewed and checked by pipe sizing software to ensure the appropriate size is utilized. Pipe sizing design is based on maximum capacity of the pumps needed in a 100-year/72 hour storm event, which assumes 17 inches of rain in 3 days.

6.6 Features included that impacted the budget

- Repaving of all streets at the end of construction
- Sound proofing the proposed pump station building
- **Aesthetics:**
 - Re-painting of the existing bridge
 - Making the pump station look like a house rather than a stormwater pump station.
 - Landscaping around the pump station, control structure and generator
 - Visually screening the generator to blend with the surrounding landscaping.



- **Additional measures** the City has taken:
 - Inspection of all large diameter stormwater pipes has been completed and corrective actions are being taken as necessary.
 - The 42 Year CDBG project includes a small drainage project within the SW area. These types of small improvements will continue as long as CDBG or other funding sources are available.
- **Public information:**

There will be an extensive public information campaign for interaction with the residents and business owners impacted by the project. The following programs will be implemented prior to and during the construction phase of the project:

 - Provide frequent social media notices;
 - Door hangers will be used for notifying the residents for lane closures and driveway access;
 - Hot line for residents for project inquiries;

7. PROJECT SCHEDULE

Item Description	Proposed Date of Completion	Status
Design Services City Commission Award	July 6, 2016	Complete
Notice to Proceed	August 1, 2016	Complete
30% Design	November 11, 2016	Complete
60% Design	February 14, 2017	Complete
Community Meeting	May 22, 2017	Complete
90% Design	May 26, 2017	Complete
100% Design Plans	September 22, 2017	Complete
Bid Plans and Specifications	November 3, 2017	In Progress (80% completed)
Permitting	November 3, 2017	In progress (90% completed)
Tentative Bid Advertising Date (pending FDEM approval of the bid package)	November 17, 2017	
Bid Opening	January 12, 2018	
Bid Recommendation to Award	February 7, 2018	
Tentative City Commission Award	March 7, 2018	
Complete package submittal to FDEM	By April 15, 2018	
Receive approval of completion as per FEMA letter	By May 24, 2018	

8. WHY ACTION IS NECESSARY

Staff is presenting this item to update the City Commission on the SW Drainage Improvement Project, to ensure that sufficient funds are available for the project, to create an understanding of how the project will function in major storm events and to meet the FEMA schedule so as not to put the grant in jeopardy.

9. NEED FOR ADDITIONAL FUNDING

The total remaining funds in the HMGP grant for the construction phase are \$6,524,227 for the SW Quadrant Drainage Improvement Project. The 25% local share is \$2,174,742 for a total of \$8,698,969. The City Commission has approved an increase to the Stormwater Utility Equivalent Rate Unit (ERU), which will provide funding for the local share of the construction phase of the HMGP in the amount of \$2,175,000. This funding has been included in the City FY17/18 budget.

The CGA opinion of probable cost after all the value engineering is now \$9,962,400, which exceeds the amount of the grant and FY 17/18 City funding by approximately \$1,200,000. The post design services by CGA are estimated to be an additional \$750,000. This amount is currently being negotiated with CGA senior staff. City staff anticipates that the short fall of approximately \$1,950,000 will be provided through a second year of utilization of the increased Stormwater Utility funds or the CRA or a combination of both. A final recommendation on how to fund the anticipated short fall will be made after the bid prices are received. At this time all avenues of funding the short fall should remain in consideration.

The Administration is bringing forth this issue as a status report at this time so that the City Commission is fully aware of the need for a second year of Stormwater Utility commitment or CRA funds or a combination of both during FY 18/19. Once the bids are received and evaluated, the City Commission will make the final decision on the funding source before awarding the contract. Staff also wants the City Commission to understand the value engineering process and the lessons learned from the NE Quadrant project and how these problems are being solved in the SW Quadrant project. Finally, it is important for the residents of the project area to understand exactly what to expect in major storm events.

10. RECOMMENDATION

The Administration recommends the City Commission accept this status report to allow the process to continue thereby meeting the FEMA schedule required to maintain the grant.

Report prepared by: Mariana Pitiriciu, City Engineer