Stormwater Projects / Program Report

Tampa City Council Update

No. 12 - October 17, 2019

A) Major Capital Improvements

Projects 1-5 are regional multi-year flooding relief projects for the City of Tampa. Each project fact sheet includes a description, location map, and timeline status. Each of these projects is in various stages of development and will continue for a number of years, due to the complexity and comprehensive nature of the project. Project 6 incorporates the Miscellaneous Neighborhood Projects that typically have a six (6) months or less construction timeline and each have their own fact sheet.

Project List CIP = $251,285,000

1. Upper Peninsula Flooding Relief
2. North Tampa Closed Basin Flooding
3. Cypress Street Outfall Extension
4. Southeast Seminole Heights Flooding Relief
5. Lower Peninsula Flooding Relief
6. Miscellaneous Capital Improvements

B) Stormwater Capital Improvement Bond Program Report

C) Stormwater Service Assessment Program $14,000,000

Section A
Major Capital Improvements

1. Upper Peninsula Flooding Relief

(Dale Mabry Trunkline)

City Project #: 1001017

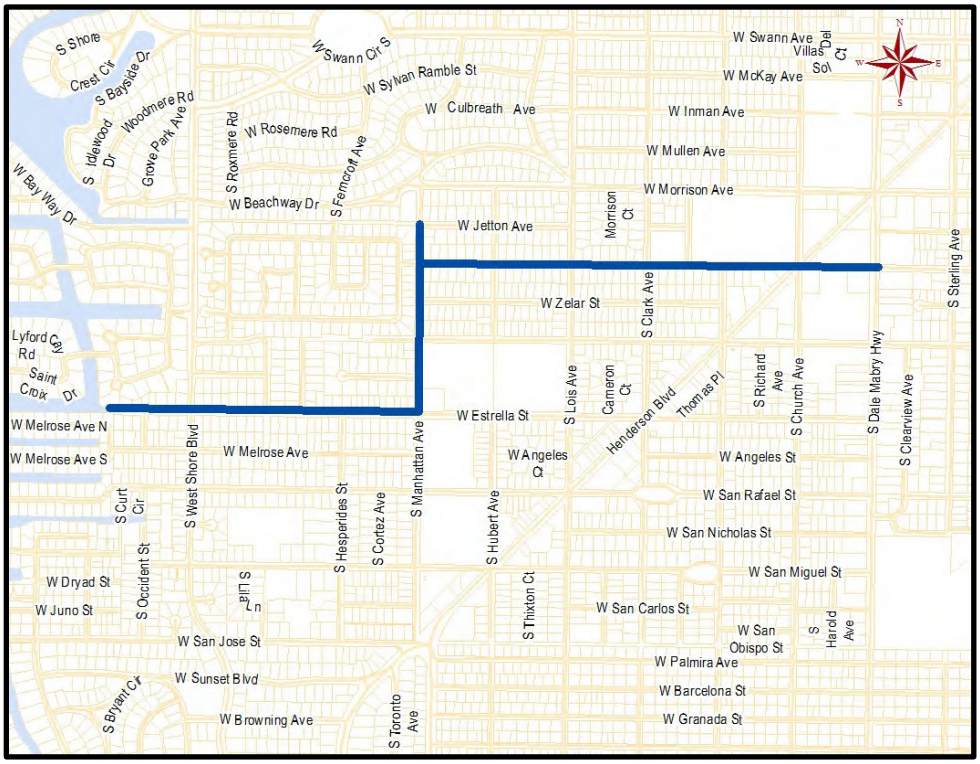
Project Description:

Upper Peninsula Regional Stormwater Improvements is a multi-year flooding relief project covering approximately 3400 acres of South Tampa from Kennedy Boulevard southward to Euclid Avenue. Stormwater Engineering Division has developed a stormwater model and comprehensive study of the project area, with the goal of providing incremental improvements to the stormwater infrastructure. The main benefit of the project is to provide targeted relief in flood prone areas to address public safety.

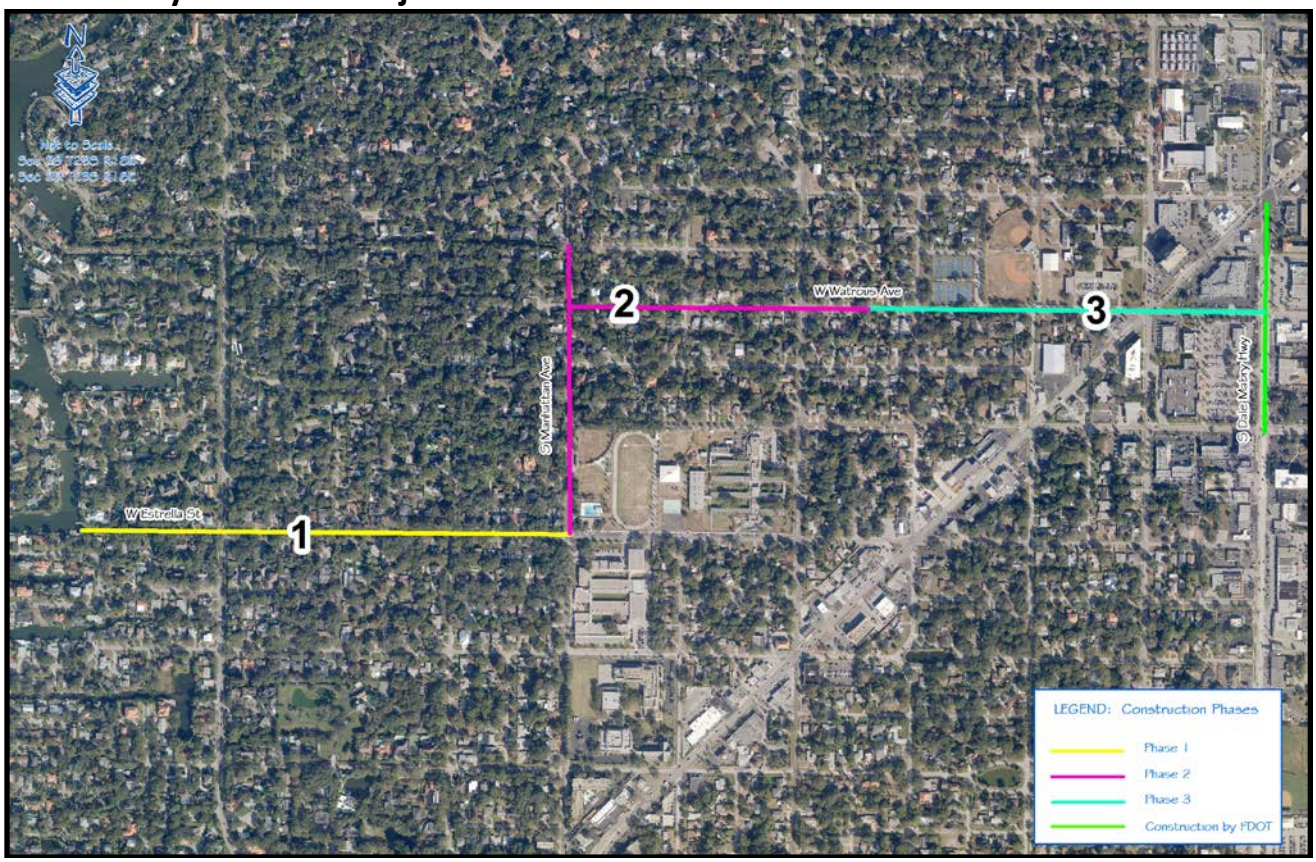
This project will alleviate the severe chronic flooding along Dale Mabry Highway between Henderson Blvd and Neptune Street. The highway is part of the primary evacuation route for South Tampa. Existing pipes will be connected to the trunkline thereby providing basin wide flooding relief.

Dale Mabry Trunkline project consists of the construction of a box culvert from Dale Mabry/Henderson/Neptune to a new outfall at Estrella Street. The system will also interconnect to improvements along the Watrous Canal, thus providing two outfalls for flooding relief.

Location Map:



Dale Mabry Trunkline Project Phases



Summary of Project Costs:

Phase	Firm	Amount	Funding Source	Schedule	
				Start	Finish
Design/Build	Kimmins	$37M	COT/SWFWMD	FY17	FY20

Timeline:

- Construction started June 25, 2018, and the projected completion is January 2021.
- 50% reimbursement by SWFWMD is occurring concurrently with construction.

2. North Tampa Closed Basins Flooding Relief

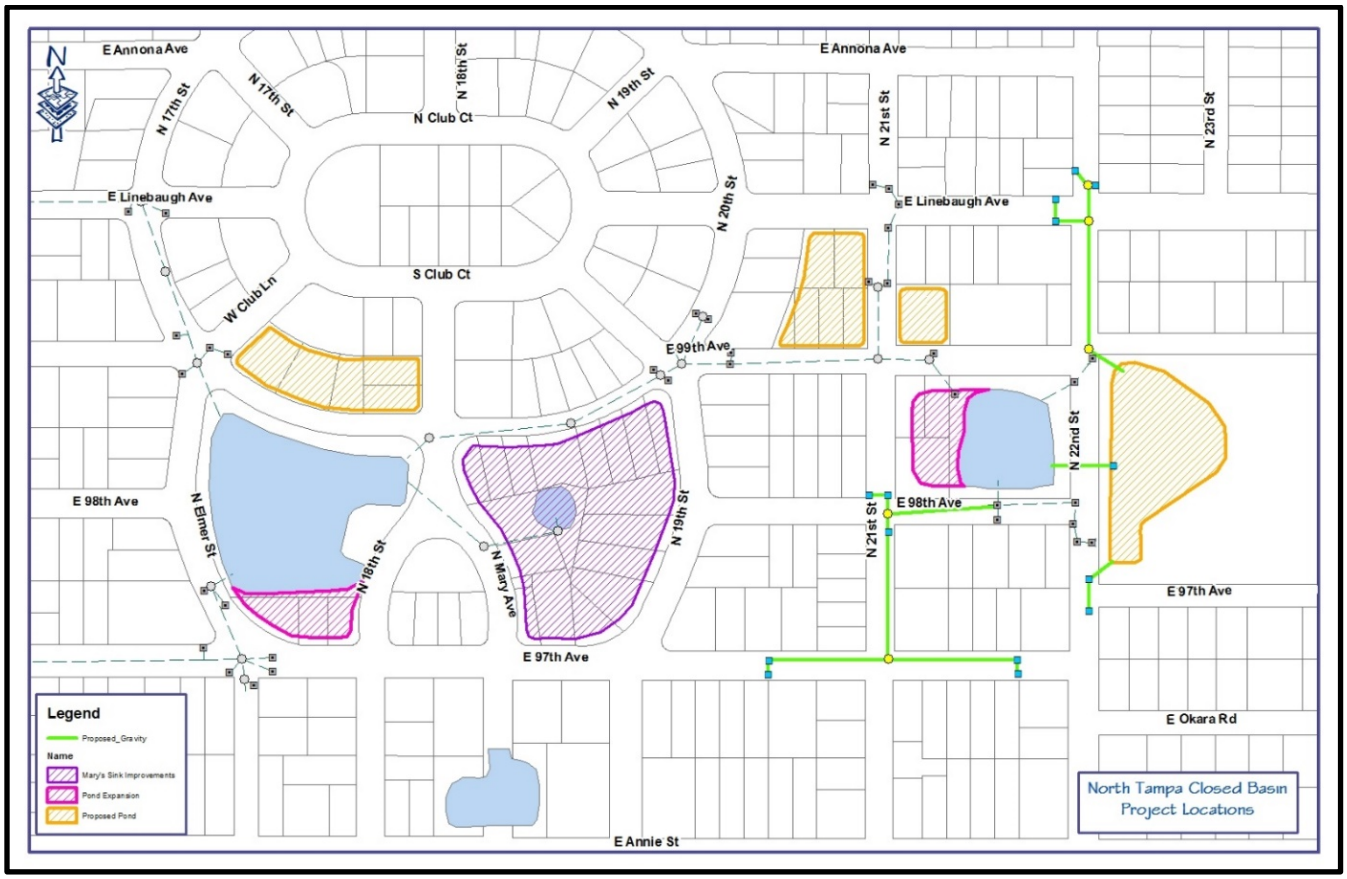
City Project #: 0000403

Project Description:

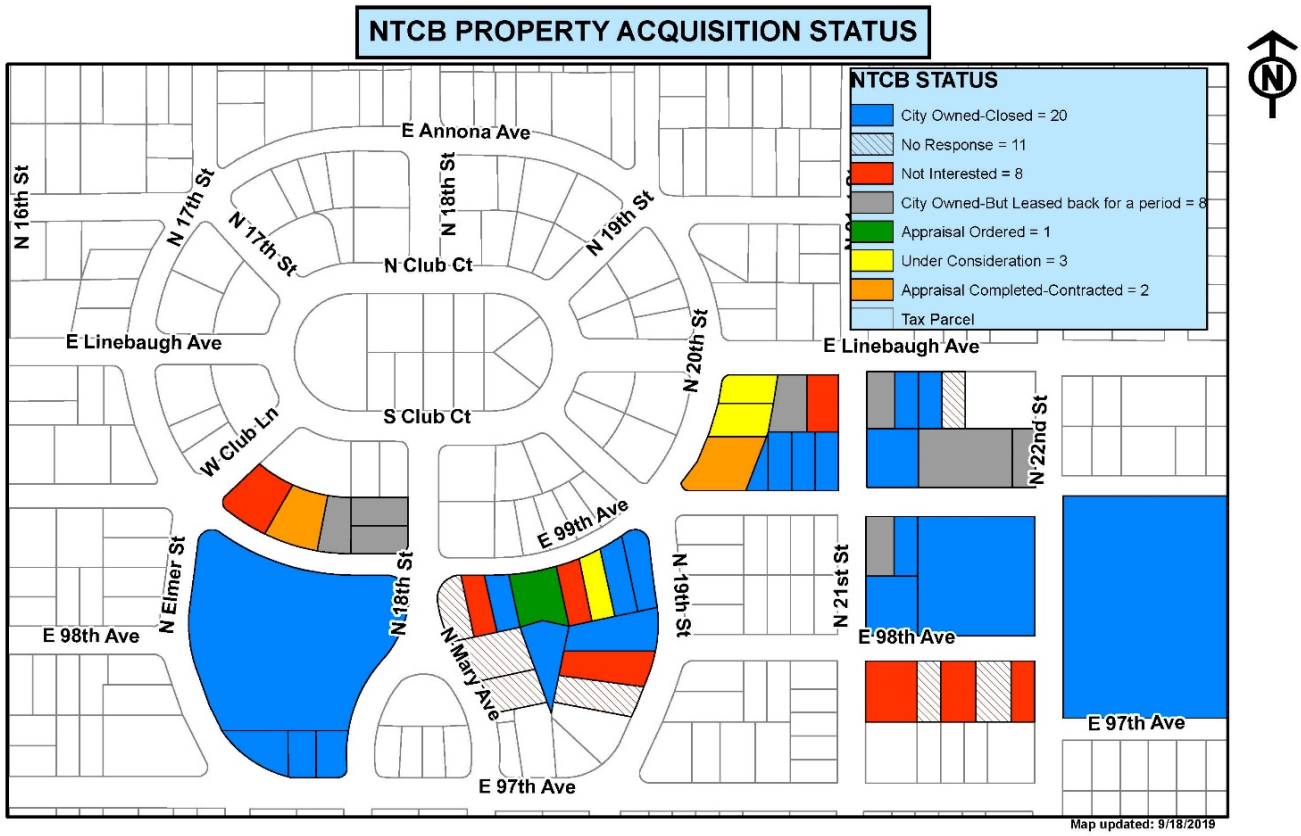
Portions of the northern part of the City of Tampa flood periodically due to their location within closed drainage basins and the absence of drainage infrastructure to provide relief. The North Tampa Closed Basins (NTCB) study area is generally bounded by Fowler Avenue on the north, 30th Street on the east, Busch Boulevard on the south and Florida Avenue on the west and includes several individual closed basins that comprise a portion of the springshed for Sulphur Springs, which is located on the north bank of the Hillsborough River just west of Nebraska Avenue. These areas rely primarily on discharge to groundwater through sinkholes, whose receiving capacity has been observed to be unreliable due to sedimentation/clogging, high groundwater levels or possible collapse of subsurface conveyances.

Based on a model and study of the closed basin area, properties are targeted for acquisition and will serve as future stormwater ponds. The project consists of property acquisition in the area experiencing the most severe flooding. Approximately 50 properties have been identified.

Project Map:



Property Acquisition Map:



Summary of Project Costs:

Phase	Firm	Amount	Funding Source	Schedule	
				Start	Finish
Property Acquisition	In-House	$1M/ Year	COT	FY16	FY20
Construction	In-House/bid	$2M	COT	FY19	FY21

Timeline:

- The City of Tampa Real Estate Division is in the process of acquiring the properties as identified by Transportation and Stormwater Services Department's North Tampa Closed Basin Study. Please see the property acquisition map above.
- The Real Estate Division is currently working with multiple potential sellers.
- Property acquisition to be completed in FY20.
- The construction of David E. West pond and piping system started in September 2019.

3. Cypress Street Outfall Extension

City Project #: 1001018

Project Description:

The drainage basin is generally bounded by Cypress Street on the north, Habana Avenue on the west, Hyde Park Avenue on the east and Swann Avenue on the south. The total basin area is approximately 550 acres and outfalls to the Hillsborough Bay. Several areas within the northern portion of the basin (north of Kennedy Boulevard) have experienced numerous incidences of flooding, which has led to flood damage claims.

The project consists of the construction of a dual box culvert from the existing stub at Cass and North Boulevard to Rome Avenue. Another box culvert will connect at Cass and Rome Avenue and run south towards Kennedy Boulevard. The last leg will connect at Rome and West Gray Street and extend west to North Tampania Avenue. This project is the second phase of the Cypress Street Outfall Flooding Relief Project that will be Design/Build procurement in coordination with the Water Department.

Location Map:

Cypress Street Outfall:

Summary of Project Costs:

Phase	Firm	Amount	Funding Source	Schedule	
				Start	Finish
Design/Build	Woodruff & Sons	$32 M	COT/SWFWMD	FY17	FY20

Timeline:

- Design and Permitting is 100% completed.
- The SWFWMD Board approved the GMP in April 2019.
- The city council approved the GMP in June 2019.
- The construction is underway.

4. Southeast Seminole Heights Flooding Relief

City Project #: TBD

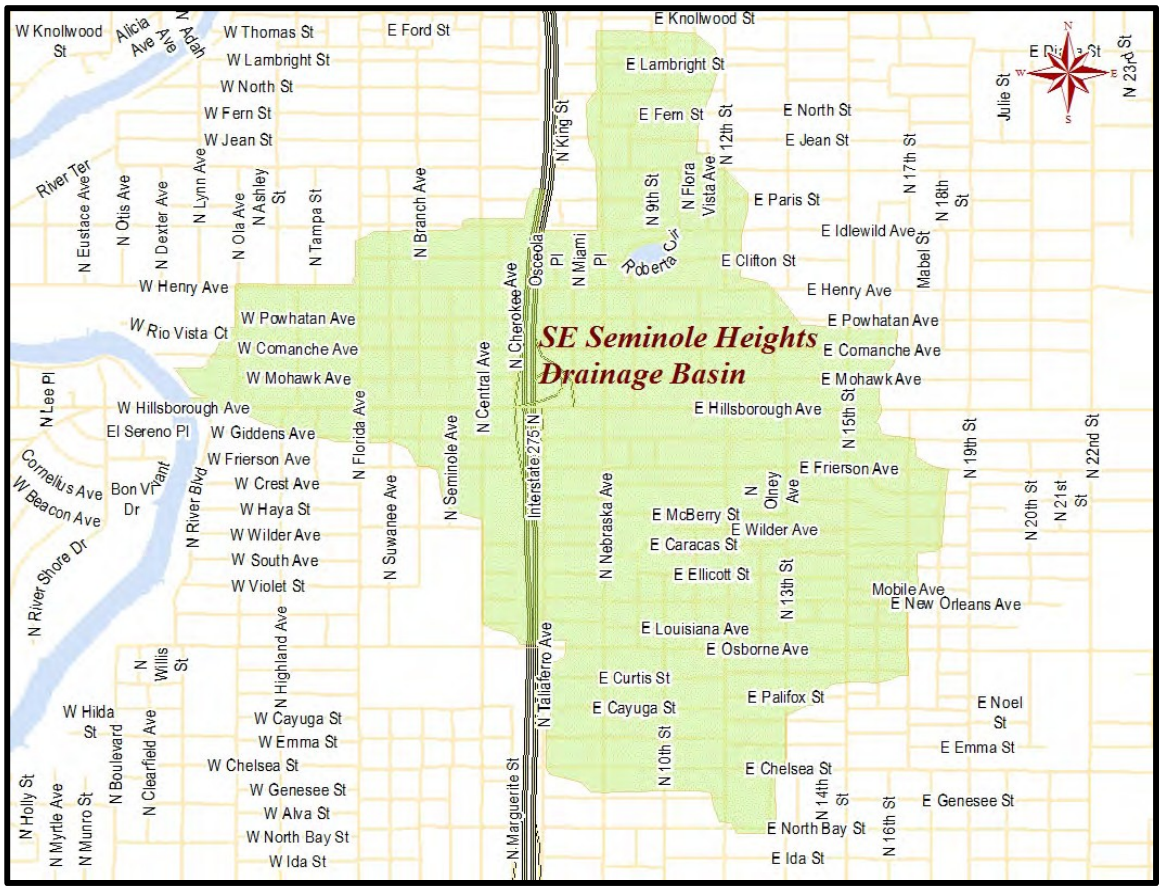
Project Description:

The Southeast Seminole Heights Drainage Basin encompasses 779 acres of urban area that discharges into the Hillsborough River south of the dam. The basin area extends northerly from East Chelsea Street east of I-275 freeway to East Diana Street and easterly to North 18th Street. To the west of I-275, the basin narrows and extends from Giddens Avenue to East North Street. The Basin is part of a historic Tampa neighborhood that had its beginnings in the early 1900's.

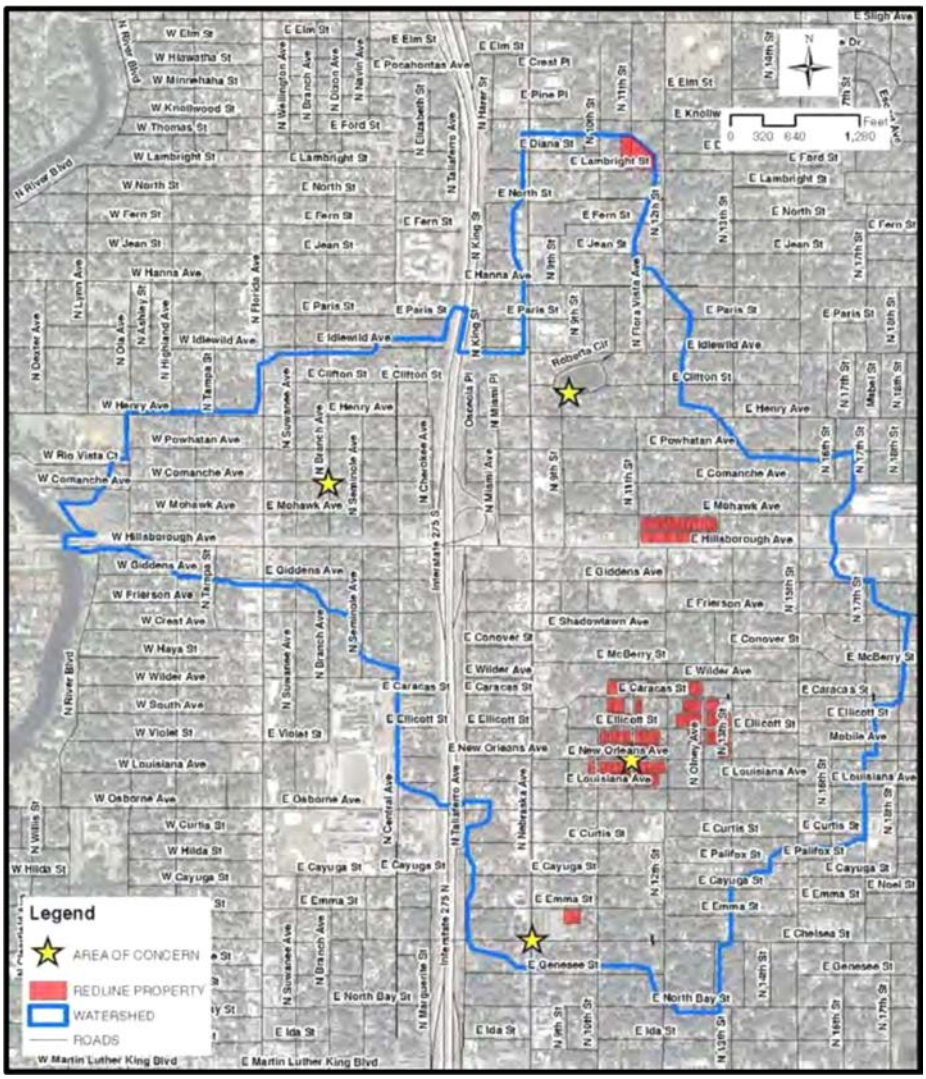
Southeast Seminole Heights Basin has numerous flooding locations, failing and undersized conveyance systems throughout the basin. A recent drainage study identified several potential stormwater improvement projects to alleviate flooding.

A feasibility study will be performed to assess the potential drainage improvement projects as recommended in the previous drainage study. Individual improvement projects will subsequently be designed and constructed throughout the basin areas to improve drainage conditions.

Location Map:



Areas of Flooding Concern:



Summary of Project Costs:

Phase	Firm	Amount	Funding Source	Schedule	
				Start	Finish
Planning Study	LWES	$90K	COT	FY16	FY16
Feasibility Study	FDC	$45K	COT	FY17	FY18
Design & Construction	Nelson/ Wade Trim	$35M	COT/SWFWMD	FY19	FY23

Timeline:

- The Planning and Feasibility studies have been completed.
- The NTP has been issued and design/permitting is underway.
- The target date for presenting the GMP for Construction to City Council is July 2020.
- The target date for the start of construction is September 2020.

5. Lower Peninsula Flooding Relief

City Project #: 1000178

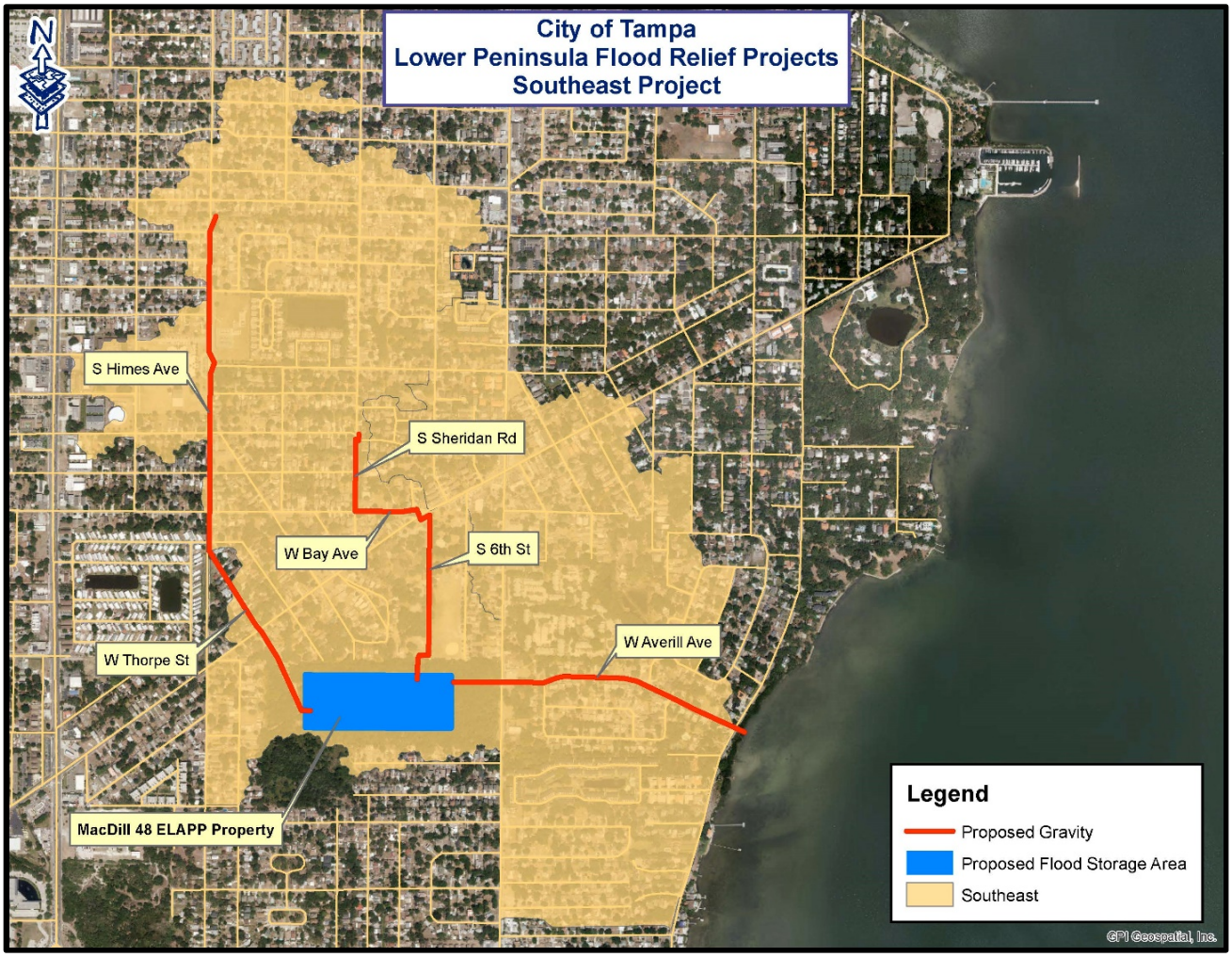
Project Description:

A regional watershed model is needed to provide a baseline for capital project improvement planning and design. The area has numerous flooding locations, failing and undersized conveyance systems throughout the 6,000 acre watershed.

The purpose of the project is to develop a baseline for capital improvement planning and design that provides conceptual solutions to frequent flooding associated with undersized stormwater pipes and relic ditch systems in the region. It is the City's desire to pursue cooperative funding from the South West Florida Water Management District (SWFWMD) for these improvements; therefore, the watershed study must meet SWFWMD's requirements for funding.

Location Map:

Southeast Segment:



Summary of Project Costs:

Phase	Firm	Amount	Funding Source	Schedule	
				Start	Finish
Planning Study	Applied Sciences	$650K	COT/SWFWMD	FY16	FY18
Southeast Segment Design	RFQ	$4M	COT/SWFWMD	FY20	FY20
Southeast Segment Construction	RFQ	$21M	COT/SWFWMD	FY21	FY23

Timeline:

- The existing and proposed condition models have been completed.
- SWFWMD has completed 3rd party review of the model.
- The Southeast Segment Design will occur in FY20.
- The Southeast Segment Construction will begin in FY21 and finish in FY23.

6. Miscellaneous Capital Improvement Project Status

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Construction timelines are typically six (6) months or less for neighborhood projects. For additional project descriptions, please see the project fact sheets following this project status report.

PROJECT STATUS KEY	
	Design
	Design Complete and In Construction Queue
	Under construction
	Construction Complete

CAPITAL IMPROVEMENT PROJECTS	DISTRICT	ESTIMATE
Projects Assigned to Construction Contracts		
1. Knights between Lynwood and MacDill	4	$200,000
2. 2511 N. Riverside Flooding Relief	5	$50,000
3. N. River Blvd Outfall Flooding Relief	6	$60,000
4. W. St. Isabel from Gomez to Habana Flooding Relief	6	$75,000
5. Virginia Park PH III, Lois from Bay to Bay to Palmira	4	$500,000
6. Virginia Park PH III, Clark from Bay to Bay to Palmira	4	$325,000
Projects Bid through CAD		
7. Howard from Swann to Morrison Flooding Relief, PH II	4	$600,000
8. 2nd Street from Interbay to Bay	4	$200,000
9. Wyoming Flooding Relief PH II	4	$325,000
10. FY19/FY20 Annual CIPP Rehabilitation	Citywide	$1,200,000
11. Annual Box Culvert Rehabilitation	Citywide	$650,000
12. Orchid Sink Rehabilitation	6	$500,000
13. David E. West Park Pond Enhancements	7	$1,000,000
14. 43rd Street Outfall Regional Drainage Improvements, PH III	5	$7,200,000
15. 30th St. Outfall	5	$600,000
16. Forest Hills Park Improvements	7	$600,000
17. Robles Park Pumping Station Replacement	5	$1,200,000
18. Rogers Park Drainage Improvements	5	$500,000
19. Poinsettia Pumping Station Rehabilitation	7	$1,400,000
20. Eastridge Pumping Station Rehabilitation	7	$700,000
21. Copeland Park Pumping Station	7	$800,000
22. Anita Subdivision Drainage Improvements PH II	4	$800,000

CAPITAL IMPROVEMENT PROJECTS	DISTRICT	ESTIMATE
Projects Bid through CAD – *continued*		
23. 56th Street and Broadway Avenue Flooding Relief	5	$2,000,000
24. Hamilton Creek Water Quality Improvement	6	$500,000
25. Lamb Canal Rehabilitation	4	$1,500,000
26. Ditch Rehabilitation Program	Citywide	$1,000,000
27. El Prado Green Infrastructure	4	$175,000
28. Lantana/Poinsettia Pumping Station	7	$625,000
29. Lake Roberta Dredging	5	$400,000
30. El Portal & Newport Pumping Station	6	$350,000
31. Lake Roberta Sediment Trap Upgrade	5	$400,000
32. Newport, Willow, Orleans and Watrous Groundwater Diversion	4	$900,000
33. Beach Park Flooding Relief	6	$750,000
34. Manhattan: Vasconia to Bay To Bay Flooding Relief	4	$3,000,000

Projects Assigned to Transportation & Stormwater Services Department In-House Crews		
35. Idell Street Roadway Improvements PH II	5	$75,000
36. Concordia Pond	4	$125,000
37. Seneca Pumping Station Site Improvements	7	$100,000
38. Gomez Alley between Kennedy & North A Street	4	$75,000
39. Gomez Alley Ph 2 (Reprofiling)	4	$75,000
40. Binnicker at 4th Street	4	$50,000
41. Neptune/Treasure Drainage Improvement	6	$75,000
42. 3911 Swann Avenue	6	$50,000
43. 1510 W. Park Ln. Drainage Improvement	6	$50,000
44. Rambla Flooding Relief	7	$100,000
45. 45th St. north of Hillsborough Flooding Relief	6	$135,000
46. Emma Street and Seminole Avenue Flooding Relief	6	$100,000
47. Iowa Ave from Sheridan to Sherwood	4	$75,000
48. W. Jetton Avenue from Armenia to Moody	4	$125,000
49. North St. & Packwood Pond	6	$100,000
50. Hale Ave. at Cleveland St. Flooding Relief	6	$100,000
51. Sherrill St. north of Cleveland St.	6	$100,000
52. North St. & 17th St. Flooding Relief	5	$75,000
53. Ballast Point Blvd and MacDill Ave	4	$125,000
54. Chelsea Street at 44th Flooding Relief	5	$90,000

CAPITAL IMPROVEMENT PROJECTS	DISTRICT	ESTIMATE
Projects Assigned to Transportation & Stormwater Services Department In-House Crews *- continued*		
55. Fair Oaks & Bayshore Flooding Relief	**4**	**$100,000**
56. Everina Street from Carrington to Coachman	**4**	**$200,000**
57. Okara and 26th St. Force Main	**7**	**$90,000**
58. Bougainvillea Pond Outfall	**7**	**$75,000**

Knights between Lynwood and MacDill

Flooding Relief FY2017, District 4

Estimated cost: $200K

Project Description:

Install a stormwater collection system to drain the street.

Justification:

Pavement grading and new development have affected the conveyance of runoff to the existing stormwater system.

Project Photos

2511 N. Riverside Flooding Relief

Flooding Relief FY2018, District 5

Estimated cost: $50K

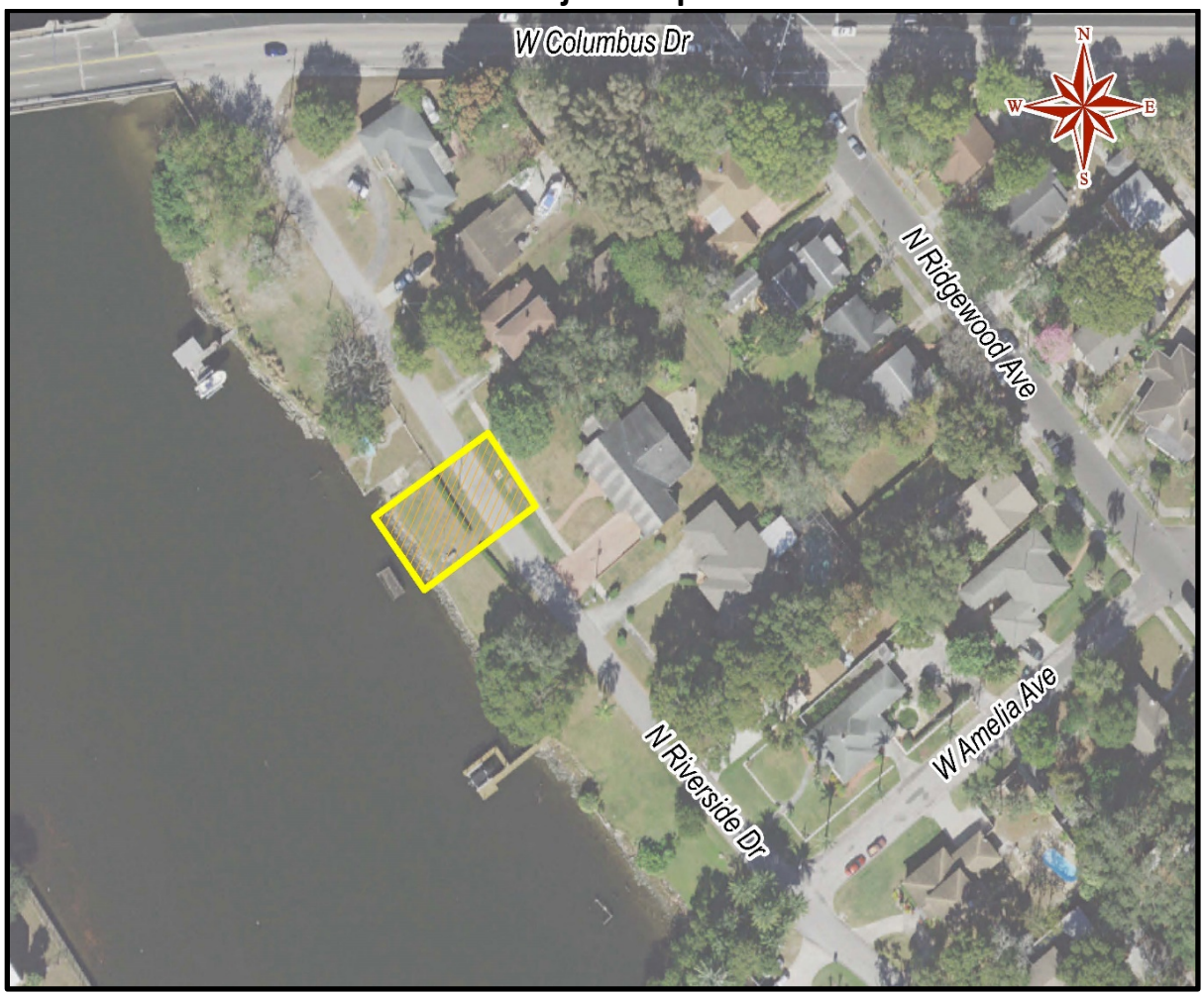
Project Description:

The project consists of removal of existing pipes and inlets, construction of new pipes and inlets, cutting sea wall and sealing opening, and roadway restorations.

Justification:

The existing pipes and inlets are failing.

Project Map



N. River Blvd Outfall Flooding Relief

Flooding Relief FY2018, District 6

Estimated cost: $60K

Project Description:

This project will install new piping system to collect and convey the surface runoff into the adjacent Hillsborough River. The project consists of construction of new pipes and inlets, regrading along the property lines, and construction of a new outfall.

Justification:

The existing drainage system in the area is inadequate and results in localized flooding in the area.

Project Map

W. St. Isabel from Gomez to Habana Flooding Relief

Flooding Relief FY2018, District 6

Estimated cost: $75K

Project Description:

The proposed project will replace the existing ditch system with new pipes and inlets.

Justification:

Development in the vicinity utilizes drainage ditches to collect and convey surface runoffs. Over the years, the ditch system has deteriorated and causes localized flooding

Project Map

Virginia Park PH III, Lois from Bay To Bay to Palmira

Flooding Relief FY2017, District 4

Estimated cost: $500K

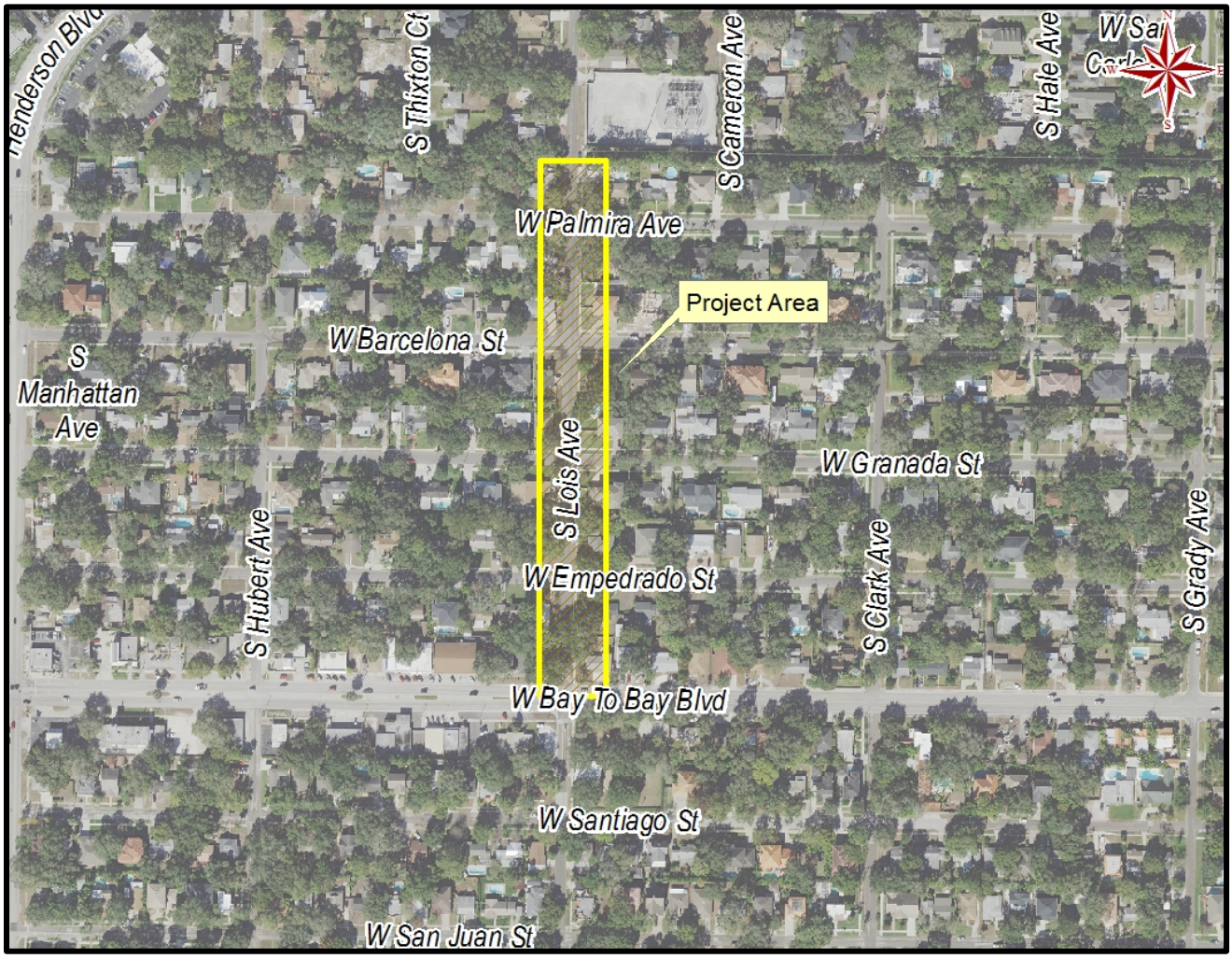
Project Description:

The project consists of regrading of the roadway to improve drainage.

Justification:

Localized flooding occurs at intersections along South Lois Avenue. The proposed project will alleviate the flooding.

Project Map



Virginia Park PH III, Clark from Bay To Bay to Palmira

Flooding Relief FY2017, District 4

Estimated cost: $325K

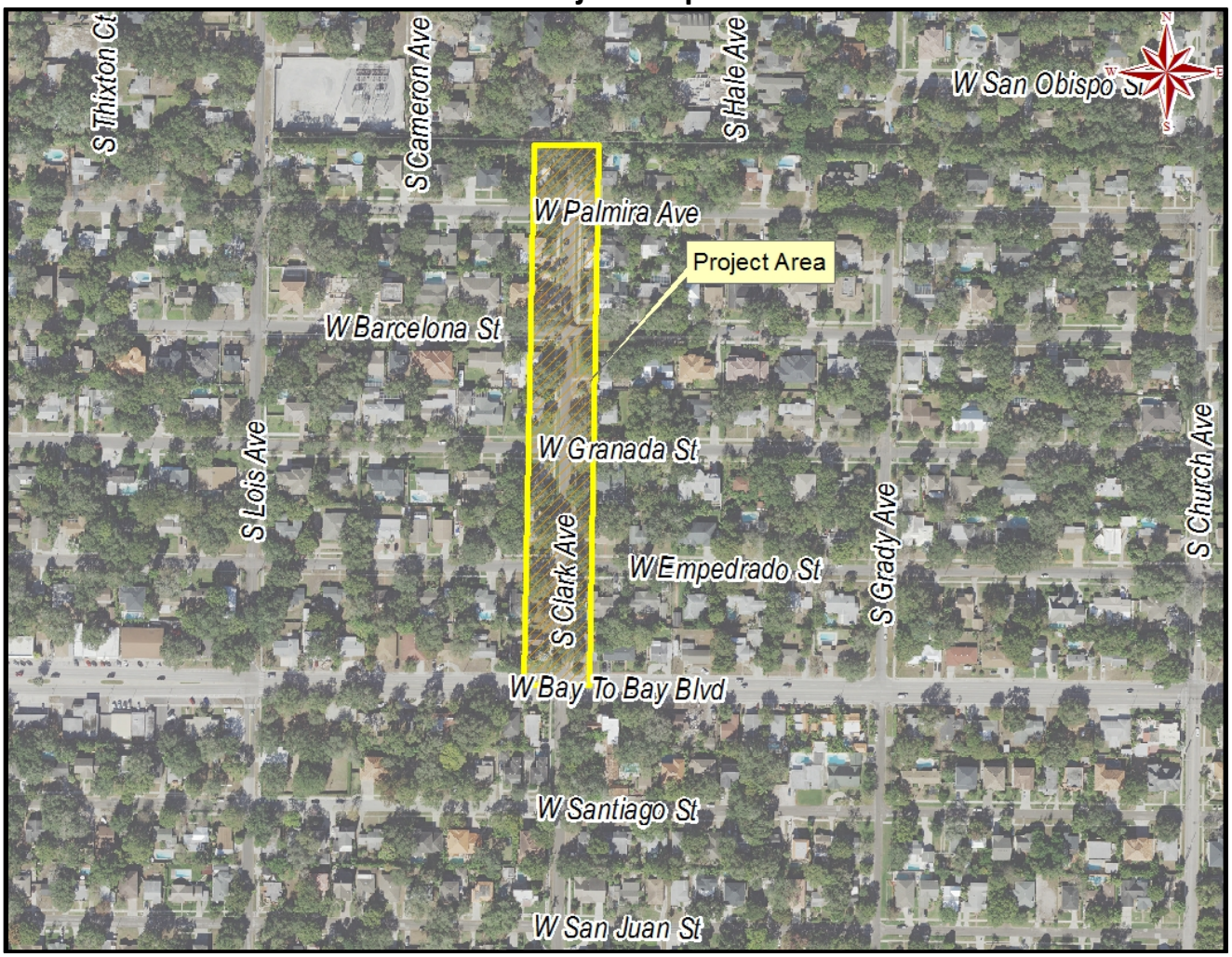
Project Description:

The project consists of regrading of the roadway to improve drainage.

Justification:

Localized flooding occurs at intersections along South Clark Avenue. The proposed project will alleviate the flooding.

Project Map



Howard from Swann to Morrison– Flooding Relief PH II

Flooding Relief FY2017, District 4

Estimated cost: $600K

Project Description:

Roadway re-grading from Morrison to Swann and potential construction of a surface water management system in coordination with roadway surfacing.

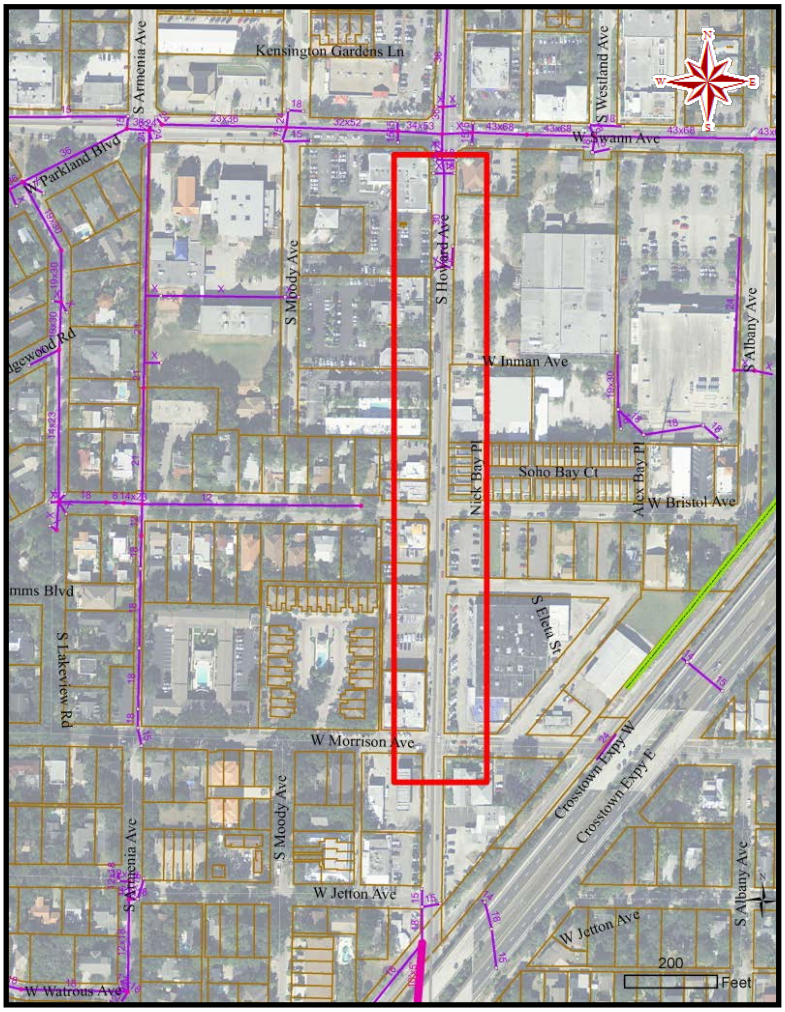
Justification:

Ponding occurs in the travel lanes due to poor grading associated with pavement overlay. The project is needed to convey runoff and relieve the ponding.

Related Issues:

Design and construction will be accomplished in coordination with the Transportation paving project.

Project Map



2nd Street from Interbay to Bay

Flooding Relief FY2017, District 4

Estimated cost: $200K

Project Description:

New drainage system to be proposed along 2nd Street to connect to box culvert along West Bay Avenue.

Justification:

Severe Street flooding along South 2nd Street from Interbay Boulevard to West Bay Avenue.

Related Issues:

S. 2nd Street dead ends before West Bay Avenue. Easement may be required to connect to existing box culvert along West Bay Avenue.

Project Map & Photo

Wyoming Flooding Relief PH II

Flooding Relief FY2017, District 4

Estimated cost: $325K

Project Description:

This project will upgrade the drainage system on 2nd Street and provide a connection to box culvert at 3rd Street.

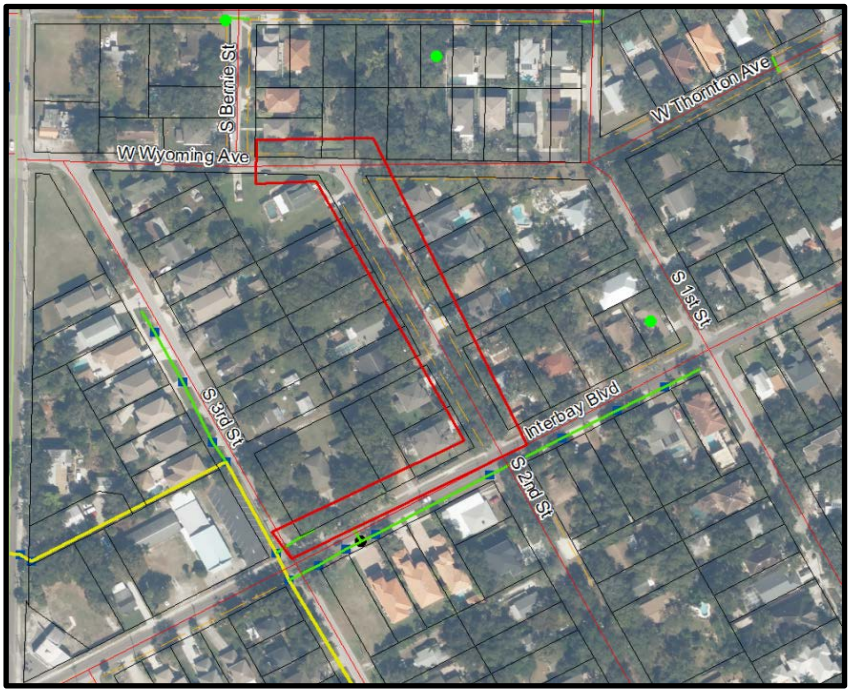
Justification:

Development in the vicinity of Wyoming/Bernie Avenue utilizes a system of drainage ditches to convey runoff to Interbay Boulevard. The ditch system has been compromised by discontinuous driveway culverts and lack of system on Interbay Boulevard.

Related Issues:

This project is a continuation of Wyoming/Trilby Phase I.

Project Map and Photos



FY19/FY20 Annual CIPP Rehabilitation

Citywide

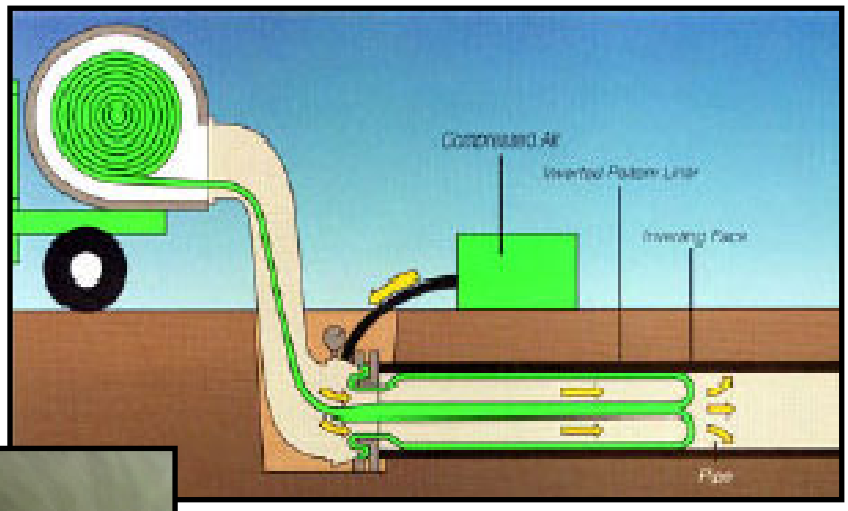
FY19 Estimated cost: $600K; FY20 Estimated cost: $600K

Project Description:

The scope of work includes labor, materials, and equipment to rehabilitate gravity stormwater pipes from 12-inch to 48-inch diameter by installation of cured-in-place pipe liner.

Justification:

The project provides rehabilitation of deteriorated stormwater pipe systems.



Project Photos

Annual Box Culvert Rehabilitation

FY2018, Citywide

Estimated cost: $650K

Project Description:

Create an annual contract to address the repairs in a timely fashion as they become evident.

Justification:

The City has numerous box culverts that are over 75 years old. These structures need remedial work to repair spalled concrete and joint leaks.

Related Issues:

Repair major culverts within roadways prior to resurfacing or rebuilding the roads.

Project Photos

Orchid Sink Rehabilitation

Flooding Relief FY2018, District 6

Estimated cost: $500K

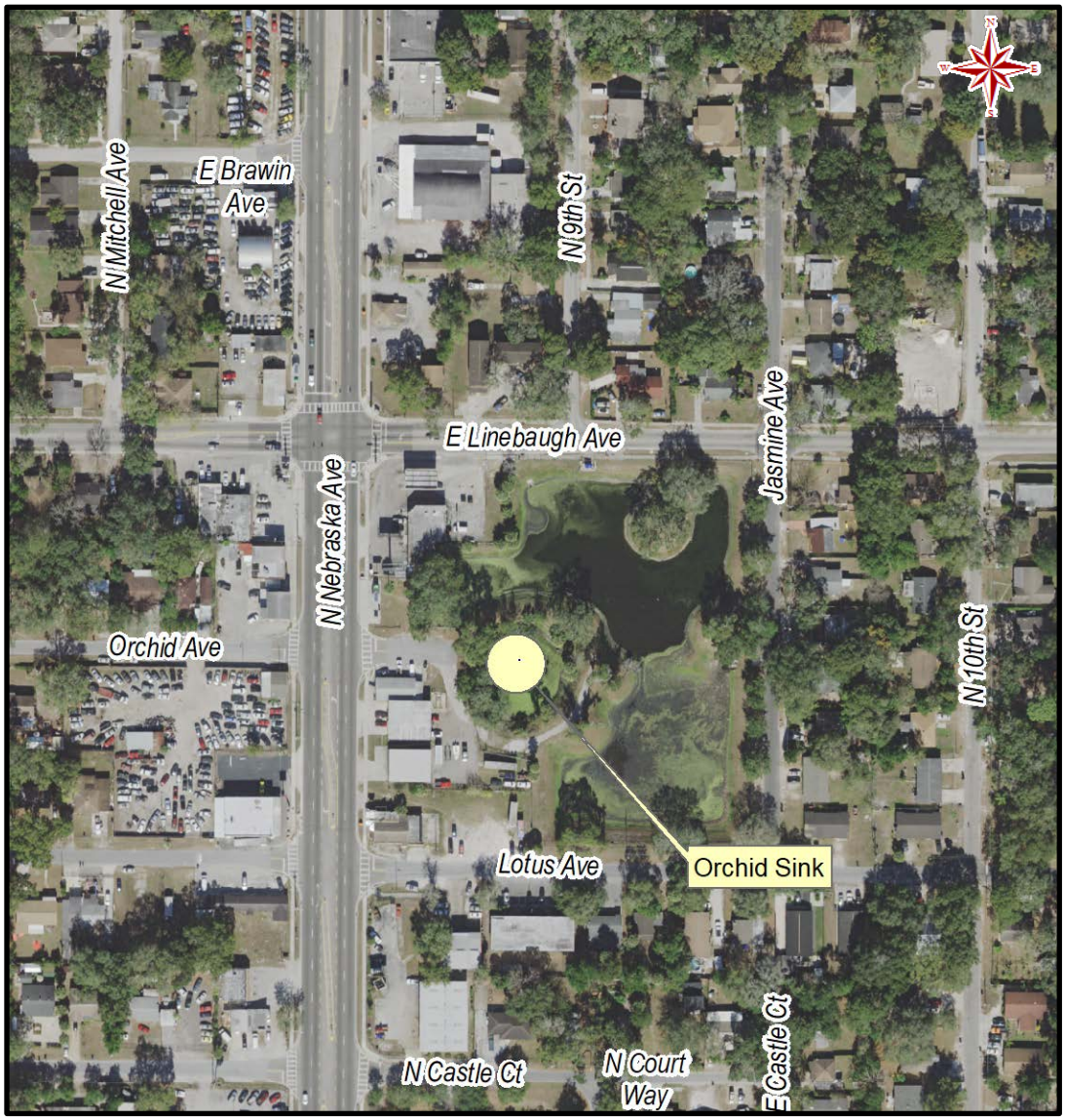
Project Description:

The project consists of removing trash and debris from the sink and stabilizing the embankment.

Justification:

Orchid sink, which serves as outfall for runoffs from the neighboring area, currently is clogged with trash and debris. This project will re-establish the sinkhole connectivity.

Project Map



David E. West Park Pond Enhancements

Water Quality Improvement/Flooding Relief FY2017, District 7

Estimated cost: $1M

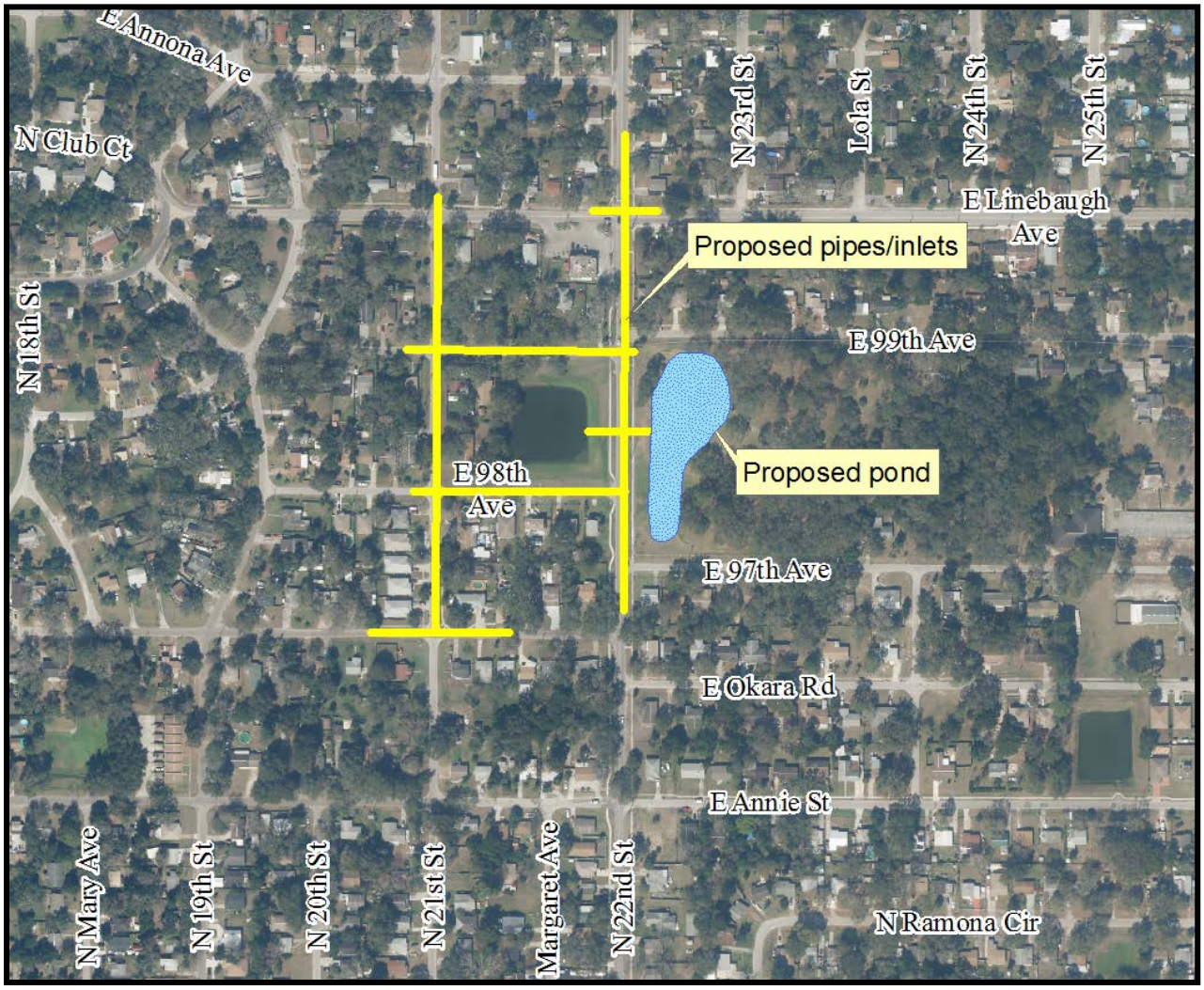
Project Description:

The project consists of the construction of a stormwater pond, pipes, and inlets on City lands. The pond will be hydraulically equalized with an existing stormwater pond, thus providing additional back-up volume to relieve downstream flooding.

Justification:

Attenuation storage is needed in this area because it is a closed basin with limited receiving capacity in the receiving sink. Multiple flooding complaints have been received.

Project Map



43rd Street Outfall PH III

Regional Drainage Improvement - FY2017, District 5

Estimated cost: $7.2M

Project Description:

The project consists of the construction of a 48-inch RCP pipe from the Phase 2 regional stormwater pond to the 43rd Street Outfall just upstream of McKay Bay. Additionally, a culvert upgrade will be constructed at the terminus of the 43rd Street ditch to reduce flooding on adjacent properties.

Justification:

The project provides a new secondary outfall to convey runoff from the Phase 2 regional pond to the 43rd Street Outfall. Phase 3 improvements provide additional flood relief for properties and roadways that are severely impacted.

Project Map

30th Street Outfall

FY 2017, District 5

Estimated cost: $600K

Project Description:

Stormwater has acquired the property on the east side of the outfall. The intent is to enlarge the discharge channel and, if necessary construct a larger outfall structure to accommodate future pipes.

Justification:

Existing 60-inch diameter stormwater pipe outfalls to Hillsborough River at 30th Street, causing continual erosion of adjoining properties. City crews have installed rip-rap to fortify the banks, but erosion has persisted.

Related Issues:

Several stormwater pumping stations utilize the existing outfall pipe and expanding the channel will allow for the extension of force mains directly to the river.

Project Map & photos

Forest Hills Park Improvements

FY2017, District 7

Estimated cost of Stormwater Share: $600K

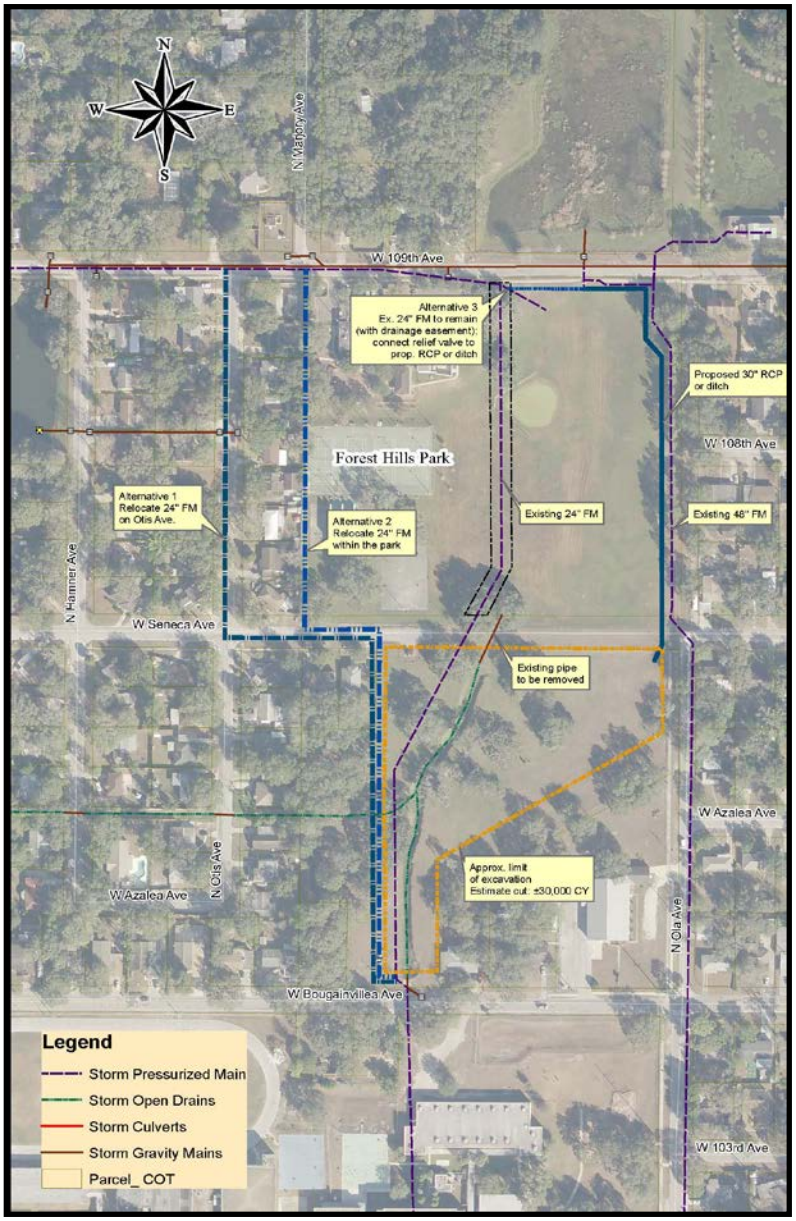
Project Description:

The scope of this project is to design a pond on the southern portion of the property and a stormwater collection system for the field area which will convey runoff to the pond. The pond will require a pumped outfall. The basin analysis shall include the outfall rate for future design of a pumping station by others. Topographic survey will be needed to evaluate what elevation the field can be raised to without impacting abutting properties and to evaluate the disposition of the tennis courts. Surface improvements may include new tennis courts or other recreational facilities and additional parking. The Parks and Recreation Department is co-funding this design with Stormwater Engineering as Stormwater will be a co-funding participant for the construction project. Stormwater has also identified the need to construct a piping system on the south side of 109th Avenue, to convey emergency bypass flow, and to continue the piping system along the east side of the property to collect and convey runoff from 108th Avenue and Seneca Avenue.

Justification:

The Parks Department has an existing baseball field located in a low area that holds water during the rainy season causing it to be unusable. Parks would like to raise the low lying areas to provide for a dry playing field during the summer months. Stormwater is providing funding and assistance to relocate the low area.

Project Map



Robles Park Pumping Station Replacement

FY2017, District 5

Estimated cost: $1.2M

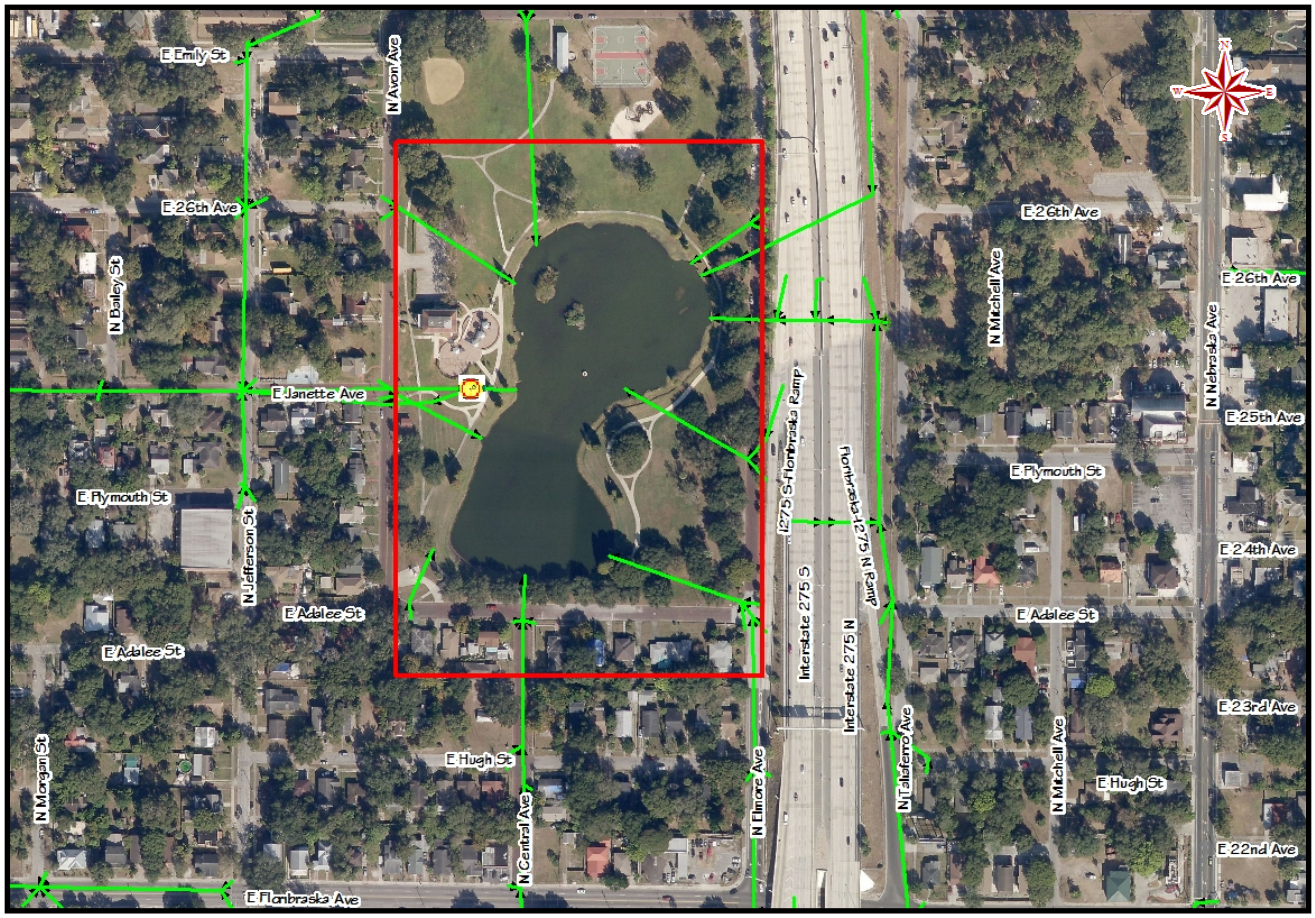
Project Description:

Pumping station will be replaced with more efficient pumping equipment.

Justification:

This is an aging facility with ongoing maintenance concerns. Older pumping station needs rehab to improve flooding relief.

Project Map



Rogers Park Drainage Improvements

Flooding Relief FY2018, District 5

Estimated cost: $ 500K

Project Description:

The project consists of replacing/relocating the failed 24 inch pipe and construction of new inlets and new outfall to the river.

Justification:

Recent TV inspection has shown several areas of failed pipe, cave-ins, and root intrusions. Current pipe location is inaccessible due to railroad spur.

Related Issues:

Need to coordinate with the Water Department's reconstruction of the railroad spur.

Project Map

Poinsettia Pumping Station Rehabilitation

Flooding Relief FY2018, District 7

Estimated cost: $1.4M

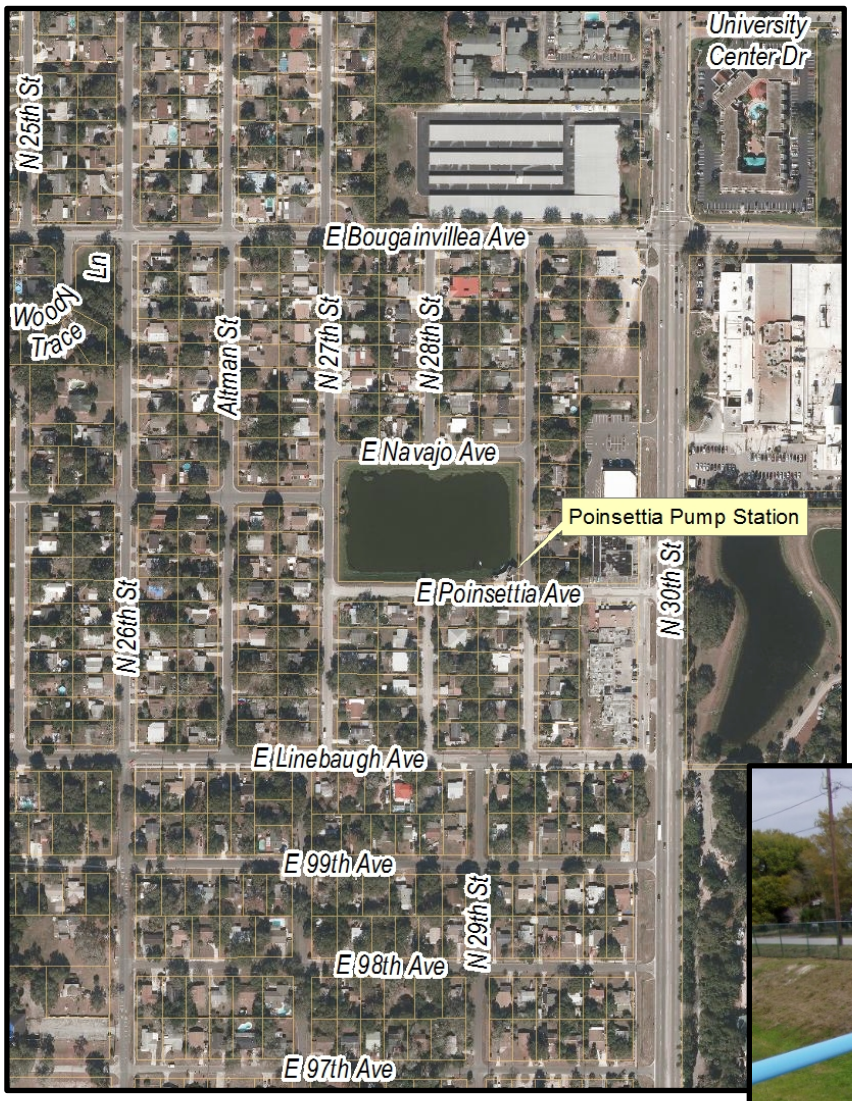
Project Description:

This project consists of removal of the failed hydraulically driven pumps and the installation of two new electric submersible pumps and motor controls. New pumps will match the existing flow and provide a more energy efficient system.

Justification:

The Poinsettia Pumping Station was equipped in 1988 with hydraulically driven pumps and augmented with additional pumping capacity in 2005 and 2010. When the Donut Pond Pumping Station was activated in 2015 upstream of this location, demand at this station was reduced.

Project Map & Photo



Eastridge Pumping Station Rehabilitation

Flooding Relief FY2018, District 7

Estimated cost: $700K

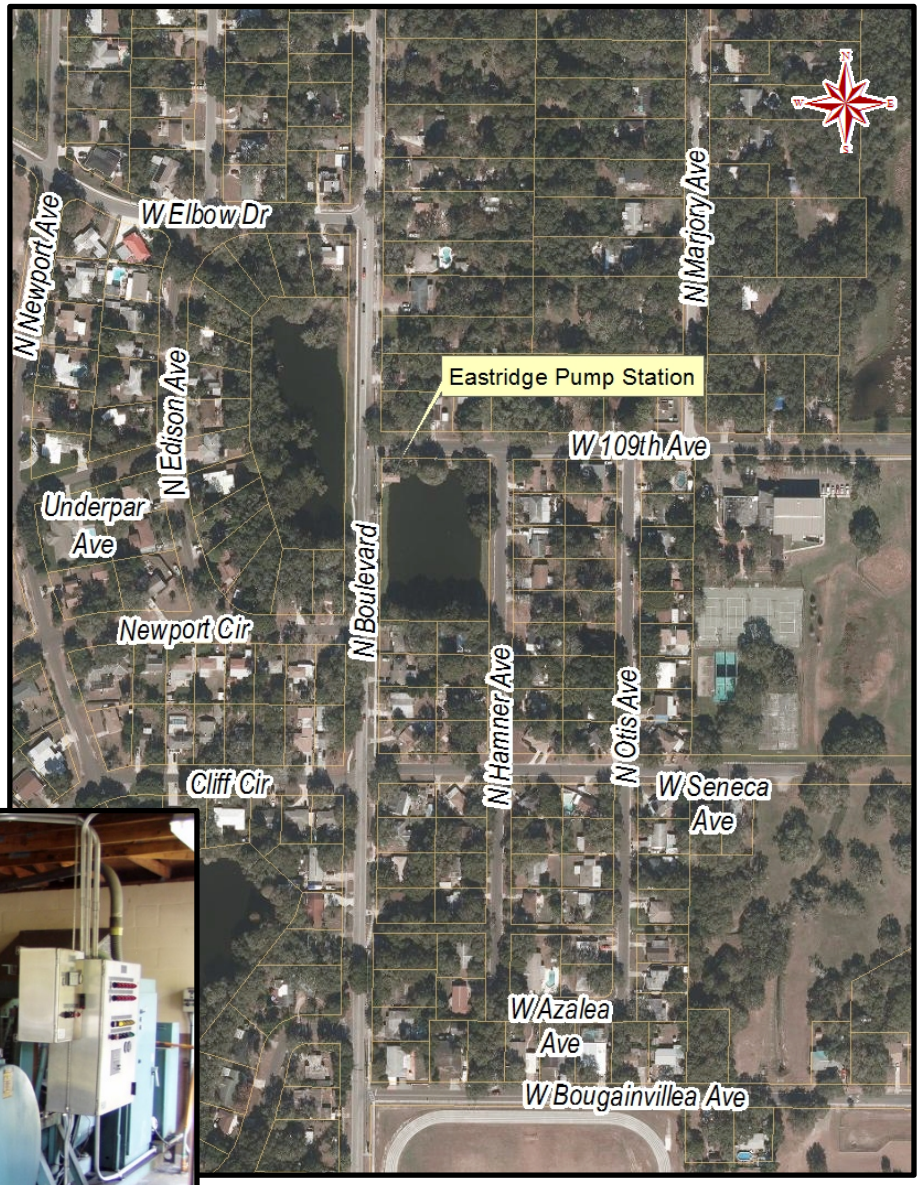
Project Description:

The project consists of removal of the hydraulically driven pump and installation of two electric submersible pumps and motor controls to provide redundancy.

Justification:

The Eastridge Pumping Station was constructed in 1983 with a single hydraulically driven pump. Repairs and maintenance has increased in the past five years.

Project Map and Photo



Copeland Park Pumping Station

Flooding Relief FY2018, District 7

Estimated cost: $800K

Project Description:

The project consists of construction of a new pumping station and force main connecting to the existing drainage system on N 22nd Street at Colby Lane area.

Justification:

Currently a temporary pump is utilized to drain the low-lying area in Copeland Park. The proposed project will replace the temporary pump with a permanent pumping station and provide a more reliable system to better alleviate the flooding in the area.

Project Map and Photo

Anita Subdivision Drainage Improvements PH II

Flooding Relief FY2018, District 4

Estimated cost: $800K

Project Description:

This neighborhood was developed with ditches draining to a collection system that discharged the stormwater to a system on Westshore Boulevard. Over the years the ditches have been filled and driveway culverts have been installed improperly. Consultant will evaluate the current drainage patterns and identify areas where ponding occurs. City crews will reestablish the relic ditches and correct the driveway culverts.

Justification:

The project reduces the flooding affecting residential properties and roadways.

Project Map

56th Street and Broadway Avenue Flooding Relief

Flooding Relief FY2019, District 5

Estimated cost: $2M

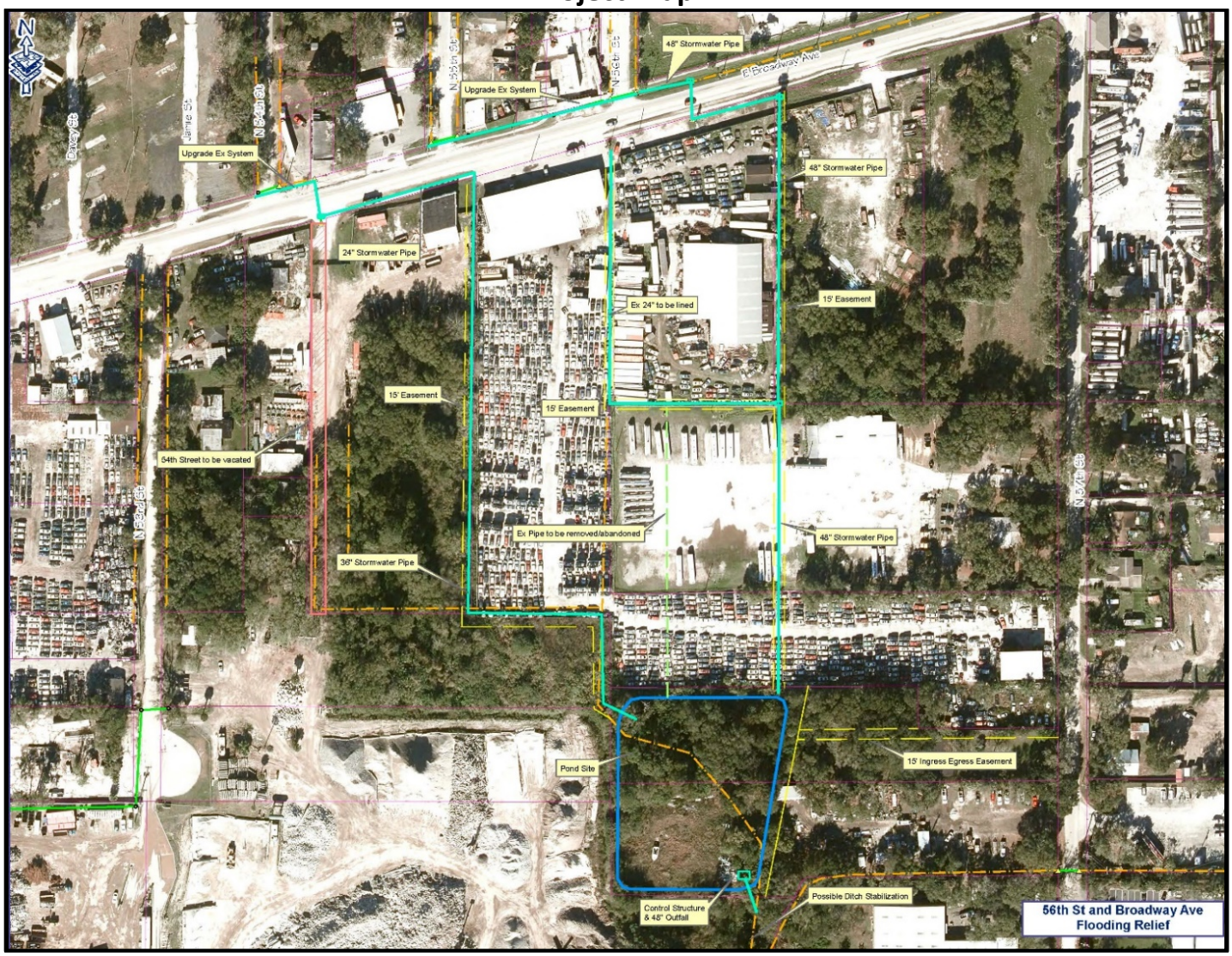
Project Description:

This section of Broadway Avenue experiences frequent flooding resulting from a combination of undersized piping systems and failing ditches. This project consists of property acquisition for a new stormwater pond that will provide water quality treatment and attenuation for the area, and the relocation, replacement and upsizing of pipes and ditches.

Justification:

This section of Broadway Avenue experiences frequent flooding resulting from a combination of undersized piping systems and failing ditches. The proposed project will improve drainage in the area.

Project Map



Hamilton Creek Water Quality Improvement

Water Quality Improvement FY2019, District 6

Estimated cost: $500K

Project Description:

The scope of this project is to construct a five-pond stormwater treatment facility for Hamilton Creek, which outfalls to the Hillsborough River.

Justification:

The receiving section of the river has been listed by the Florida Department of Environmental Protection as impaired for fecal coliforms. This segment of the river was issued a Total Maximum Daily Load (TMDL) for nutrients and fecal coliforms and is currently under Basin Management Action Plan (BMAP) requirements for water quality improvements. The proposed project is part of the effort to improve the Hillsborough River water quality by reducing the amount of fecal coliform and nutrients discharged to the river. The Lowry Park Zoo supports this project and will be cooperative in implementing educational environmental programs on the project site to benefit the public.

Project Map

Lamb Canal Rehabilitation

Water Quality Improvement/Flooding Relief FY2019, District 4

Estimated cost: $1.5M

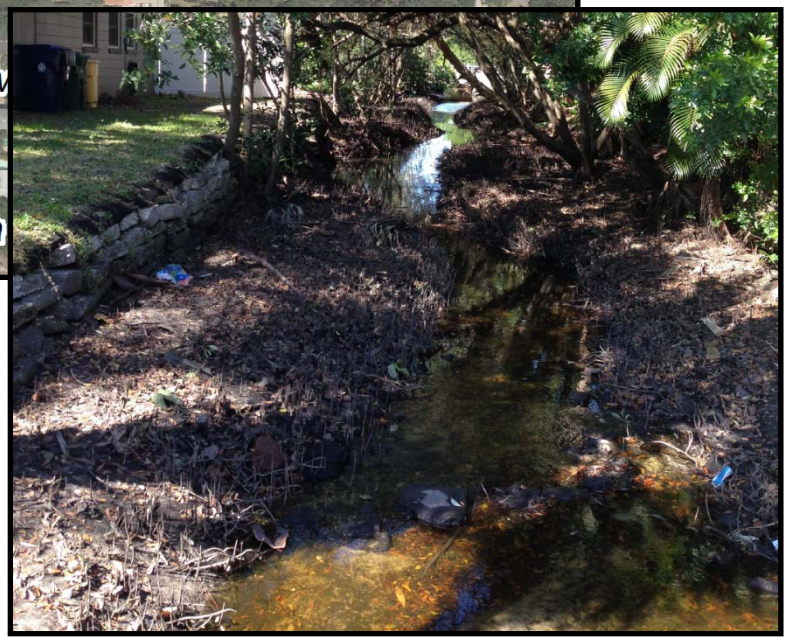
Project Description:

The project will include removal of sediments and reconstruction of the banks of the canal to restore the canal capacity and protect properties from erosion.

Justification:

Lamb canal from South Schiller Street to West Lowell Avenue section has been eroded over the years and in need of rehabilitation. The capacity of the canal is significantly reduced due to embankment deterioration.

Project Map and Photo



Ditch Rehabilitation Program

Water Quality Improvement/Flooding Relief FY2019, Citywide

Estimated cost: $1M

Project Description:

This project creates an annual contract to address ditch improvements and associated upgrades to improve conveyance capacity and embankment stabilization.

Justification:

Rehabilitation is needed for ditches that have diminished capacity due to embankment erosion that cannot be corrected by maintenance.

Project photos

El Prado Green Infrastructure

Water Quality Improvement/Flooding Relief FY2019, District 4

Estimated cost: $175k

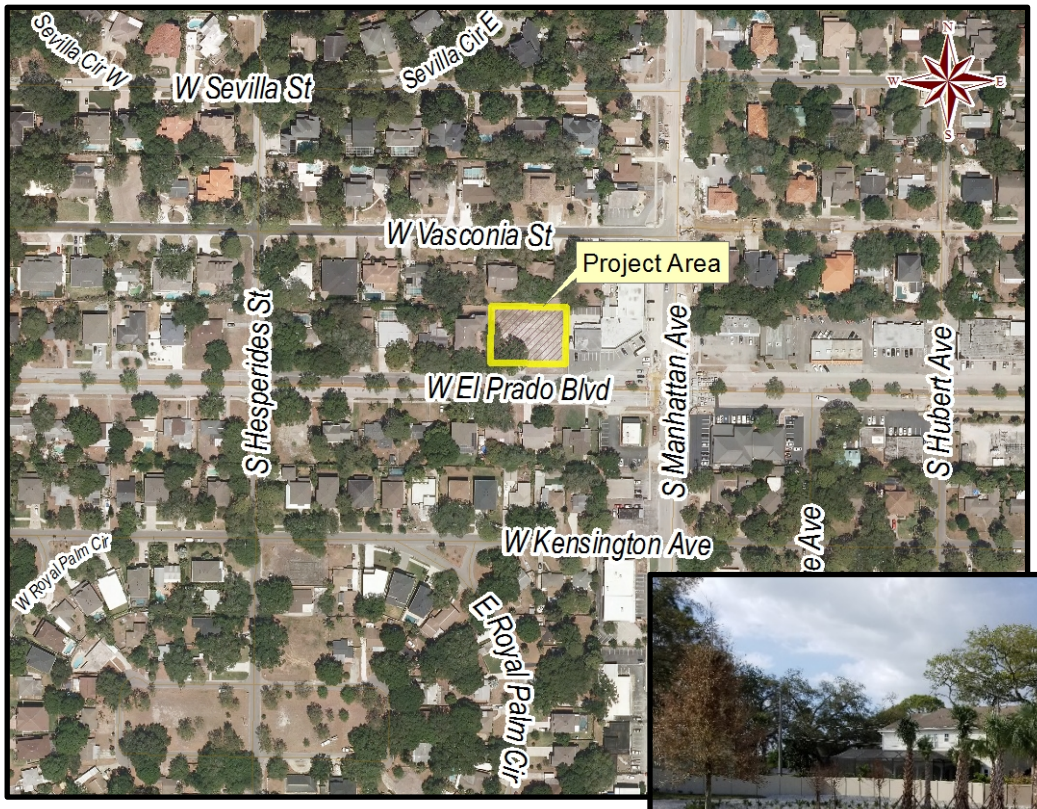
Project Description:

Project implements green infrastructure technology on two vacant lots near the intersection of El Prado Blvd. and S. Manhattan Ave. The green infrastructure provides aesthetics to the residential area in addition to serving as a functional means for capturing, storing, and treating urban stormwater runoff. The green infrastructure technology incorporates Florida-friendly landscaping that allows runoff to slowly percolate into the ground before discharging to the existing stormwater system.

Justification:

This low lying area experiences street and yard flooding. The proposed project will provide water quality treatment, flooding relief, and aesthetics for the neighborhood.

Project Map and Photo



Lantana / Poinsettia Flooding Relief

Flooding Relief FY2020, District 7

Estimated cost: $625k

Project Description:

The project consists of property acquisition and construction of a new collection system, a new pumping station to replace the temporary pumping station, and force main connecting to the existing drainage system on N 11th St.

Justification:

Currently a temporary pump is utilized to drain the low-lying area along E Poinsettia Ave. between N Brood St. and N Lantana Ave. The proposed project will replace the temporary pump with a permanent pumping station.

Project Map

Lake Roberta Dredging

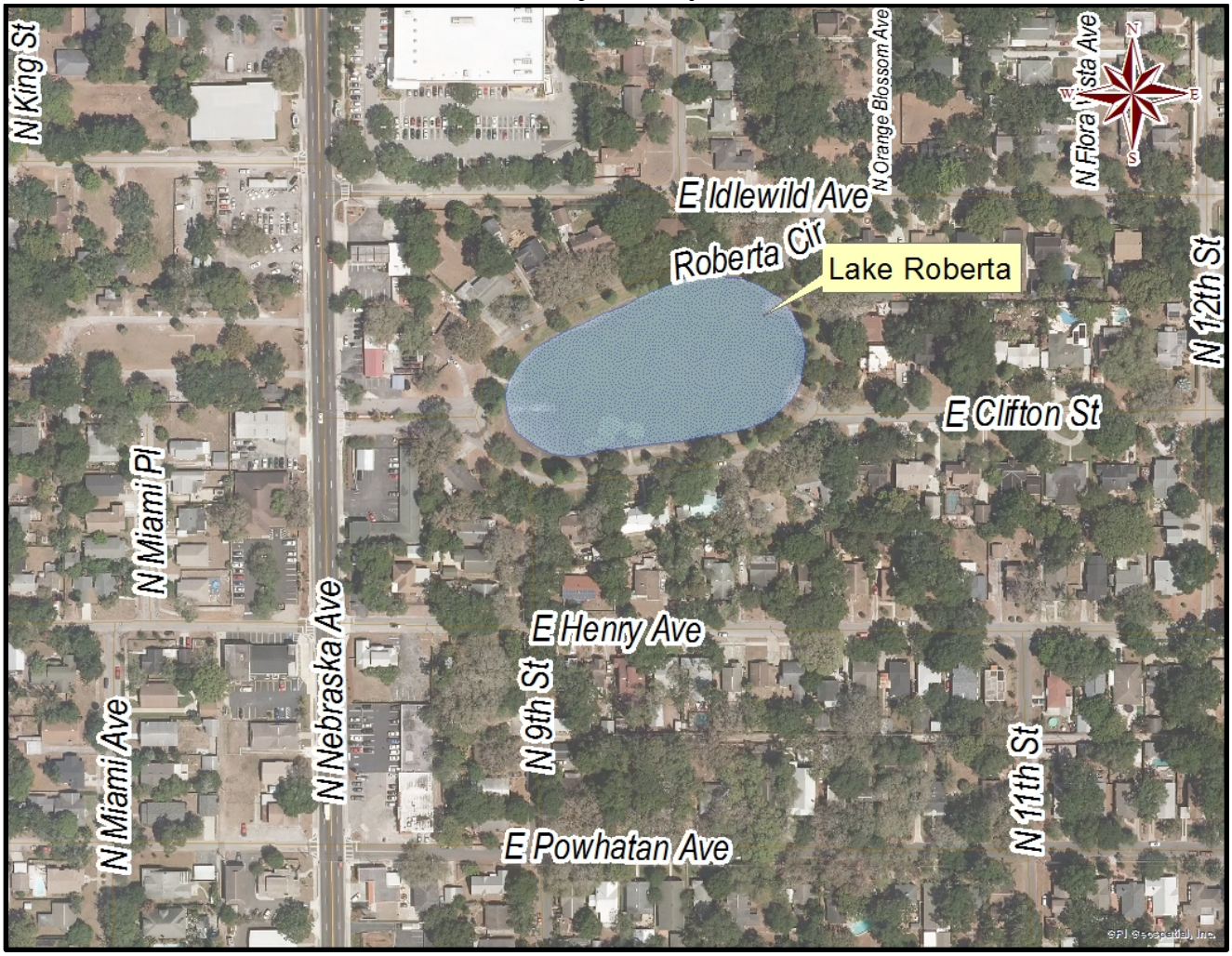
Water Quality Improvement FY2019, District 5

Estimated cost: $400k

Project Description:

To enhance water quality and to improve the general environmental health of Lake Roberta, the City plans to remove the accumulated lake sediments. Currently, the deepest part of the lake is about 6' deep. The dredging project is targeting a new depth of 10'. It is anticipated that approximately 10,000 cubic yards of wet sediment consisting of silt, sand, muck and decomposed vegetation will be dredged from the lake in this project. The increased storage capacity, called the permanent pool volume, will restore the health of the lake and its ability to provide water quality treatment for the stormwater runoff entering the lake from the surrounding area.

Project Map



El Portal/Newport Pumping Station

FY2021, District 6

Estimated cost: $350k

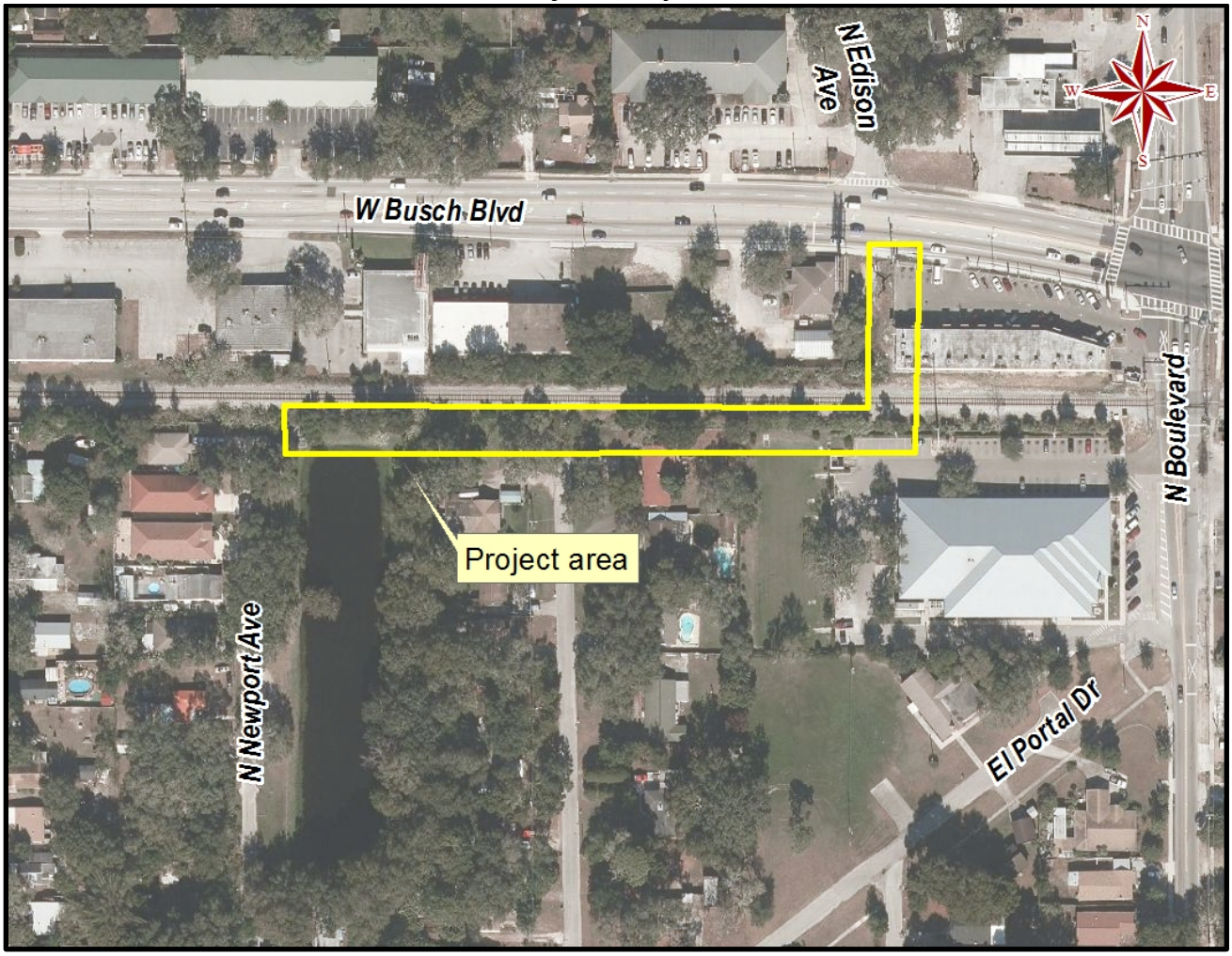
Project Description:

The project consists of construction of a new pumping station and force main connecting to the existing drainage system on Busch Blvd.

Justification:

The pond located at N Newport Ave. and Busch Blvd. area currently discharges via a temporary pump. The proposed project will replace the temporary pump with a permanent pumping station to provide a more reliable outfall for the pond system.

Project Map



Lake Roberta Sediment Trap Upgrade

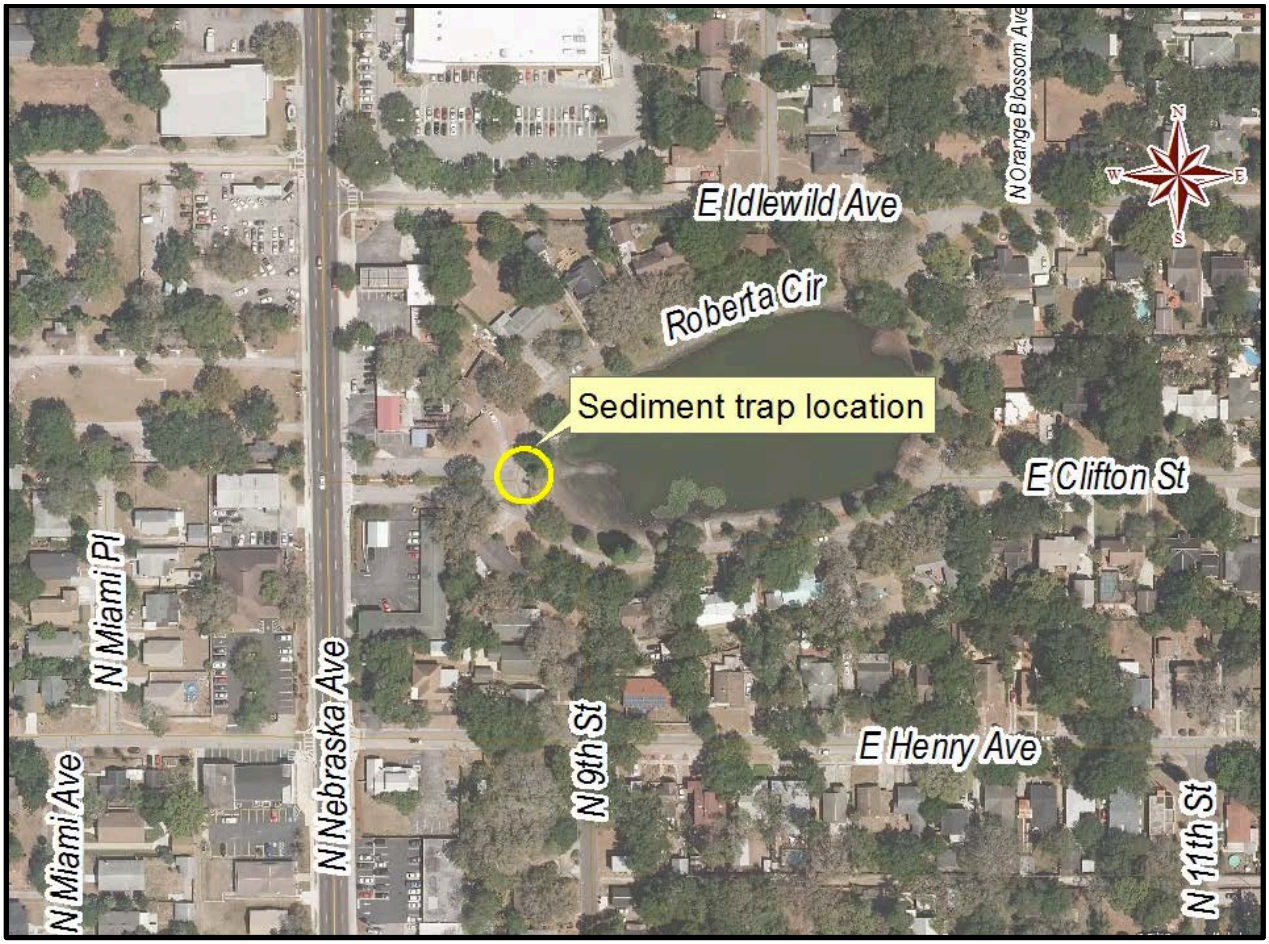
Water Quality Improvements FY2020; District 5

Estimated cost: $400K

Project Description:

The City of Tampa has contracted with the University of South Florida (USF) College of Engineering to evaluate stormwater sediment traps throughout the city. The existing Lake Roberta sediment trap at E Clifton St. does not sufficiently capture all the trash from Nebraska Ave. It is one of the unit locations that is being monitored and sampled continuously by USF in order to estimate pollution loads into the stormwater units as part of the study. USF will review monitoring results and make a recommendation for the existing sediment trap model. The proposed project will upgrade the existing sediment trap accordingly to reduce pollutant loading into the lake.

Project Map



New Port, Willow, Orleans, and Watrous

Groundwater Diversion FY2020; District 4

Estimated cost: $900K

PROJECT DESCRIPTION:

This area of Hyde Park has experienced extremely high groundwater level causing seepage from the cracks in the sidewalks, driveways and roadway. This seepage has killed roadway trees and prompted a growth of algae on the street and sidewalks, posing a hazard to pedestrians and traffic.

The proposed project includes the installation of underdrain systems along each side of the roadways. The new underdrain systems will be connected to the existing inlets along Bayshore Blvd for discharge to Hillsborough Bay.

Project Map

Beach Park Drainage Improvement

Flooding Relief FY2020; District 6

Estimated cost: $750K;

- **Project Description:**

  This project consists of construction of new pipes and inlets connecting to the existing system on Swann Ave. to alleviate flooding in the area.

- **Justification:**

  Flooding occurs in the area due to insufficient drainage capacity of the existing system. The proposed project will provide a second outlet for the low lying area to reduce the localized flooding.

Project Map

Manhattan: Vasconia to Bay To Bay

Flooding Relief FY2020; District 4

Estimated cost: $3M

Project Description:

This section of Manhattan Ave. has experienced flooding due to lack of stormwater system. The proposed project consists of installation of new inlets and pipes connecting to the existing Vasconia system to provide flooding relief for the area.

Project Map

Idell Street Roadway Improvements PH II

Flooding Relief FY2017, District 5

Estimated cost: $75K

Project Description:

Construction of new ditch system discharging to the Hillsborough River.

Justification:

Phase 2 of Idell Street Roadway improvements which will provide for a new outfall into the River. Stormwater in-house construction crews will be responsible for installing the new outfall via ditch to the River.

Related Issues:

Site located at 1911 East Mulberry.

Project Map

Concordia Pond

Flooding Relief FY2017, District 4

Estimated cost: $125K

Project Description:

Four parcels have been acquired to construct a drainage pond to provide additional drainage system capacity before discharge to box culvert in adjacent CSX corridor.

Justification:

During heavy rain events, several parcels at corner of Concordia and Kensington experience flooding due to outdated drainage system.

Related Issues:

CSX drainage connection permit will be obtained before construction.

Project Map and Photo

Seneca Pumping Station Site Improvements

Flooding Relief FY 2017, District 7

Estimated cost: $100K

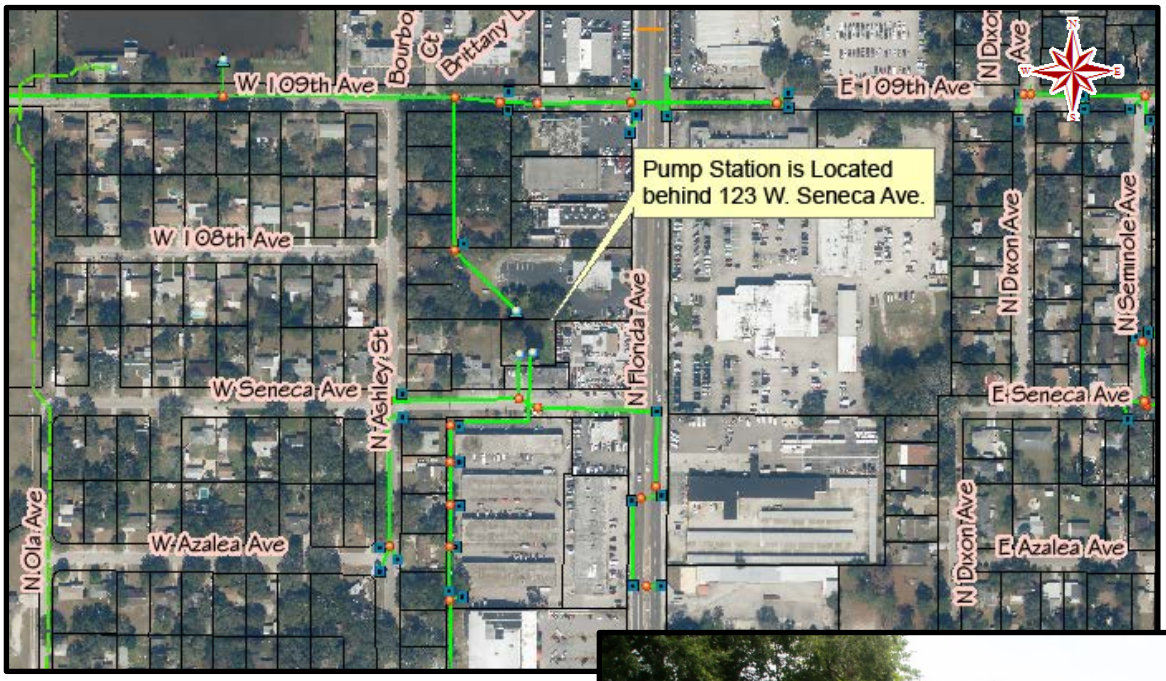
Project Description:

This project will include constructing a new control structure on the existing outflow pipe, stabilizing the pond banks, and controlling erosion caused by runoff flow from adjacent properties.

Justification:

Seneca Pumping Station was determined to be obsolete and unnecessary due to reconfigurations of the drainage system serviced by Curiosity Creek Pumping Station. Under Phase 1, the pumping station building and mechanical equipment were removed. The runoff accumulated in the Seneca pond will flow north to 109th Avenue.

Project Map and Photo



Gomez Alley between Kennedy & North A Street

Flooding Relief FY2019, District 4

Estimated cost: $75K

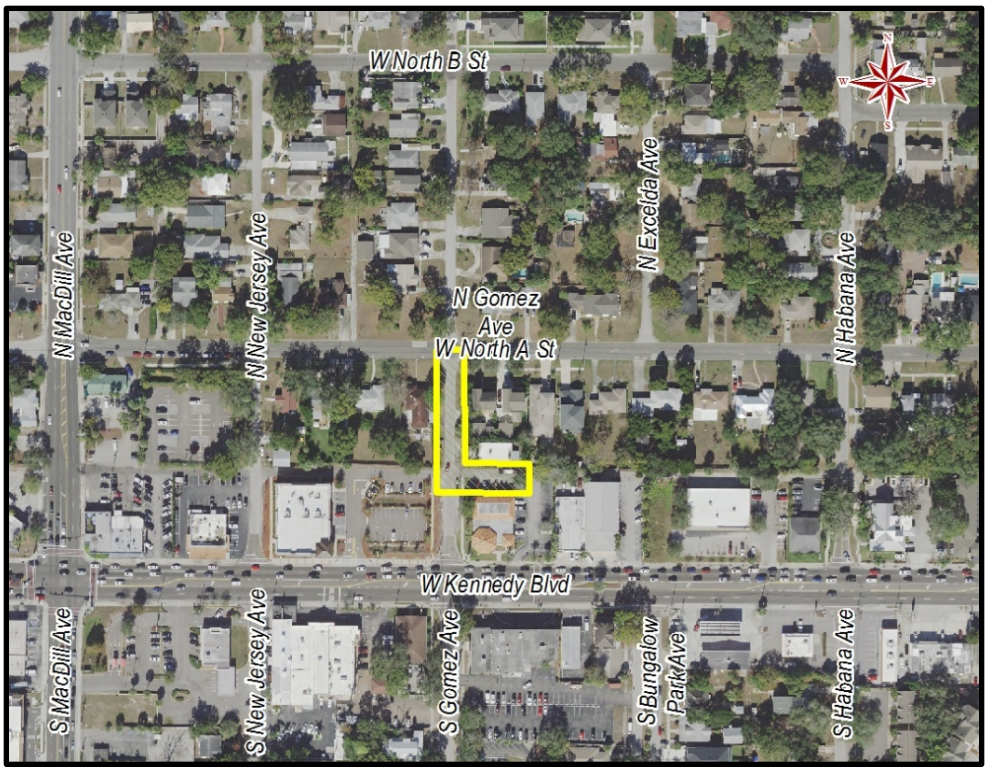
Project Description:

The project consists of construction of new inlets and pipes connecting to the existing drainage system on West North A Street and regrading of the roadway as needed.

Justification:

Localized flooding occurs in the low lying Gomez alley area. The proposed project will alleviate the flooding.

Project Map and Photo



Gomez Alley Ph2 (Re-profiling)

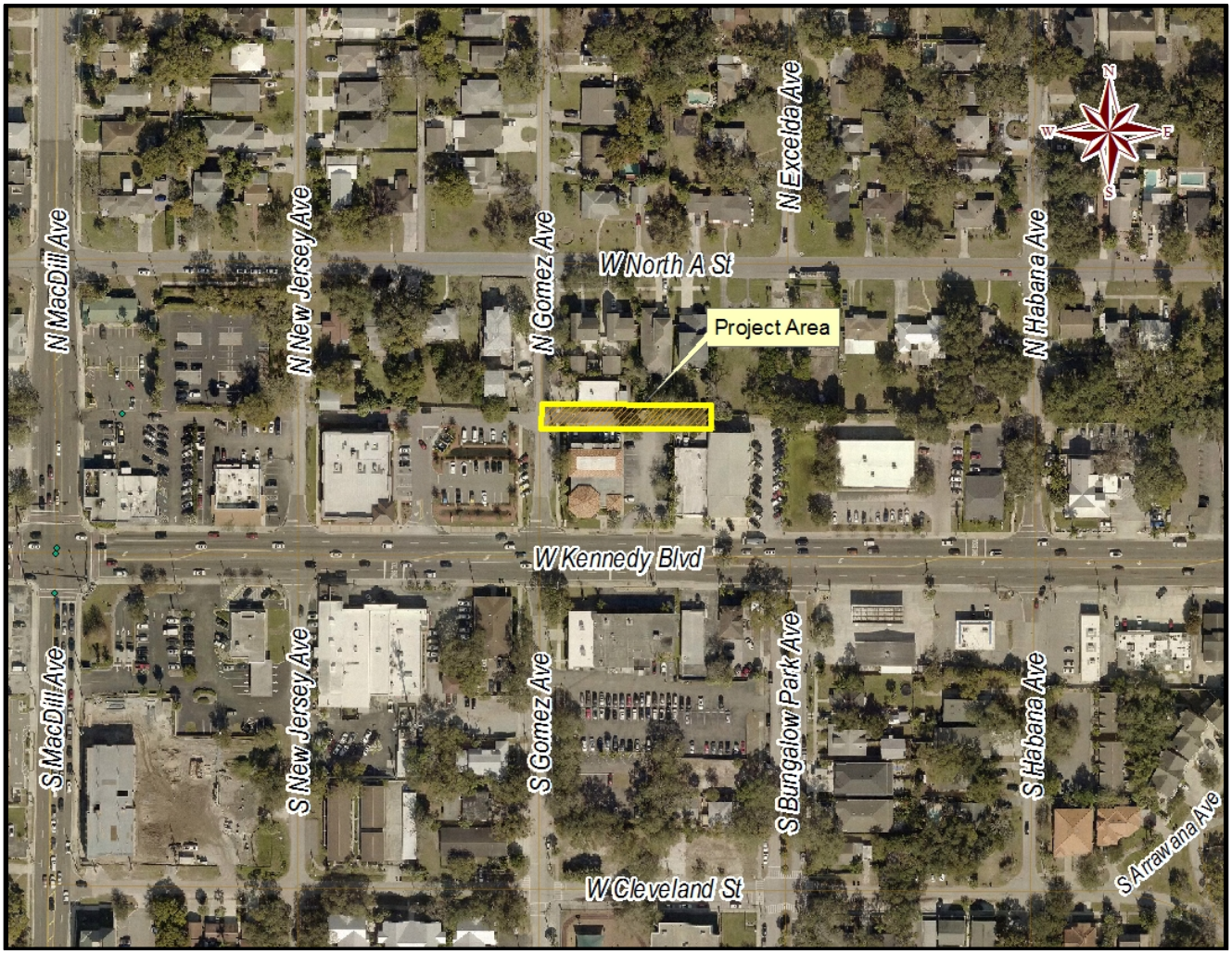
Flooding Relief FY2019, District 4

Estimated cost: $75K

Project Description:

Localized flooding occurs in the low lying Gomez alley area. Phase 2 of the project consists of re-grading the alley to direct stormwater runoff to the newly constructed inlet system to be collected and conveyed.

Project Map



Binnicker at 4th Street

Flooding Relief FY2018, District 4

Estimated cost: $50K

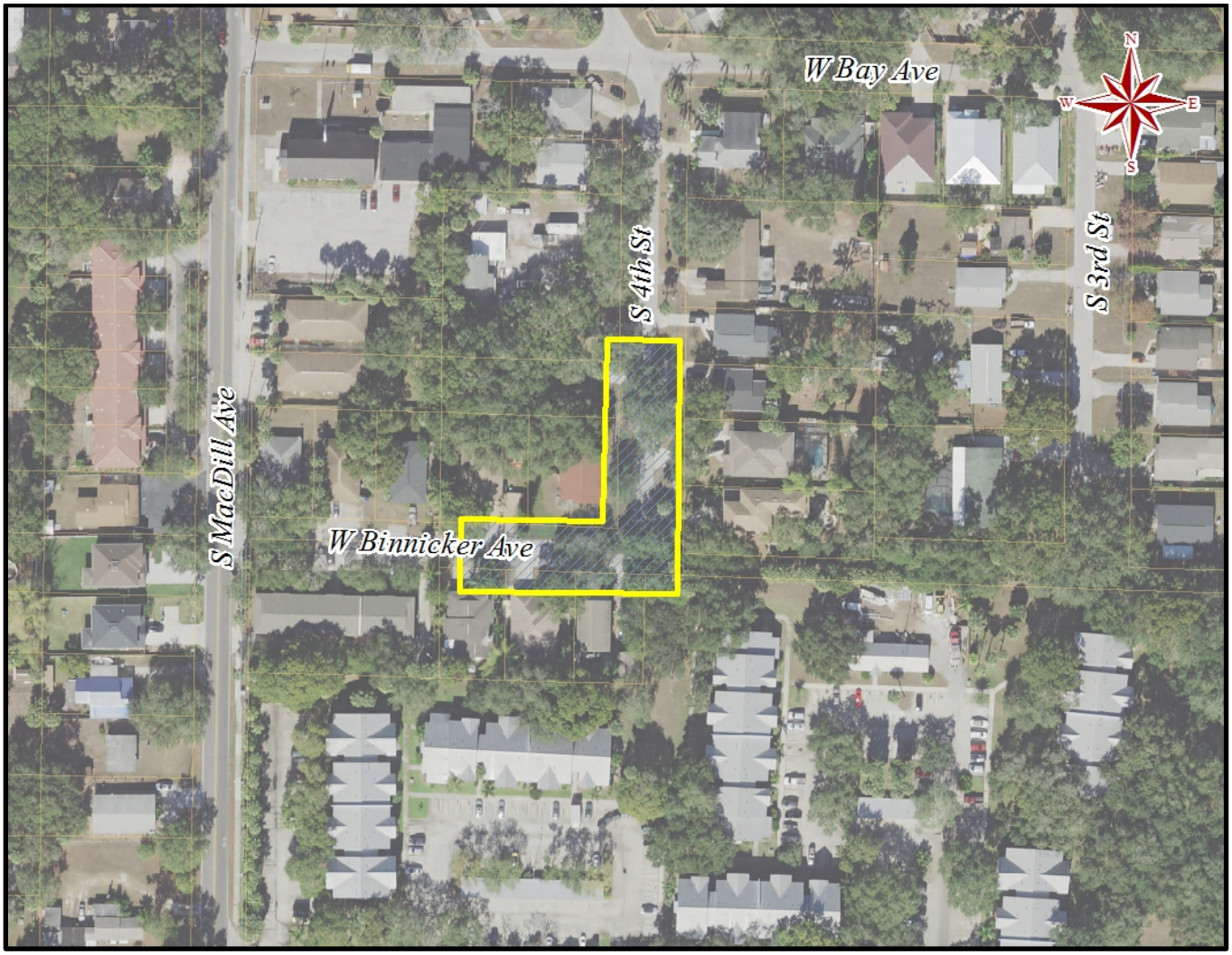
Project Description:

The project consists of construction of new pipes and inlets and regrading of the roadway as needed.

Justification:

Localized flooding occurs at intersection of West Binnicker Avenue and South 4th Street. The proposed project will alleviate the flooding.

Project Map



Neptune/Treasure Drainage Improvement

Pipe in Ditch FY2018, District 6

Estimated cost: $75K

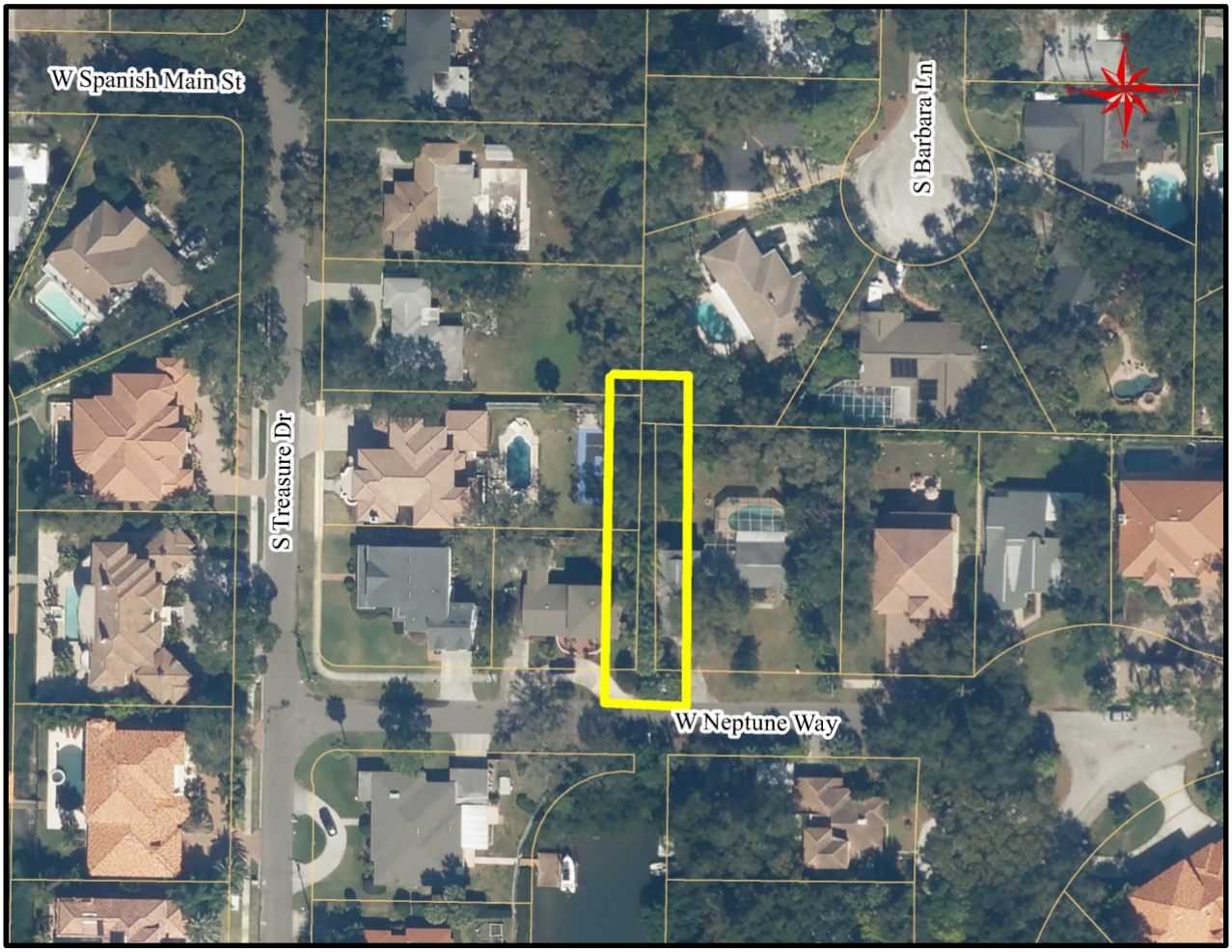
Project Description:

The proposed project will pipe in the existing ditch with a shallow swale.

Justification:

The ditch is eroded and in need of restoration. The proposed project will prevent further erosion and enhance public safety.

Project Map



3911 Swann Avenue

Flooding Relief FY2018, District 6

Estimated cost: $50K

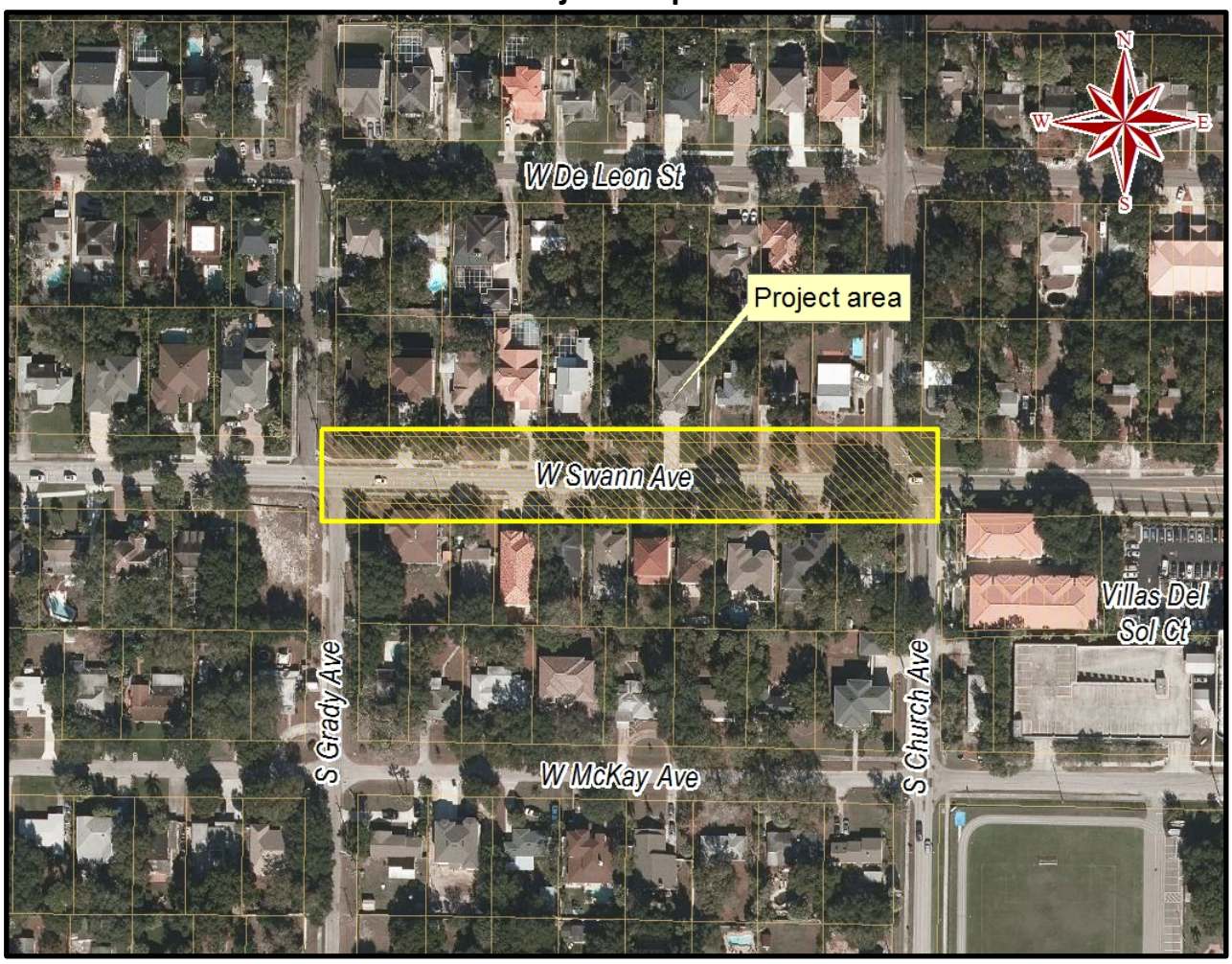
Project Description:

The proposed project consists of converting some existing manholes to inlets.

Justification:

Low lying areas on the street experience street and yard flooding. This project will alleviate the localized flooding.

Project Map



1510 W. Park Drainage Improvement

Pipe in Ditch FY2017, District 6

Estimated cost: $50K

Project Description:

The proposed project will pipe in the existing ditch.

Justification:

The ditch is eroded and had been repaired multiple times in the past. The proposed project will enhance public safety and reduce maintenance cost.

Project Map

Rambla Flooding Relief

FY2018, District 7

Estimated cost: $100K

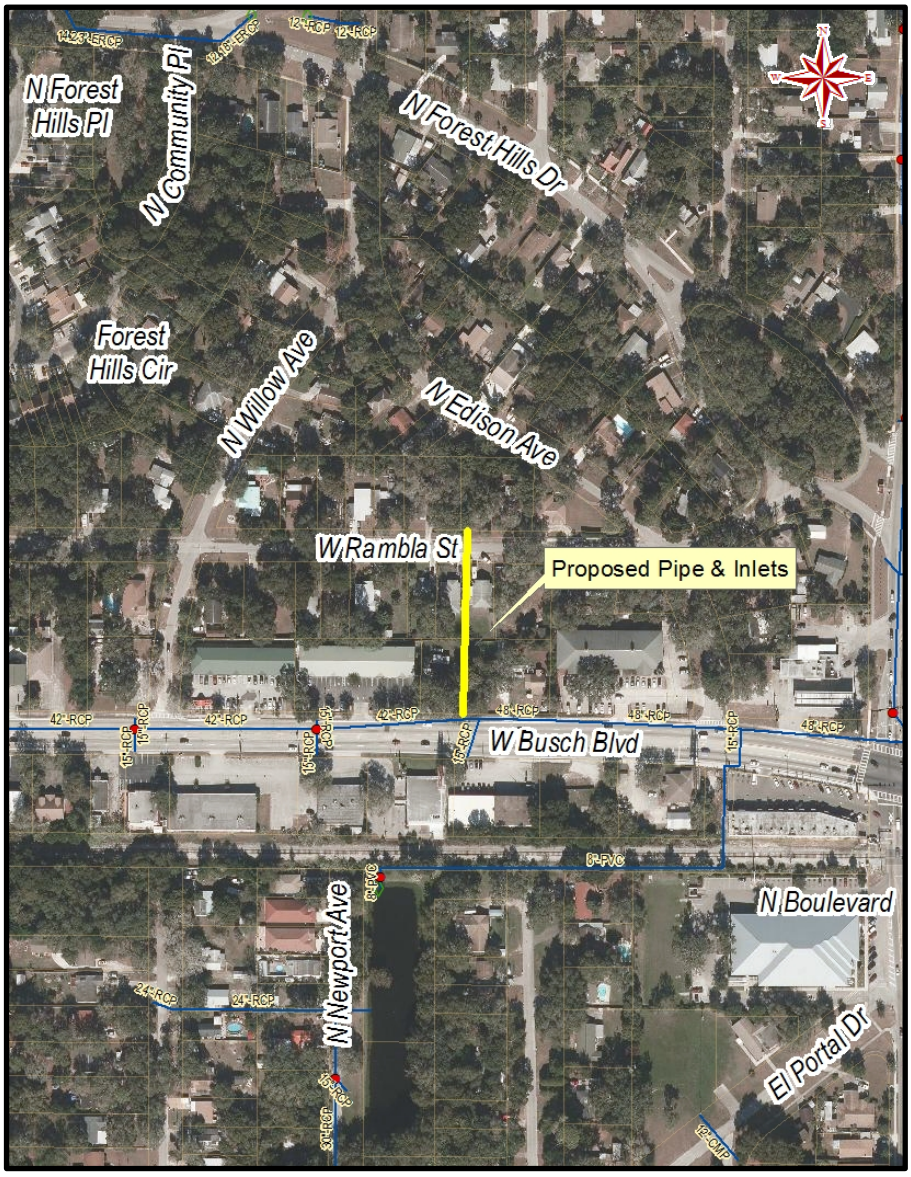
Project Description:

The proposed project will consist of construction of new inlets and pipes connecting to the existing drainage system.

Justification:

Properties on Rambla Street between Edison Avenue and Willow Avenue experience chronic flooding. The project will alleviate the flooding in the area.

Project Map



45th Street north of Hillsborough Flooding Relief

FY2019, District 6

Estimated cost: $135K

Project Description:

The proposed project will replace the temporary pump with a permanent pumping station to alleviate the neighborhood flooding.

Justification:

Currently a temporary pump is utilized to drain the low-lying North 45th Street area north of East Hillsborough Avenue. This project will provide a more reliable system to better alleviate the flooding in the area.

Project Map and Photo

Emma Street and Seminole Avenue Flooding Relief

Flooding Relief FY2019, District 6

Estimated cost: $100K

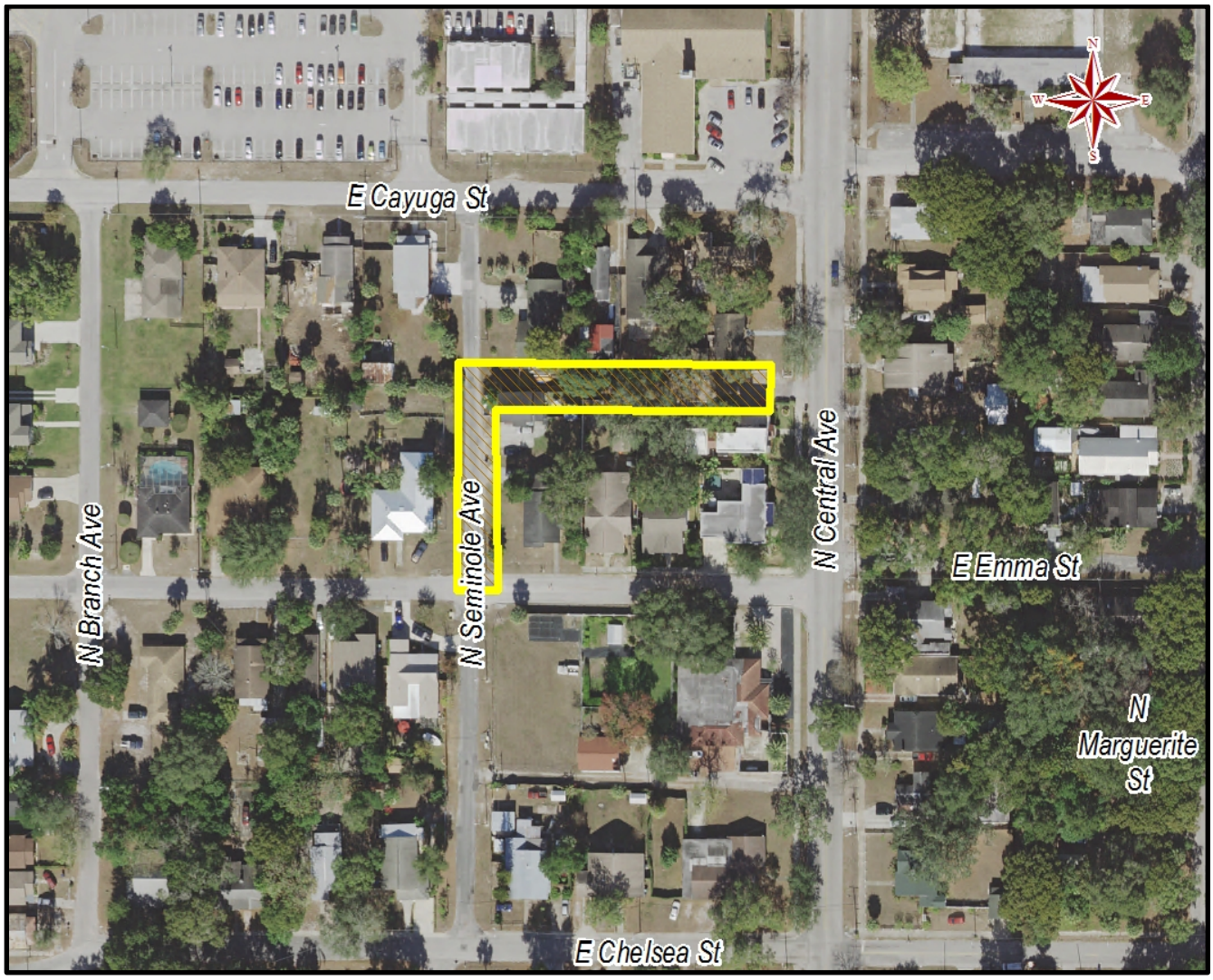
Project Description:

The project consists of construction of new pipes and inlets and regrading of the roadway as needed to alleviate the flooding in the area.

Justification:

The proposed project will reduce the localized flooding.

Project Map



Iowa Avenue from Sheridan to Sherwood

Flooding Relief FY2018, District 4

Estimated cost: $75K

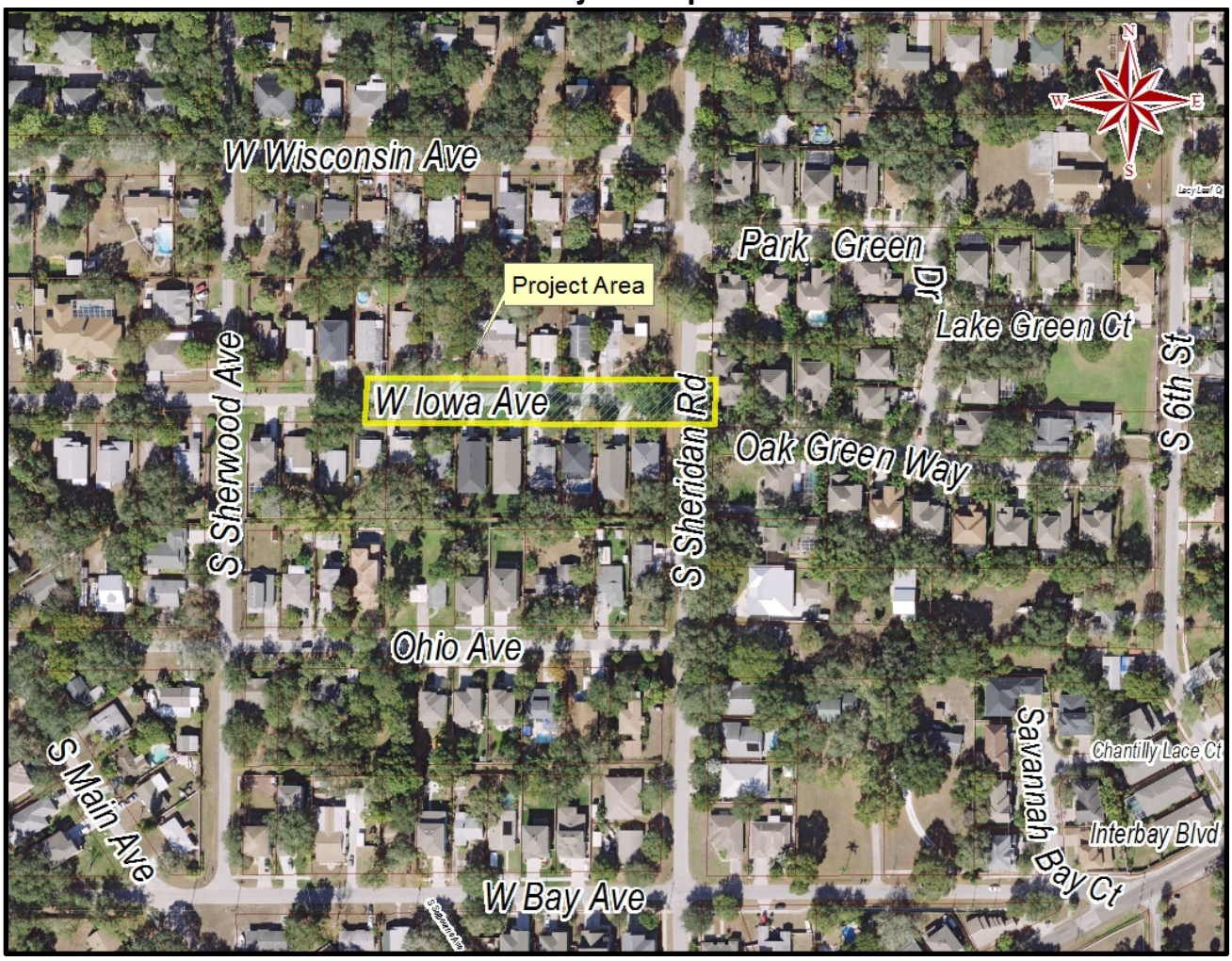
Project Description:

The proposed project will replace/upgrade the system to improve drainage in the area.

Justification:

Development in the vicinity utilizes a system of drainage ditches and pipes to convey runoff. The ditch system has been eroded and some of the pipes and other structures have failed and in need of restoration or replacement.

Project Map



West Jetton Avenue from Armenia To Moody

Flooding Relief FY 2017, District 4

Estimated cost: $125K

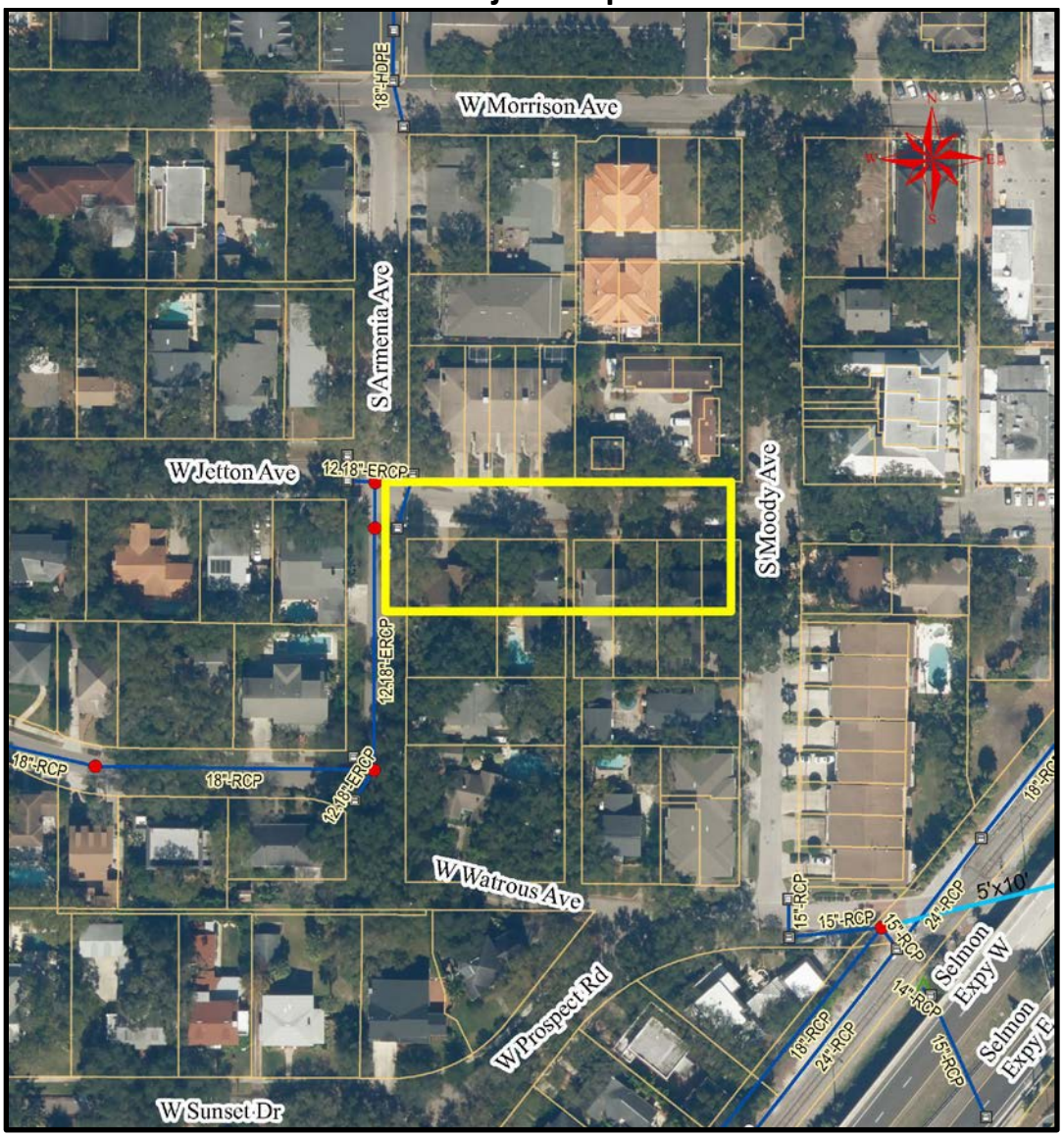
Project Description:

Storm pipe and inlet system will be installed and connected to the existing stormwater system to reduce flooding in the area.

Justification:

Flooding complaint reported from residents on 2400 block Jetton Avenue. The proposed project will alleviate the localized flooding.

Project Map



North Street & Packwood Pond

Flooding Relief FY 2019, District 6

Estimated cost: $100K

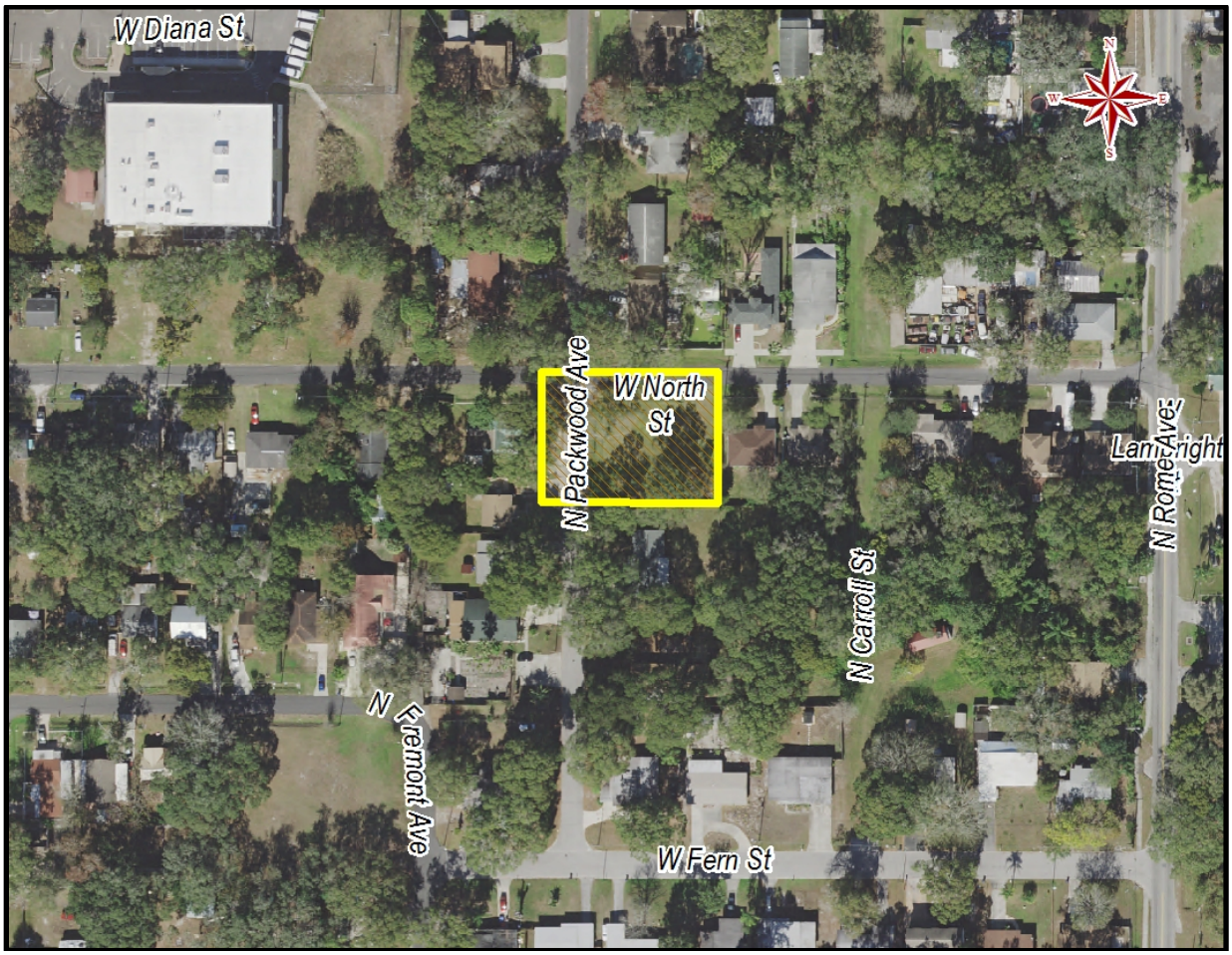
Project Description:

The proposed project consists of construction of a new pond, new pipes and inlets, and regrading of the roadway as needed.

Justification:

Flooding complaints have been reported from the residents in the area. The proposed project will alleviate the localized flooding and provide water quality treatment.

Project Map



Hale Avenue at Cleveland Street Flooding Relief

Flooding Relief FY 2020, District 6

Estimated cost: $100K

Project Description:

The proposed project consists of construction of new pipes and inlets, and regrading of the roadway as needed.

Justification:

South Hale Avenue between West Kennedy Boulevard and West Cleveland Street experiences frequent and dangerous flooding during short, intense rainfalls. The existing stormwater infrastructure on South Hale Avenue is old and undersized. The proposed project will alleviate the current flooding situation and ultimately reduce flood stages.

Project Map and Photo

Sherrill Street north of Cleveland Street

FY 2018, District 6

Estimated cost: $100K

Project Description:

The proposed project consists of construction of new pipes and inlets.

Justification:

Currently there is a small ditch on the east side of Sherrill Street between Kennedy Boulevard and Cleveland Street that drains to the private pond located on 5119 West Cleveland Street. The proposed project will divert the flow to the existing city system rather than to the private pond.

Project Map

North Street & 17th Street Flooding Relief

Flooding Relief FY 2018, District 5

Estimated cost: $75K

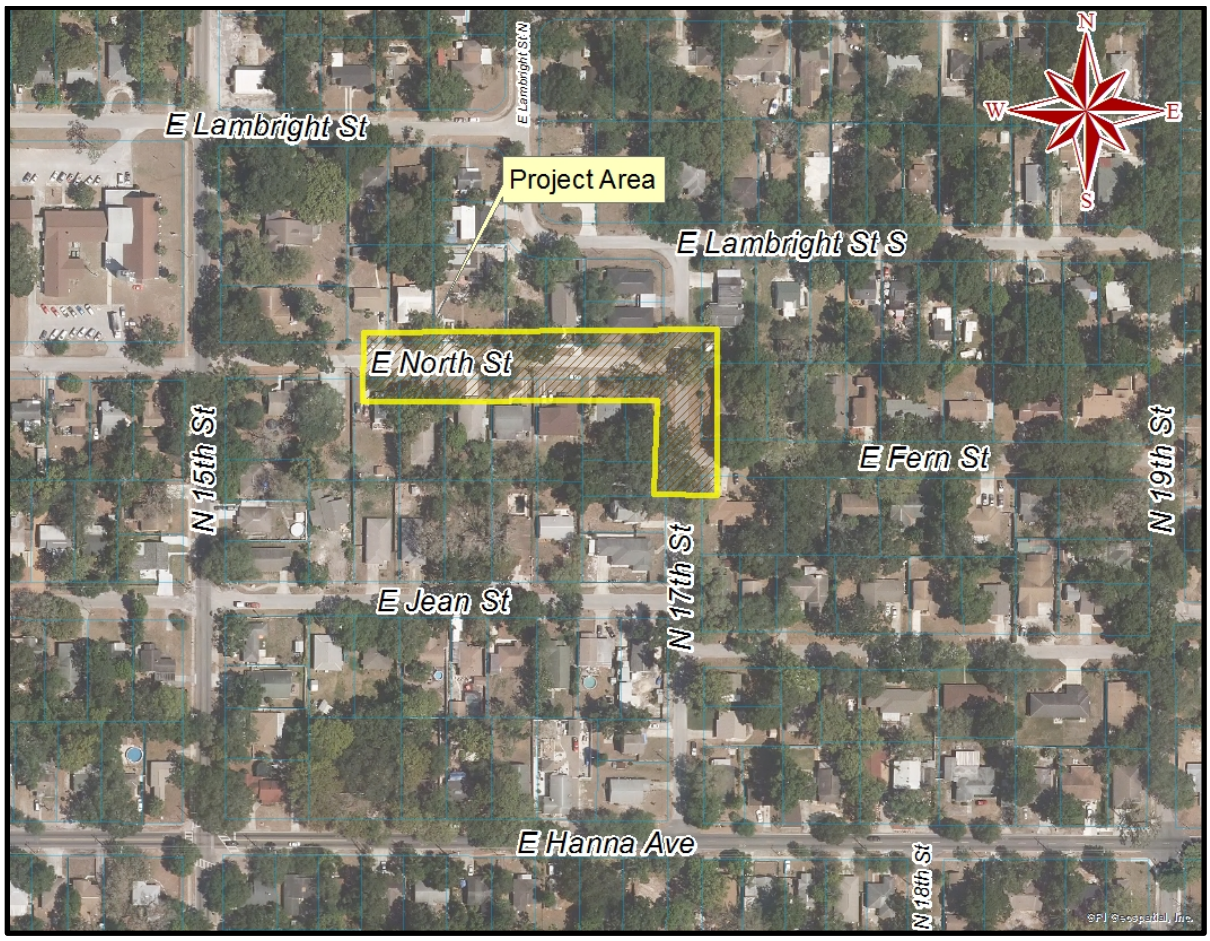
Project Description:

The project consists of construction of new pipes and inlets and regrading of the roadway as needed.

Justification:

Localized flooding occurs in the low area of East North Street due to improper grading/lack of drainage system.

Project Map



Ballast Point Boulevard at MacDill Avenue

Flooding Relief FY 2019, District 4

Estimated cost: $125K

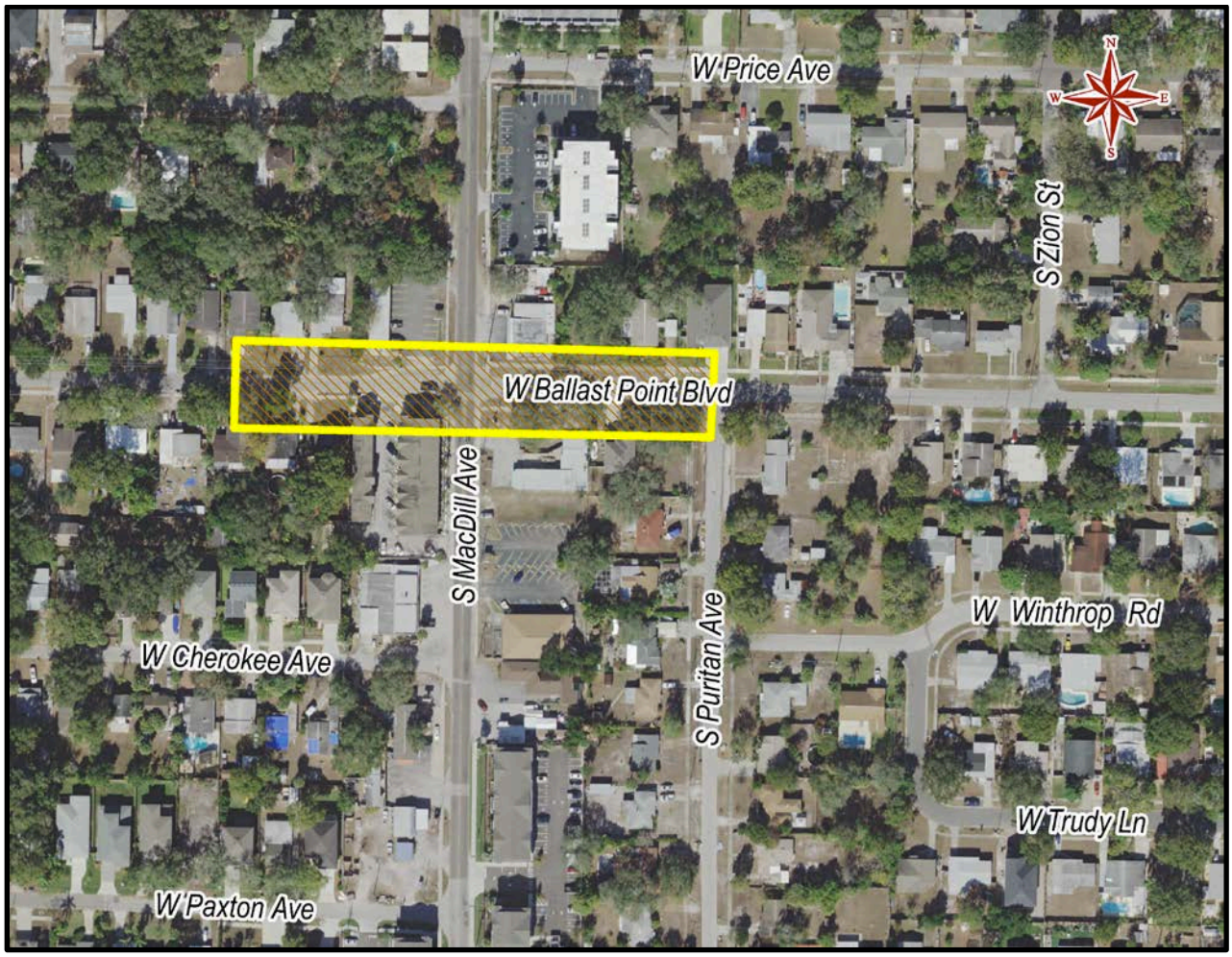
Project Description:

The project consists of construction of new surface water management facilities and roadway re-grading.

Justification:

The intersection experiences frequent flooding from blocked drainage resulting from the cumulative impact of sidewalk additions and street overlayment. The project will improve conveyance to relieve flooding in the intersection.

Project Map



Chelsea Street at 44th Street Flooding Relief

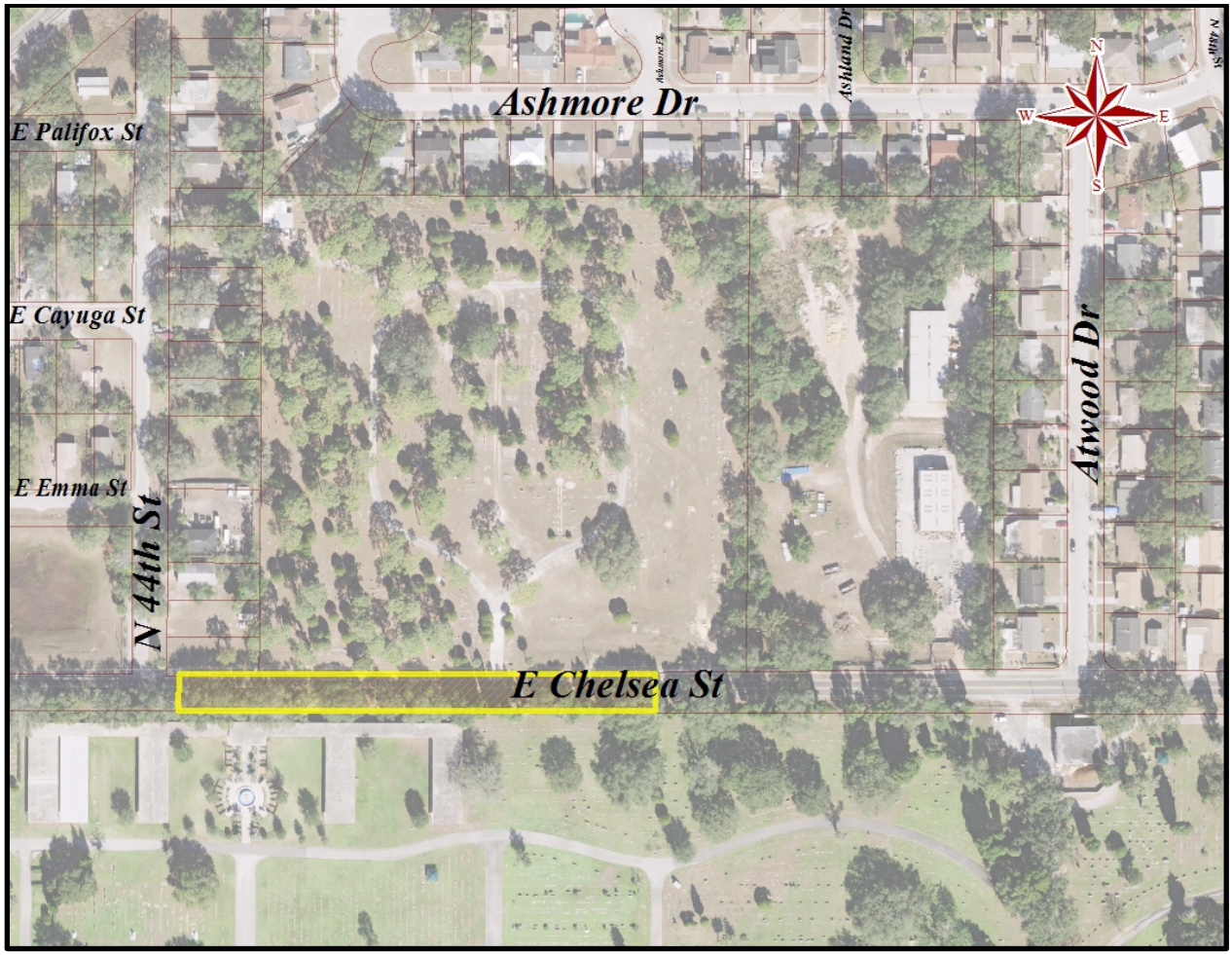
Flooding Relief FY 2020, District 5

Estimated cost: $90K

Project Description:

Low-lying areas on East Chelsea Street between North 44th Street and Atwood Drive experiences frequent flooding. The proposed project consists of construction of new pipes and inlets connecting to the existing drainage system to alleviate the current flooding situation.

Project Map



Fair Oaks and Bayshore Flooding Relief

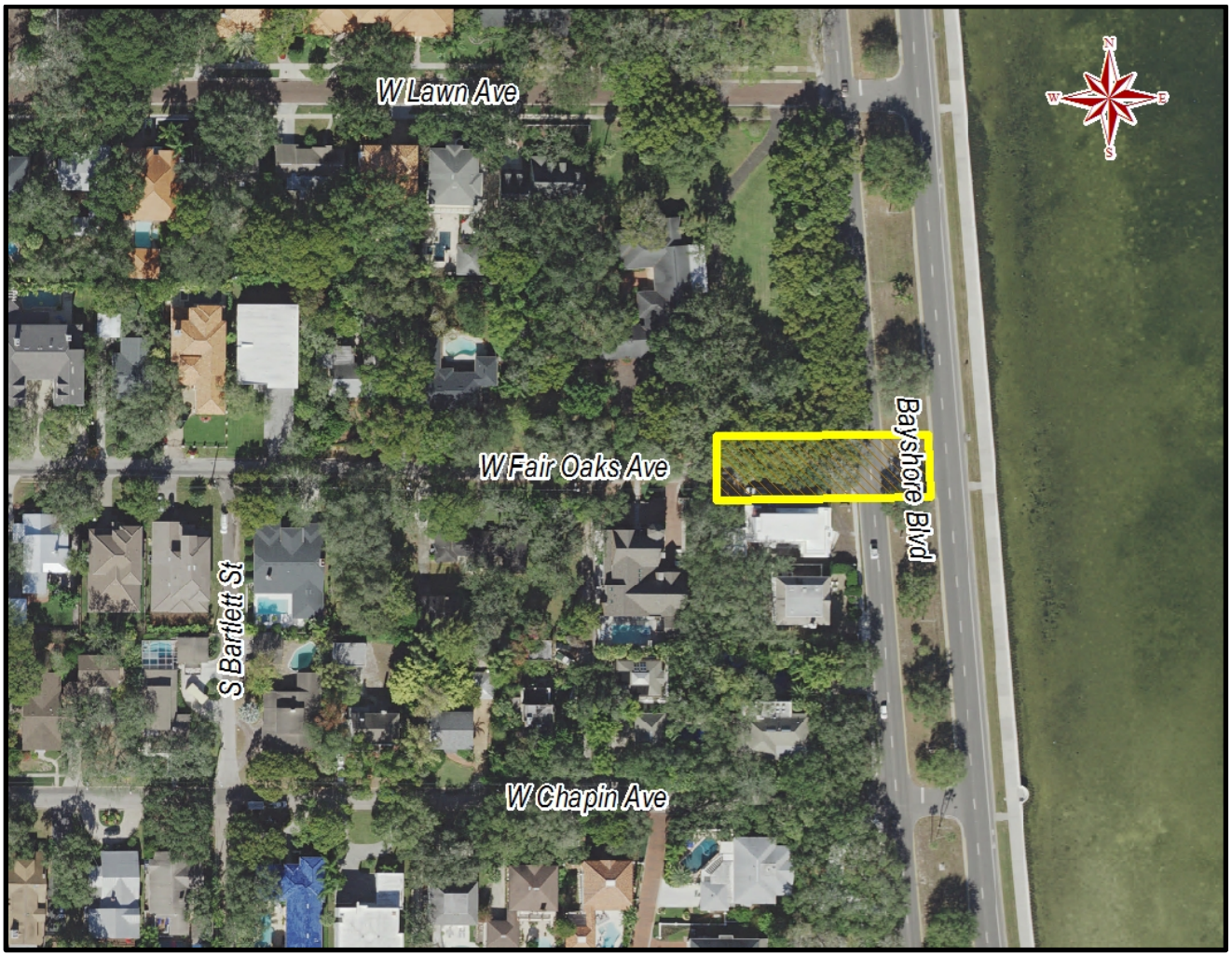
Flooding Relief FY 2019, District 4

Estimated cost: $100K

Project Description:

Localized flooding occurs in the area. The proposed project consists of construction of new pipes and inlets and regrading of the roadway as needed to alleviate the flooding.

Project Map



Everina Street from Carrington to Coachman

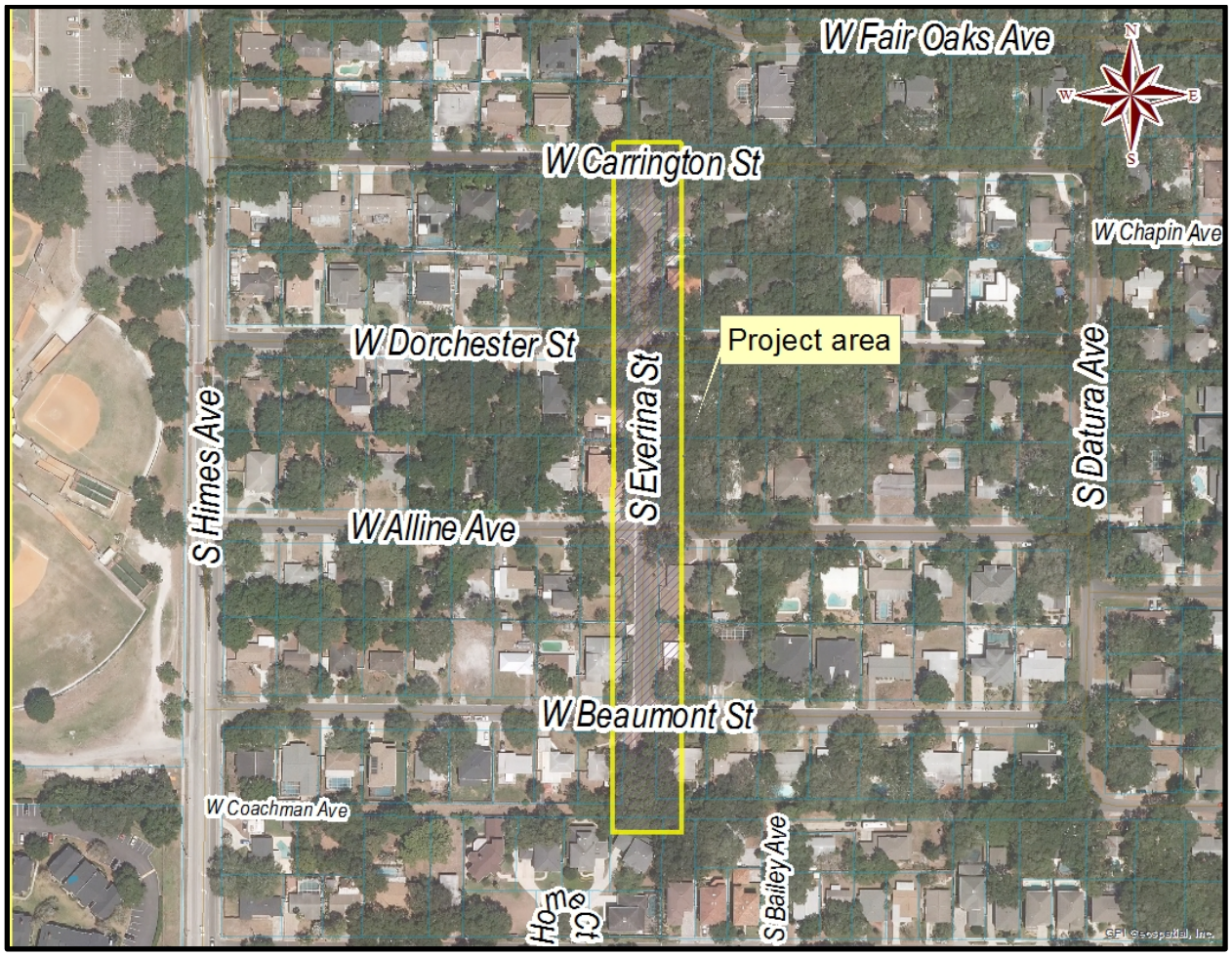
Flooding Relief FY 2020, District 4

Estimated cost: $200K

Project Description:

This section of S Everina Street has experienced localized flooding in the past. The scope of this project is to install new pipes and inlets connecting to the existing system to provide flooding relief for the residential neighborhood.

Project Map



Okara & 26th St. Force Main

Flooding Relief, District 7

Estimated cost: $90K

Project Description:

Currently the pond located at Okara Rd. and 26th St. outfalls via a temporary pump and force mains. The proposed project will replace the force main system. The temporary pump will be replaced with a permanent pumping station later under a separate project.

Project Map

Bougainvillea Pond Outfall

Flooding Relief, District 7

Estimated cost: $75K

PROJECT DESCRIPTION:

The existing pond located at the intersection of 46th St. and Bougainvillea Ave. does not have an outfall. The pond overflows and floods the adjacent properties and streets after heave rainfalls. The proposed project will provide an outfall for the pond to alleviate the flooding. Project includes the installation of control structure for the pond with pipes connecting it to the existing system on Bougianvillea Ave.

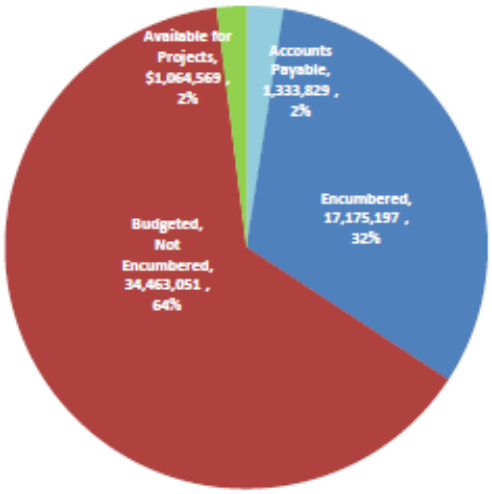
Project Map

Section B
Stormwater Capital Improvement Bond Program Report

City of Tampa
Budget Office
Stormwater Assessment Revenue Bonds, Series 2018
As of August 31, 2019

Available Funding for Projects:

Bond Proceeds	97,782,033.00
Underwriters & Other Fees	(706,444)
Bank Note Refunding	(26,220,000)
Transfer to Capital Project Fund	70,855,589
Amount Expended to Date	(19,677,280)
Accounts Payable	1,333,829
Unused Fees and Interest Earnings	1,064,569
Appropriation of Earned Interest	459,940
Remaining Bond Proceeds	54,036,647
Accounts Payable	1,333,829
Encumbered	17,175,197
Budgeted, Not Encumbered	34,463,051
Available for Projects (1)	**$1,064,569**



Spend-Down Schedule:

6 Months (10/26/2018)	10%	$7,131,553
12 Months (04/26/2019)	45%	$32,091,988
18 Months (10/26/2019)	75%	$53,486,647
24 Months (04/26/2020)	100%	$71,315,529
Percentage Spent - August 2019		**28%**
Bond Issuance Date		4/26/2018
Interest Earning Rate	0.11%	
Bond Yield Rate	1.60%	

Project Details:

Project Name	Project Number	Budget	Actuals	Encumbrance	Balance
43rd Street Outfall Regional Drainage Improv Ph III	1000151	$4,417,342	$115,588	$79,000	$4,222,754
Cypress Street Outfall Pipeline Extension	1000176	0	0	0	0
Upper Peninsula Flooding Relief, Ph. II - Vasconia	1000178	3,877,619	3,833,784	36,758	7,077
Orchid Sink Rehabilitation	1000384	580,935	513,094	0	67,841
Watrous Ditch Rehabilitation	1000386	90,604	60,581	188	29,835
Kensington Avenue	1000573	0	0	0	0
30th Street Outfall	1000580	40,000	28,794	10,963	243
Box Culvert Rehabilitation	1000581	1,013,749	808,800	0	204,949
Howard Avenue Flooding Relief Swann to Jetton	1000749	672,752	322,245	308,926	41,581
Lower Peninsula Watershed Plan	1000750	1,856,890	117,605	42,612	1,696,673

Project Name	Project Number	Budget	Actuals	Encumbrance	Balance
Ditch Rehabilitation	1000751	149,259	107,849	0	41,410
Southeast Seminole Heights Flood Relief	1000773	11,500,000	0	2,347,220	9,152,780
Upper Peninsula Watershed Drainage Improvement	1001017	16,873,600	6,736,911	10,002,491	134,198
Cypress Street Outfall Regional Stormwater	1001018	16,708,108	2,037,715	136,203	14,534,191
99th Avenue Pumping Station	1001164	25,056	0	0	25,056
6901 Sparkman Flooding Relief	1001165	7,708	0	0	7,708
Hamilton Creek Water Quality Improvements	1001169	500,000	30,824	118,661	350,515
Rogers Park Drainage Improvements	1001170	431,442	0	0	431,442
Lamb Canal Rehabilitation	1001171	1,500,000	0	149,715	1,350,285
North Tampa Closed Basins FY2018 - FY2022	1001173	4,231,653	3,106,476	1,067,954	57,223
Failed Pipe CIPP FY2018 - FY2022	1001175	2,459,696	727,309	733,741	998,647
In House Flooding Relief/Failed Pipe Replacement	1001176	165,470	125,214	28,798	11,459
Consultants and Land Acquisition FY2018 - FY2022	1001218	321,206	149,662	64,017	107,527
Annual Contract-Copeland Park	1001370	600,000	0	591,016	8,984
Annual Contract-Anita Sub PH2	1001371	1,300,000	0	1,257,054	42,946
In House Flooding Relief - 15th Street at Ellicott Street	1001405	125,000	0	0	125,000
In House Flooding Relief - 45th Street North of Hillsborough	1001406	240,000	167,201	71,156	1,643
In House Flooding Relief - Annette Ave & Bougainvillea Ave	1001407	150,000	0	0	150,000
In House Flooding Relief - Emma Street and Seminole Ave	1001408	100,000	0	0	100,000
In House Flooding Relief - Fair Oaks and Bayshore	1001409	10,000	0	0	10,000
In House Flooding Relief - North Street & Packwood Pond	1001410	100,000	0	0	100,000
In House Flooding Relief - South Ave: Grady Ave to Cortez Ave	1001411	0	0	0	0
In House Flooding Relief - 17th Street and Annona Avenue	1001412	150,000	0	0	150,000
In House Flooding Relief - Ballast Point Blvd at MacDill Ave	1001413	125,000	0	0	125,000
In House Flooding Relief - Gomez Alley (Kennedy & North A)	1001414	100,000	0	0	100,000
In House Flooding Relief - Rambla Street	1001428	100,000	36,247	1,703	62,050
West Saint Isabel from Gomez to Habana Flooding Relief	1001437	125,000	19,236	104,880	884
Virginia Ave Pumping Station Drainage Improvements	1001597	207,500	0	22,143	185,358
Project 000000 [2]	0000000	459,940	632,146	0	-172,206
Grand Total[2]		**$71,315,529**	**$19,677,280**	**$17,175,197**	**$34,463,051**

[1] Available balance from unused issuance cost budget and interest earnings.

[2] Includes $459,940 of anticipated interest earnings. Additional anticipated revenue will cover any internal project management fees.

Section C
Stormwater Service Assessment Program Report

Tampa City Council Update No. 12 - October 2019

Maintenance activities are reported based on service level frequency. Below is a list of the primary maintenance categories that are being tracked. Along with service level cycle times, we have also provided maintenance statistics for the quarter.

Operations and Maintenance Activities	Pre Fee Service Levels	Fee Target Service Levels	4th Quarter FY19 & Year-to-Date Service Levels
Ditches	10-Year Cycle	7-Year Cycle	12.2-Year Cycle (4th Qtr.) 5.8-Year Cycle (Y.T.D)
Ponds	Minimal	3-Year Cycle	3-Year Cycle (4th Qtr.) 3-Year Cycle (Y.T.D)
Pipes	10-Year Cycle	7-Year Cycle	6.6-Year Cycle (4th Qtr.) 5.1-Year Cycle (Y.T.D)
Outfalls	15-Year Cycle	5-Year Cycle	4.2-Year Cycle (4th Qtr.) 3.4-Year Cycle (Y.T.D)
Pumps	Low Preventative Maintenance	Annual Preventative Maintenance	1-Year Cycle
Street Sweeping	90-Day Cycle	60-Day Cycle	52-Day Cycle (4th Qtr.) 53-Day Cycle (Y.T.D)

Operations and Maintenance Activities	4th Quarter Maintenance Statistics
Ditches	20,301 linear feet of ditches maintained with 3,314 tons removed, 20 fallen trees removed, 441,765 linear feet of ditch mowed monthly. Installed 275 linear feet of ditch bank was stabilized. Summer rains significantly impacted ditch grading operations.
Ponds	7.3 tons of trash and illegal dumping have been disposed of, there have been 114 herbicide treatments to various ponds, 1 pond harvesting activity was conducted removing 1,652 tons of vegetation removed, 125 stormwater ponds mowed monthly.
Pipes	76,091 linear feet of storm drain pipe inspected and maintained, 1,360 storm drain inlets and manholes inspected and maintained with 393 tons of debris removed. 35 sediment traps cleaned removing 27 tons of debris. 47 cave-ins and 20 inlet tops repaired.
Outfalls	30 outfalls inspected with no maintenance needed. During the summer months, outfall maintenance drops significantly due to the higher-than-normal tides. Maintenance will increase in the fall.
Pumps	Preventative Maintenance provided to all thirteen (13) stormwater pump stations. Continuous monitoring is ongoing with proactive maintenance and inspections.
Street Sweeping	4,660 curb miles were swept, approximately 1,285 tons of debris removed.

Woodmere Ditch at Beach Park Dr.

Before

After

Woodmere Ditch at Beach Park Dr. (cont.)

Before

After