



Village of Palmetto Bay

February 18, 2021

Oscar Camejo,
Transportation Planner 3
Miami-Dade TPO
150 West Flagler Street, Suite 1900
Miami, FL 33130

RE: 2021 Transportation Alternative Cycle
Palmetto Bay's Sub-Basin 11 Improvements

Dear Mr. Camejo:

On behalf of the Village of Palmetto Bay, I am pleased to submit the enclosed grant application to the Florida Department of Transportation's 2021 Transportation Alternative Cycle Program to implement sub-basin improvements to help us significantly limit and/or eliminate flooding in the affected area.

Should this project site be selected for funding, the Village will adhere to all commitments made in the grant application. We thank you for the opportunity to be considered for this future project.

If additional information is needed, please do not hesitate to contact me at dhall@palmettobay-fl.gov or at (305) 259-1277.

Regards,

Djeneba 'Jenny' Polynice-Hall
Grant Administrator

*9705 East Hibiscus Street
Palmetto Bay, FL 33157
(305) 259-1234
Fax: (305) 259-1290*



FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT VI
TRANSPORTATION ALTERNATIVES
APPLICATION FOR FISCAL YEAR 2026/2027
2021 Application Cycle

A. APPLICANT INFORMATION

AGENCY (Local Agency PROJECT SPONSOR): Village of Palmetto Bay	
APPLICATION CONTACT PERSON: Djenepha 'Jenny' Polynice-Hall	TITLE: Grant Writer
ADDRESS: 9705 East Hibiscus St.	CITY / STATE / ZIP: Palmetto Bay, FL 33156
PHONE: (305) 259-1277	EMAIL: dhall@palmettobay-fl.gov

PROJECT SPONSOR'S LOCAL AGENCY PROGRAM (LAP) CERTIFICATION STATUS ¹ Select one response

Full Certification: *Click here to enter text.* Responsible Charge: *Click here to enter text.*
Phone: *Click here to enter text.*

Project Specific Certification: June 2, 2020 Responsible Charge: Dionisio Torres
Phone: (305) 969-5011

Not Certified, Local Agency has attached a Certification Schedule *

Not Certified, Local Agency does not have a Certification Schedule*

B. PROJECT INFORMATION

PROJECT TITLE: Palmetto Bay Sub-Basin 11 Improvements
PROJECT LOCATION: Drainage sub-basin 11 is generally located south of SW 152nd Street, north of SW 156th Street, west of SW 89th Avenue, and east of Dixie Highway (US1).
ROADWAY NAME AND/OR NUMBER: SW 152nd Street & Dixie Highway (US 1)
PURPOSE OF PROJECT: This project will help eliminate flooding to these specified roadways and the connected side streets that lead to and from local homes. It will also help to manage storm water discharge and percolate into the underground water table.
PROJECT BRIEF DESCRIPTION: This project will take place in the biscayne Bay watershed, specifically in the Village of Palmetto Bay Sub-Basin 11, which is a 48.37 acre area of single-family homes and commercial development. We will construct a drainage improvmeent project which includes cleaning and flushing all sediment and debris from existing catch basins and pipes and adjust catch basin elevations and locations to minimize accumulation of sediment and debris. Install additional drainage infrastructure including exfiltration trench, modification of existing catch basins to provide sediment traps and pollution retardant baffles and installation of additional catch basins and manholes to interconnect the catch basins. The improvmeents will achieve load reductions of 26.64 KG/YR of phosphorous and 202.73 KG/YR of Nitrogec.

Note: All questions on the application **must** have a response. Failure to respond **to all** questions will result in a **disqualification** of the application. Should you feel that a question is not applicable to your project, please respond "not applicable."

¹ All Agencies shall be certified according to the Local Agency Program Manual Chapter 2, for more details contact the Local Programs office at (305) 470-5141 https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/programmanagement/lap/manual/final-ch2-20190319.pdf?sfvrsn=a03958a9_2

FOR FDOT USE ONLY		
Application Complete	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Project Eligible	<input type="checkbox"/> YES	<input type="checkbox"/> NO

C. TA QUALIFYING ACTIVITIES - PROJECT CRITERIA

Select the Transportation Alternative activity that the proposed project will address. Please select one activity that represents most of the work proposed. Eligible activities must be consistent with details described under 23 U.S.C. 101(a) (29) and 213(b). (Note: selecting more than one activity does not ensure or increase eligibility.)

1. Construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety - related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990
2. Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes or for non-drivers, including children, older adults, and individuals with disabilities to access daily needs
3. Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized Transportation users
4. Construction of turnouts, overlooks, and viewing areas
5. Community improvement activities, which include but are not limited to:
 - a) Inventory, control, or removal of outdoor advertising
 - b) Historic preservation and rehabilitation of historic transportation facilities
 - c) Vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control
 - d) Archaeological activities relating to impacts from implementation of a transportation project eligible under Title 23
6. Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
 - a) Address storm water management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 133(b) (11), 328(a), and 329 of Title 23; or
 - b) Reduce vehicle-caused wildlife mortality or restore and maintain connectivity among terrestrial or aquatic habitats
7. SRTS program-eligible projects and activities listed in section 1404(f) of the SAFETEA-LU:
 - a) Infrastructure-related projects
 - b) Non-infrastructure-related projects
 - c) Safe Routes to School Coordinator
8. Planning, designing, and constructing boulevards² and other roadways largely in the Right-of-Way of former Interstate System routes or other divided highways
9. Recreational trails program³

² A boulevard is defined as a walkable, low speed (35 mph or less) divided arterial thoroughfare in urban environments designed to carry both through and local traffic, pedestrians and bicyclists. Boulevards may be long corridors, typically four lanes but sometimes wider, serve longer trips, provide pedestrian access to land, may be high ridership transit corridors, are primary emergency response routes and use vehicular and pedestrian access management techniques. Curb parking is encouraged.

³ https://www.fhwa.dot.gov/environment/transportation_alternatives/guidance/guidance_2016.cfm#RecreationalTrails

D. PROJECT DETAILS

1. Roadway Classification:

State Roadway
 Federal Aid Roadway
 Local Roadway
 Other

2. Project Termini:

Begin: SW 92nd Avenue **End:** SW 89th Court **Project Length:** 6,470 LF

If the project has various locations, include an attachment specifying each termini and project length.

Attachment included? Yes No

3. Location maps and aerials are attached: REQUIRED

Yes No

4. Provide the Scope of Work: Clean and flush all sediment and debris from existing catch basins and pipes and adjust catch basin elevations and locations to minimize accumulation of sediment and debris. Based on the Sea Level Rise analysis, Sub-basin 11 requires additional exfiltration trench, associated stormwater infrastructure, and requires the installation of a new outfall pipe and headwall connection to the adjacent South Florida Water Management District (SFWMD) C-100 Canal.

A detailed scope of work is attached Yes No

Conceptual plans are attached Yes No

Typical section drawings are attached Yes No

5. Identify the project stakeholders: Existing residents and commercial businesses around the project area.

Has the Local Agency received input from stakeholders? Yes No

Briefly explain This project has been discussed since 2004 with the development of the Stormwater Master Plan which is now undergoing it's 4th update.

6. Has the Local Agency performed public awareness activities or held community meetings? Yes No

If yes, provide a brief description and attach supporting documentation: This project has been discussed and evaluated publicly with the approval of selected vendor to perform the study and tests needed to build the Stormwater Master Plan.

7. Is there public and/or private support for the project? Yes No

If yes, provide a brief description and attach supporting documentation (e.g. petitions, written endorsements, resolutions, letters of support, etc.): Resolutions starting with the most recent to show the history of this and other drainage work in the Village: 2020-39, 2015-49, 2012-83, 06-41, and 04-102. The upgrading of our stormwater system has been a commitment of the Village since 2004 with the approval of the first Stormwater Master Plan.

E. PROJECT IMPLEMENTATION PLAN

1. Select the project phase(s) the local agency is applying for in this application:

- | | |
|--|---|
| <input type="checkbox"/> Planning Activities | <input type="checkbox"/> Project Development & Environment ⁴ |
| <input checked="" type="checkbox"/> Preliminary Engineering/Final Design | <input type="checkbox"/> Right of Way ⁵ |
| <input checked="" type="checkbox"/> Construction | <input checked="" type="checkbox"/> Construction Engineering & Inspection (CEI) |

NOTE: Local agencies are not eligible to be certified in PD&E and/or ROW; therefore, funds cannot be requested to self-administer PD&E and/or ROW phase (s).

⁴ Refer to LAP Manual Chapter 11

⁵ Refer to LAP Manual Chapter 12

2. Select who will execute the project phase (s) identified in the question above. Check all applicable boxes:

<u>PLANNING</u>	<u>PD&E</u>	<u>DESIGN</u>	<u>ROW</u>	<u>CONSTRUCTION</u>	<u>CEI</u>
<input checked="" type="checkbox"/> Local Agency Staff	<input type="checkbox"/> FDOT	<input type="checkbox"/> Local Agency Staff	<input type="checkbox"/> FDOT	<input checked="" type="checkbox"/> Contractor	<input type="checkbox"/> Local Agency Staff ⁶
<input type="checkbox"/> Consultant	<input checked="" type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Consultant	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> FDOT	<input checked="" type="checkbox"/> Consultant
<input type="checkbox"/> Not Applicable		<input type="checkbox"/> FDOT		<input type="checkbox"/> Not Applicable	<input type="checkbox"/> FDOT
		<input type="checkbox"/> Not Applicable			<input type="checkbox"/> Not Applicable

Note: Chapter 337.14 Florida Statutes was amended by HB 905, effective July 1, 2019 prohibiting an entity from performing both design services and construction engineering and inspection services for a project wholly or partially funded by the Department of Transportation and administered by a local governmental entity.

3. Is this project related to other FDOT funded phase(s) that are complete, underway or in FDOT's 5-year Work Program? Yes No

If yes, provide the associated 11-digit Financial Management number(s): *Click here to enter text.*

4. Are signed and sealed design plans available for the project associated with this application? Yes No

- a. If yes, are design plans updated to current standards and existing conditions? Yes No
 - 1. Specify the date of design plans developed? *Click here to enter text.*
 - 2. Enter Engineer of Record contact information: *Click here to enter text.*
- b. If no, identify status of design plans
 - No plans
 - 30%
 - 60%
 - 90%
 - Other Describe: *Click here to enter text.*

5. Attach a project schedule (dates may be tentative) General Tentative Project Schedule is attached

- Include (as applicable):
- Consultant acquisition & award Yes No
 - Contractor acquisition & award Yes No
 - Project schedule and production dates Yes No
 - Plans preparation & review submittal (FDOT 30 days review) Yes No
 - Environmental Assessments Yes No
 - Permit Acquisition Yes No

6. Identify permits required: We will seek a general permit from the Miami-Dade Department of Regulatory and Economic Resources and if necessary an ERP from South Florida Management District.

Copies of permits are attached to this application Yes No

7. Is a maintenance plan proposed? Yes No

Describe: The Village has a current maintenance plan in practice for our drainage system within Palmetto Bay.

8. Attach documents requested as exhibits to this application. List exhibits: Exhibit A_Aerial of sub-basin location, Exhibit B_Detailed Project Scope, Exhibit C_General Tentative Project Schedule, Exhibit D_Letter Committing Local Funds

⁶ Work done by local agency staff requires prior FDOT approval in any phase identified

F. RIGHT OF WAY

1. Is the project within the Local Agency's right of way? Yes No

If yes, describe the project's existing Right-of-Way ownership as it relates to the project. (i.e. plats, deeds, prescriptions, certified surveys, easements). The village has ownership and responsibility to maintain project site.
If no, describe the existing ROW conditions. *Click here to enter text.*

2. Is Right-of-Way acquisition proposed in this application? Yes No

If yes, describe the proposed acquisition and provide a ROW map *Click here to enter text.*
Identify entity acquiring and retaining ownership of proposed Right-of-Way⁷: *Click here to enter text.*
Will temporary construction easements be required? Yes No
If yes, please describe: *Click here to enter text.*

G. ENVIRONMENTAL EVALUATION

Coordination with the Federal Highway Administration and the State Historic Preservation Officer will be required by Section 106 of the National Historic Preservation Act.

A. Has the Local Agency performed an environmental assessment for the project? Yes No

List the environmental assessments performed: *Click here to enter text.*

B. Does the Local Agency have a historic preservation planner? Yes No

If yes, provide contact information: *Click here to enter text.*

C. Is the proposed project located adjacent to a locally designated historic property or a National Register of Historic places-listed historic site? Yes No

If yes, have any historic properties/places received Florida Department of State Historic Preservation Grant funds?
 Yes No
If yes, attach preservation agreements, covenants, or easements.

D. Are archeological sites or Native American sensitive sites located within proximity to or adjacent to the project? Yes No

If yes, provide a brief description: *Click here to enter text.*

E. Has the Local Agency coordinated with any Federal or State Agencies for this project? Yes No

If yes, provide a brief description and submit supporting documentation: *Click here to enter text.*

F. Are parks, recreation areas or wildlife or waterfowl refuges in close proximity to the project? Yes No

If yes, provide a brief description: *Click here to enter text.*

G. Are there any navigable waterways adjacent or near the project? Yes No

If yes, provide a brief description: *Click here to enter text.*

H. Does the project have any wetland impacts? Yes No

If yes, will wetlands mitigation be needed? Yes No

⁷ All right-of-way acquisitions must comply with State and Federal rules, regulations and procedures.

If yes, provide a brief description: *Click here to enter text.*

I. Has the Local Agency reviewed the project for potential protected species/ critical habitat impacts? Yes No

If yes, provide a brief description: *Click here to enter text.*

J. Has the Local Agency reviewed the project for potential contamination that could affect the area? Yes No

If yes, provide a brief description: *Click here to enter text.*

K. Are there noise sensitive areas? Yes No

If yes, provide a brief description: *Click here to enter text.*

H. COST ESTIMATE

1. For projects that have not been designed, an opinion of probable cost **must be** submitted with this application. Utilize the FDOT's Basis of Estimates Manual⁸ to develop a **detailed** estimate with FDOT pay items for construction phase estimates. **If the project has been designed, then, a detailed engineer cost estimate must be submitted with this application.**

The opinion of probable cost or engineers cost estimate is attached to this application Yes No

2. Provide a summary of the estimated costs for the proposed work in the table below

A project cost estimate **must** be attached to this application

Activities	Total Cost	Local Funds	TA Funds
Planning Activities	<i>\$Click here to enter text.</i>	\$0	\$0
Project Development & Environmental Study	<i>\$Click here to enter text.</i>	\$0	\$0
Design Costs/ Plans Preparation	<i>\$Click here to enter text.</i>	50,000	\$0
Environmental Assessment(s) associated with the design phase	<i>\$ Click here to enter text.</i>	\$ 6,000	\$0
Permits associated with the design phase (including application fees, mitigation, and permit acquisition work)	<i>\$Click here to enter text.</i>	\$5,000	\$0
Right of Way	<i>\$Click here to enter text.</i>	\$0	\$0
Construction	<i>\$Click here to enter text.</i>	\$450,000	\$1,000,000
Construction Engineering and Inspection activities (CEI)	<i>\$Click here to enter text.</i>	\$20,000	<i>\$Click here to enter text.</i>

⁸ Use the following links to access the Basis of Estimates Manual as well as historical cost information for your area:

<http://www.fdot.gov/programmanagement/Estimates/BasisofEstimates/BOEManual/BOEOnline.shtm>

<http://www.fdot.gov/programmanagement/Estimates/HistoricalCostInformation/HistoricalCost.shtm>

Other Costs (describe) ⁹ <i>Click here to enter text.</i>	<i>Click here to enter text.</i>	<i>Click here to enter text.</i>	<i>Click here to enter text.</i>
Total Estimated Project Cost	\$1,531,000	\$531,000	\$1,000,000

I. PROJECT FUNDING

TA FUNDS	\$ 1,000,000	PERCENTAGE OF TA FUNDS	65%
LOCAL FUNDS ALLOCATED	\$ 531,000	PERCENTAGE OF LOCAL CONTRIBUTION	35 %
TOTAL PROJECT COST	\$ 1,531,000		

Note: The percentage of local contribution indicated above will be greater than or equal to the local contribution to the final contract award.

Example A: A 20% local contribution is indicated for a construction project. The local agency was awarded \$1,000,000. The bid amount is \$1,000,000. The awarded amount would be reduced to \$800,000. The local agency would contribute \$200,000.

Example B: A 20% local contribution is indicated for a construction project. The local agency was awarded \$1,000,000. The bid amount is \$1,400,000. The awarded amount would remain \$1,000,000. The local agency would contribute \$400,000.

- Describe in detail how the project will be funded (include funding types and commitment of funds):** To meet the project costs, we will use funds from the Stormwater Utility fund and from the capital projects fund.
- Provide the funding year for each phase(s) of the project:**
Design & Permitting - FY 2026-2027 / Construction & CEI FY 2027-2028
- Provide a letter from the Local Agency's Budget Office committing Local Funds to the project.**
A copy of the letter is included with this application. Yes No

J. Project Sponsorship Certification

I hereby certify that the proposed project herein described is supported by the Village of Palmetto Bay (Local Agency, county, state or federal agency, or tribal council) and that said entity will: (1) provide any required funding match; (2) enter into a maintenance agreement with the Florida Department of Transportation (FDOT); (3) comply with the Federal Uniform Relocation Assistance and Acquisition Policies Act for any Right of Way actions required for the project, (4) Comply with Local Agency Program Manual during all phases of the project, (5) comply with the NEPA process prior to construction, which may involve coordination with the State Historic and Preservation Office (SHPO) prior to construction, and (6) support other actions necessary to fully implement the proposed project.

I further certify that the estimated costs are reasonable and understand that the Village of Palmetto Bay (Local Agency, county, state or federal agency, or tribal council) will bear all expenses in excess of the total cost of the project. Upon notification of project award, I further certify that the aforementioned entity will work with the FDOT to ensure the associated contracts are executed in the fiscal year programmed. Project deferrals are highly discouraged and are subject to fund availability.

⁹ FDOT does not allow programming for contingency costs. Any contingency costs should be accounted for using local funds.

Name (please type or print): Nick Marano

Title: Village Manager

Signature:

A handwritten signature in blue ink, appearing to read "Nick Marano", written over a horizontal line.

Date: 02/18/2021

If you have any questions about this application or need assistance, please contact:

Oscar Camejo

Miami-Dade Transportation Planning Organization

Phone: (305) 375-1837

Email: Oscar.Camejo@miamidade.gov

Janene Sclafani

Monroe County

Phone: (305) 289-2545

Email: Sclafani-Janene@MonroeCounty-FL.Gov

Xiomara Nunez

Florida Department of Transportation District Six

Phone: (305) 470-5404

xiomara.nunez@dot.state.fl.us

RESOURCES

FDOT Local Agency Program Manual

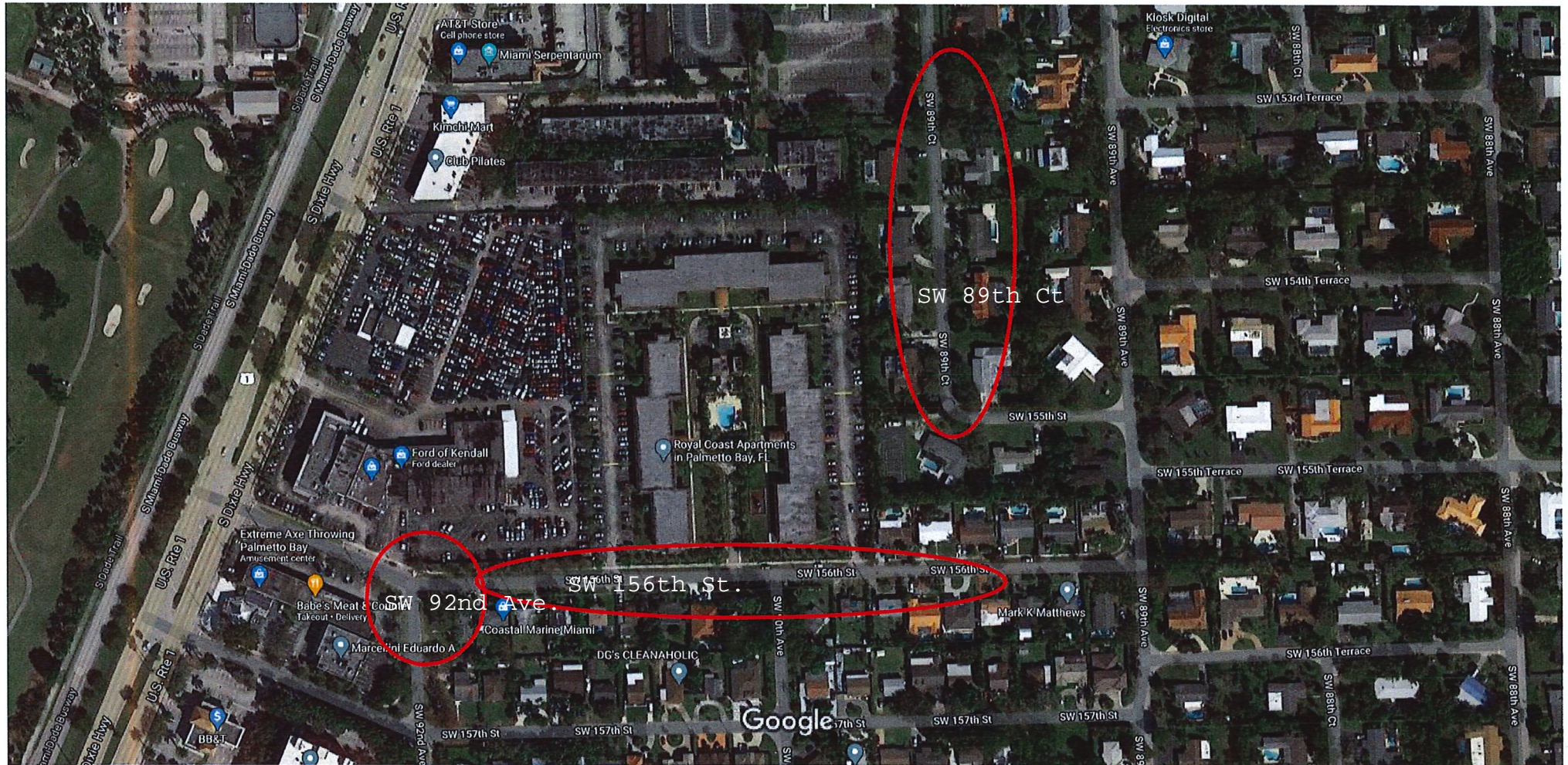
<https://www.fdot.gov/programmanagement/LAP/LAP-TOC.shtm>

FDOT PD&E Manual

<https://www.fdot.gov/environment/pubs/pdeman/pdeman1.shtm>

Basis of Estimates Manual

<http://www.fdot.gov/programmanagement/Estimates/BasisofEstimates/BOEManual/BOEOnline.shtm>



Drainage Sub-basin #11

Location: Drainage sub-basin 11 is generally located south of SW 152nd Street, north of SW 156nd Street, west of SW 89th Avenue, and east of Dixie Highway (US 1). Drainage sub-basin 11 is part of the C100C-N-11 Miami-Dade County basin along SW 152nd Street. Drainage sub-basin 11 was hydraulically analyzed as part of the 2014 Stormwater Master Plan but has been updated to include impacts associated with Sea Level Rise (SLR). This 2020 report includes an updated improvement approach and budget for the proposed stormwater system modifications.

Existing and Future Conditions: Figure 8 shows existing conditions for drainage sub-basin 11. The sub-basin consists of approximately 48.37 acres of existing residential and commercial development with approximately 6,470 linear feet of roadway, including SW 92nd Avenue, SW 89th Court, SW 89th Avenue, SW 157th Street, SW 156th Street, and SW 155th Street. It was assumed that much of the stormwater generated on the large commercial properties located in this sub-basin is captured onsite and does not contribute to the public right-of-way stormwater system. The existing drainage system in this sub-basin is a closed system with catch basins connected to exfiltration trench located in the vegetated swales along the sides of the roadways.



No complaints were reported in this area by the Village as part of this update or from Miami-Dade County as part of the prior master plan. In our investigation, Kimley-Horn found flooding extending across the entire roadway width on SW 156th Street, SW 92nd Avenue, SW 89th Court, and SW 155th Street. The location of these deficiencies can be seen in Figure 8. The entire sub-basin area was modeled based on data collected as part of the Stormwater Master Plan process and as discussed above includes impacts associated with estimated sea level rise.

Based on available GIS data, the existing crown of road elevations ranges from a low of approximately 9.00 feet to a high of approximately 9.90 feet NGVD. It was assumed that the building finish elevations range from 9.67 feet (eight inches above the lowest crown of road) to 10.67 feet (eight inches above highest crown of road). The lowest edge of road is 8.75 feet. Pervious area elevations were assumed to range from 8.85 feet (one inch above the lowest edge of road) to 10.00 feet (highest edge of road).



Performance Goal Analysis: Based on the available information described above, calculations were made for drainage sub-basin 11 to compare the existing conditions with the previously stated performance goals and the revised parameters associated with sea level rise. The detailed calculations can be found in Appendix A. Based on the revised hydrologic and hydraulic calculations for drainage sub-basin 11, the sub-basin is subject to flooding during all design storm events. The table below shows the performance of the sub-basin versus performance goals.

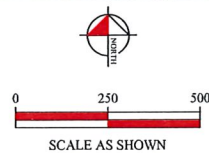
Table 1: Drainage Sub-basin 11 – Performance Goal Analysis for Existing Conditions

Design Storm Event	Flood Stage Elevation Above Performance Goal Criteria
5-year, 24-hour	0.76 feet above lowest crown of road for collector and local roadways
100-year, 72-hour	0.94 feet above lowest finish floor elevation (FFE.)
Total Above Goal	1.70 feet above performance goal criteria

The flood stages shown for drainage sub-basin 11 exceed allowable levels and the sub-basin does not meet the performance goal criteria.



**FIGURE 8:
DRAINAGE SUB-BASIN #11
PROPOSED CONDITIONS**



PROPOSED MODIFICATIONS

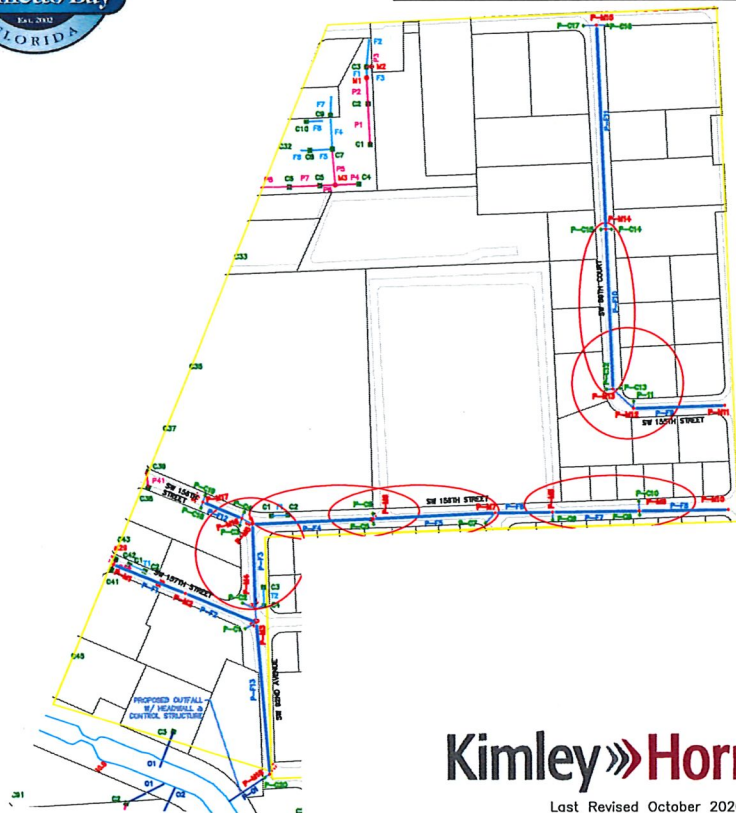
- Add 3,100 LF 18" French Drain / Exfiltration Trench
- Add 450 LF of 18" Storm Sewer Pipe (HDPE)
- Add 550 LF of 15" Storm Sewer Pipe (HDPE)
- Add 20 Catch Basins
- Add 18 Manholes
- Add 1 Control Structure
- Add 1 Headwall

PERFORMANCE GOAL CRITERIA

- Min. Roadway EOP Elevation 8.75
- Min. Roadway Centerline Elevation 9.00
- Min. Building FFE 9.67

LEGEND

Catch Basin (C1)	
French Drain (F1)	
Trench (T1)	
Pipe (P1)	
Outfall (O1)	
Sub-Basin Boundary	
Manhole (M1)	
Elevation	
Proposed Catch Basin (P-C1)	
Proposed French Drain (P-F1)	
Proposed Manhole (P-M1)	
Proposed Pipe	
Pipe	
Flooding across roadway observed by KHA	



Kimley»Horn

Last Revised October 2020

Storm Drainage Deficiencies: The catch basins inspected in this sub-basin were observed to be clean, with only limited debris and sediment. As a result, drainage deficiency issues are likely to be a function of limited system capacity and infrastructure age and or condition. Hydrologic and hydraulic calculations for this sub-basin confirmed the existing drainage infrastructure does not discharge adequate runoff to meet the desired performance criteria. The capacity of the existing swales and French drains is not sufficient to discharge the volume of runoff outlined in the performance criteria during the modeled storm events. Pavement condition within the sub-basin area is generally average and in need of resurfacing or rehabilitation. Improvements to drainage infrastructure will be needed to address these inadequacies. The corner of SW 92nd Avenue and SW 158th Street appears to provide an opportunity to install an outfall connection.



Recommended Drainage Improvements: Clean and flush all sediment and debris from existing catch basins and pipes and adjust catch basin elevations and locations to minimize accumulation of sediment and debris. Install the additional infrastructure depicted in Figure 8. Existing catch basins should be modified or reconstructed as required to provide sediment traps (sumps) and pollution retardant baffles to protect the exfiltration trench. Constructing additional catch basins, manholes, culverts, and exfiltration trench is recommended to interconnect the catch basins. Based on the SLR analysis, Sub-basin 11 requires additional exfiltration trench, associated stormwater infrastructure, and requires the installation of a new outfall pipe and headwall connection to the adjacent SFWMD C-100 canal. The proposed

stormwater infrastructure improvements are listed in the Capital Improvement Budget shown below.

Environmental Impact of Proposed Improvements: A full analysis of the estimated pollutant loading for existing, future, and proposed conditions was prepared for the priority sub-basins using a spreadsheet developed for this purpose (see Appendix B). The table below shows how the proposed improvements will result in a significant reduction in the pollutant load contribution from this sub-basin to the Biscayne Aquifer for three major pollutants.

Table 2: Drainage Sub-basin 11 – Pollutant Loading Analysis

Pollutant	Existing Load (kg/yr)	Reduction (kg/yr)	Proposed Load (kg/yr)
Total Phosphorous	28.75	26.64	2.11
Total Nitrogen	226.51	202.73	23.78
Total Suspended Solids	2,715.24	2,458.65	256.59

Capital Improvement Budget: This budget includes proposed stormwater system modifications resulting from the revised hydraulic analysis associated with SLR and construction cost updates. This proposed budget assumes DERM will permit and SFWMD will allow right-of-way access for a new outfall connection to the C-100 canal.

Table 3: Drainage Sub-basin 11 – Capital Improvement Budget

Item	Description	Qty.	Units	Unit Price	Sub-total
1	Mobilization/Maintenance of Traffic	1	L.S.	\$89,000	\$89,000
2	Stormwater Pollution Prevention Plan (SWPPP)	1	L.S.	\$9,000	\$9,000
3	Clearing and Grubbing	1	L.S.	\$18,000	\$18,000
4	Asphalt Concrete Surface Course	11,000	S.Y.	\$15	\$165,000
5	Inlet Apron (Asphalt)	65	S.Y.	\$25	\$2,000
6	15" Diameter Polyethylene Pipe	550	L.F.	\$70	\$39,000
7	18" Diameter Polyethylene Pipe	450	L.F.	\$90	\$41,000
8	18" French Drain Exfiltration Trench	3,100	L.F.	\$130	\$403,000
9	Manhole	18	EA.	\$6,000	\$108,000
10	Catch Basin Inlet	20	EA.	\$5,000	\$100,000
11	Pollution Retardant Baffle	25	EA.	\$500	\$13,000
12	Outfall Control Structure	1	EA.	\$8,000	\$8,000
13	Outfall Headwall	1	EA.	\$10,000	\$10,000
14	Utility Adjustments	1	L.S.	\$18,000	\$18,000
15	Swale Restoration	1	L.S.	\$45,000	\$45,000

16	Professional Services	1	L.S.	\$161,000	\$161,000
17	Contingency	1	L.S.	\$214,000	\$214,000
TOTAL					\$1,450,000

Notes:

1. The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.
2. Costs do not include inflation or interest costs.
3. Sequence of improvements should be coordinated with roadway CIP.
4. It is anticipated a new utility easement will be required, but costs associated with purchasing new property for the outfall connection is not anticipated or included in the proposed budget.

Table 27: Sub-basin Prioritization Matrix

Priority Ranking	Area	Hydraulic Analysis	Observed Flooding	Complaints	Roadway Condition	Traffic Volumes	Total Score
1	Drainage Sub-basin #43	4.61	2	2	3	1	12.61
2	Drainage Sub-basin #57/96	2.70	2	2	3	1	10.70
3	Drainage Sub-basin #11	1.70	4	1	3	1	10.70
4	Drainage Sub-basin #41	4.37	3	1	1	1	10.37
5	Drainage Sub-basin #12	3.36	3	2	1	1	10.36
6	Drainage Sub-basin #39	5.23	2	1	1	1	10.23
7	Drainage Sub-basin #42	3.20	2	1	3	1	10.20
8	Drainage Sub-basin #44	3.90	2	1	1	1	8.9

Except for the hydraulic analysis score, each project was given a score between 1 and 5 in each of the four categories: observed flooding, complaints, roadway condition, and traffic volumes. The scores were then totaled, and the projects were ranked from highest to lowest. The basis for the category scores is detailed below.

Hydraulic Analysis

Based on the hydrologic and hydraulic analysis described in the Drainage Sub-basin Analysis section of this report, a number for “total flood stage above performance goal criteria” was determined for each of the sub-basins studied. This number was entered in the table above in the Hydraulic Analysis column.

Observed Flooding

- 1 = No flooding observed in sub-basin
- 2 = Roadway flooding observed in less than 1/3 of drainage areas within sub-basin
- 3 = Roadway flooding observed in 1/3 to 1/2 of drainage areas within sub-basin
- 4 = Roadway flooding observed in 1/2 to all but one of the drainage areas within sub-basin
- 5 = Roadway flooding observed in all of the drainage areas within sub-basin

Complaints

- 1 = No complaints recorded
- 2 = Complaints recorded for less than 1/3 of drainage areas within sub-basin



Village of Palmetto Bay

February 18, 2021

Oscar Camejo
Miami-Dade Transportation Planning Organization

RE: Letter Committing Local Funds to
Palmetto Bay's Sub-Basin 11 Improvements Project

Dear Mr. Camejo:

On behalf of the Village of Palmetto Bay, I am pleased to submit the enclosed grant document confirming our commitment to the above referenced project for which we are applying.

The Village, upon grant approval, will set allocate the funds for the project from the Storm Water Utility fund and the Capital Improvements fund to pay for these services.

We sincerely thank you for the opportunity to be considered for our continued work of storm drainage improvements to significantly limit and/or eliminate flooding in the project area. Should you require additional information, please feel free to contact myself or the Public Services Director, Mr. Dionisio Torres at dtorres@palmettobay-fl.gov, 305-969-5011.

Regards,

A handwritten signature in blue ink, appearing to read "Nick Marano", is written over the typed name.

Nick Marano
Village Manager