



City of Marco Island

MEMORANDUM

Date: August 30, 2024

To: City Council

Through: Michael A. McNees, City Manager

From: Justin Martin, P.E., Director, Public Works

Subject: Public Works Departmental Report – August 2024

The City's public works department has 13 dedicated employees that administer, repair, and maintain the city's public infrastructure including traffic signals, streetlights, roads, sidewalks, swales, street signs, stop signs, median landscaping and irrigation, city street trees, storm sewer drainage, and bridges.

The following summarizes the department's notable activities over the month of August:

Barfield Dr. Drainage

This project consists of drainage improvements that will help to alleviate flooding in the area immediately north and south of the Barfield Dr./San Marco intersection. This project is making steady progress. Construction of drainage improvements including pipes and inlets in the swales along the west side of S. Barfield Dr. has been completed, and the contractor is restoring the driveway connections in this area. Work on N. Barfield Dr. is in progress. Work on San Marco Rd. and the east side of S. Barfield Dr. will commence upon completion of the work on N. Barfield. Construction is expected to be completed in March of 2025. This project is primarily funded by state legislative appropriation.



Drainage pipe installation on S. Barfield Dr.



Forming of Cast-in-place drainage inlet on N. Barfield Dr.

Annual Street Resurfacing

The 2024 paving has been completed. The following streets were repaved:

1. South Collier Blvd. between San Marco Rd. and Winterberry Dr. excluding the area between Maple Ave. and Spruce Ave.
2. South Barfield Dr. from San Marco Rd. to Winterberry Dr.*
3. 6th Ave
4. Waikiki Ct.
5. Fairlawn Ct. from Collier Blvd to Waikiki Ct.
6. Buttercup Ct.
7. Robin Ct.
8. Rose Ct.*
9. Fern Ct.*
10. Cedar Ct.*
11. Bluebird Ave. from Collier Blvd. to Yellowbird St.*
12. Dorando Ct.*
13. Dandelion Ct.*
14. Wintergreen Ct.*
15. Seaview Ct.*
16. Bayside Ct.*
17. Saturn Ct.*

The streets indicated with an asterisk (*) were not milled, just overlaid. This results in a smooth, level road profile and slightly raises the road elevation to minimize the effects of localized flooding. Public Works is contracting driveway adjustments for those driveways that have more than 1.5 inches in elevation difference where the driveway meets the road asphalt.

Public Works crews are also constructing some of the driveway adjustments thereby saving some contracting costs. By not milling the above indicated streets, the City was able to pave seven (7) additional streets more than what was planned for 2024.



Newly paved 6th Ave.



Public Works Crew constructing driveway elevation adjustment



Paving on S. Barfield Dr.



Public Works added riprap boulders to protect some of the newly paved cul-de-sac circle pavement edges



Newly paved S. Collier Blvd.

N. Barfield Shared Path

The shared path consists of a new 8ft. wide concrete sidewalk. Construction is now 65% complete. The new path from N. Collier Blvd. to the bridge between Butterfly Ct. and Redwood Ct. is now in place. Construction from the bridge to Bald Eagle will be done in the months of September and October. Exfiltration swales are being constructed where possible along the route as part of this project. Concerns of affected homeowners are being addressed in a timely manner.



N. Barfield Dr. shared path construction



Newly constructed N. Barfield Dr. shared path

Traffic Signal Posts and Mast Arm Painting

The contractor completed the painting of the posts and arms at the San Marco Rd./Barfield Dr. and San Marco Rd./Cushing Ln. intersections. The two remaining intersections (San Marco Rd/ Heathwood Dr. and Collier Blvd./Winterberry Dr. will be painted in September.

W. Winterberry Dr. Bridge Repair

The city publicly bid the bridge repairs. The award of contract for the bridge repairs will be presented to city council for approval at the 9/9/24 meeting. The cost of the repairs is \$228k. The bridge replacement cost as realized from the bidding earlier this year is \$8.7M. The bridge will need to be closed for several weeks during construction of the repairs.

Advisory Committee Support

In addition to the above projects, PW staff attends and supports the Waterways Advisory Committee, the Beautification Advisory Committee, and the Hideaway Beach Tax District Committee, and the Bike Lane and Shared Path Ad-Hoc Committee including the preparation of meeting minutes, conducting research, updating the city website related to committee functions, coordinating among committee members, and attending additional meetings, and responding to requests.

Water Quality Action Items

The following table lists the water quality action items being considered or performed by the city. The items appearing in gray text are not recommended, not feasible, and not implemented.

WQ Action Item	Cost	Status
dredging	\$30M (\$6M/yr x 5yrs)	coordinated permitting feasibility with FDEP. A pilot program will be presented to council in the FY 26 proposed budget.
inlet side slot filling	\$300/inlet	ongoing: 0 filled in months of August (147 total to date)
Exfiltration swales	\$12M	There are 120 miles of swales in Marco Island. \$1.5M in grant funding has been approved with a 50% city matching funds. New exfiltration swales will be constructed as part of the N. Barfield Shared Path project. Construction plans underway for exfiltration swales on S. Collier Blvd. from Huron Ct. to the end of Collier Ct. More exfiltration swale project designs are on the way in FY25. The right of way construction standards manual was revised to require that exfiltration swales be constructed as part of the right of way permitting process.
inlet screens	\$600 ea	ongoing: 218 installed to date. More will be installed as part of the N. Collier Blvd./N. Barfield Dr. intersection improvements project.
rain barrells/gardens	borne by homeowner	add to education campaign for homeowner implementation
seawall denitrification beds	borne by homeowner	not recommended - media can migrate into canals (unintended consequence)
reuse disposal alternatives	\$5M+	not feasible - FDEP will not permit the discarding of reuse water into deep injection well. Defeats the purpose of re-using treated water.
reuse irrigation inspections	included in operating budget	ongoing: city-owned irrigation inspected and repaired by city landscape contractor. Condo HOA's and hotels inspect and repair their systems
reuse educational program	included in operating budget	W&S dept prepared and distributed educational material. Follow up with HOA's annually
golf course irrigation	borne by golf courses	W&S dept coordinated with golf courses regarding irrigation rates. Golf courses effectively manage their irrigation
golf course interconnecting culverts	borne by golf courses	golf course water management systems detain stormwater and irrigation runoff onsite. Discharge to offsite is through outfall weirs. Interconnecting culverts are internal to golf course SWM systems.
Hydrodynamic study for dead-end canal circulation	\$50k	completed in Dec 2023 and presented to council in Jan 2024
Dead-end canal interconnects	\$6M	state legislative appropriation approvals obtained. The first interconnect project has been designed, and bids opened on 8/5/24. The City will seek additional state funding in FY25 so that this project can be constructed.
Street sweeper	\$380k	street sweeping program underway
fertilizer education campaign	low	city environmental staff coordinating
fertilizer enforcement	low	ongoing - city code enforcement
fertilizer ordinance revision	low	not recommended - unenforceable
stormwater utility	property owner assessments	requires stormwater system inventory, master plan update, and rate study by consultant. Staff has not received direction from city council to proceed with this.
Alternate water quality plan (4e)	\$50k	Approved by FDEP in Sept 2023. City is proceeding with projects in the plan as indicated in this table.
WQ testing	\$86k/yr	Ongoing. Qtrly testing of PTOX algae added in FY25.
WQ monitoring evaluation	\$10k/yr	evaluation being conducted as part of the MS4 permit. PW staff submitted the NPDES Annual Report for the Phase II MS4 permit for year 2 on 2/28/24. FDEP issued comments and city staff subsequently responded to FDEP's comments. FDEP approved the annual report in August 2024.

Permitting Functions

Public works staff reviewed the development and right-of-way permit applications and conducted inspections of the active right-of-way, SDP, and Seawall permits as indicated below.

Reviews

Permit Type	qty
ROW permits (residential)	23
ROW permits (commercial)	1
SDP reviews	1
SEAW Seawall Work	3

Inspections

Type	qty
Residential	75
commercial	0

Infrastructure Maintenance Field Crew Activities

- Swept City Roadways with new street sweeper (88 lane miles swept between 8/12/2024 and 8/23/2024).
- Inspected crosswalks.
- Painted stop bars island wide.
- Completed safety training (drug use training).
- Cleaned storm debris island wide.
- Maintained city grass at Saturn Ct. and Dunford Ln.
- Removed floating dock from waterway on Seminole Ct.
- Diagnosed and repaired traffic signal at Elkcam and Bald Eagle.
- Replaced red light traffic signal bulb at San Marco and Heathwood.
- Installed waterway danger sign at beach near Hideaway.
- Replaced two PED pedestrian crosswalk buttons at E. Elkcam and Collier Blvd.
- Graded 100ft of swale at Nassau and Fruitland.
- Collected roadkill on San Marco Rd.
- Filled swale with dirt and sod on Juniper Ct.
- Repaired speed limit sign on Collier Blvd.
- Cleaned debris pile (construction dirt) on San Marco and Balfour.
- Repaired edge of roadway on Bond Ct.
- Performed maintenance and replaced worn parts on city street sweeper.
- Camera outfall pipe at 12 locations along Kendall Dr. Located and marked pipes for cable contractors.
- Grinded trip and fall hazards on sidewalk along E. Elkcam Cir. (25 locations total).
- Distributed notices along Rose Ct. (driveway edge of pavement repairs).
- Installed rip rap along cull de sacs at Fern, Rose, Cedar and Buttercup Courts.
- Cleaned dead fish along Caxambas Ct. bridge.
- Repaired storm box and filled sinkhole at storm box on South Seas Ct.
- Cleaned mold along Herb Savage bridge structure.
- Installed cold patch on driveway aprons on Rose Ct.
- Filled sinkhole and camera pipe at Ironwood Ct. New outfall pipe installation

required.

- Inspected swale complaint at 219 Bald Eagle Dr. No issues found.
- Cut and replaced three driveway aprons (edge of pavement only) on Dorando Ct.
- Inspected storm drain complaint on 190 Post Ct. No issues found.
- Replaced red navigation light at Herb Savage Bridge.
- Retreated mold at Herb Savage bridge structure.
- Repaired pedestrian crosswalk sign on Collier Blvd. and Elkcarn.

Floating dock removal on Seminole Ct.



Edge of pavement repair on Bluebird



Dorando Ct. edge of pavement repairs.



Storm drain box repair on South Seas Ct.

