



CITY OF

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# City Commission

## Public Works & Utilities Quarterly Update

January 24, 2022

Todd J. Grant, P.G.

Director, Utilities

Reuben C. Franklin, Jr., P.E.

Director, Public Works





# Public Works & Utilities CIP Agenda

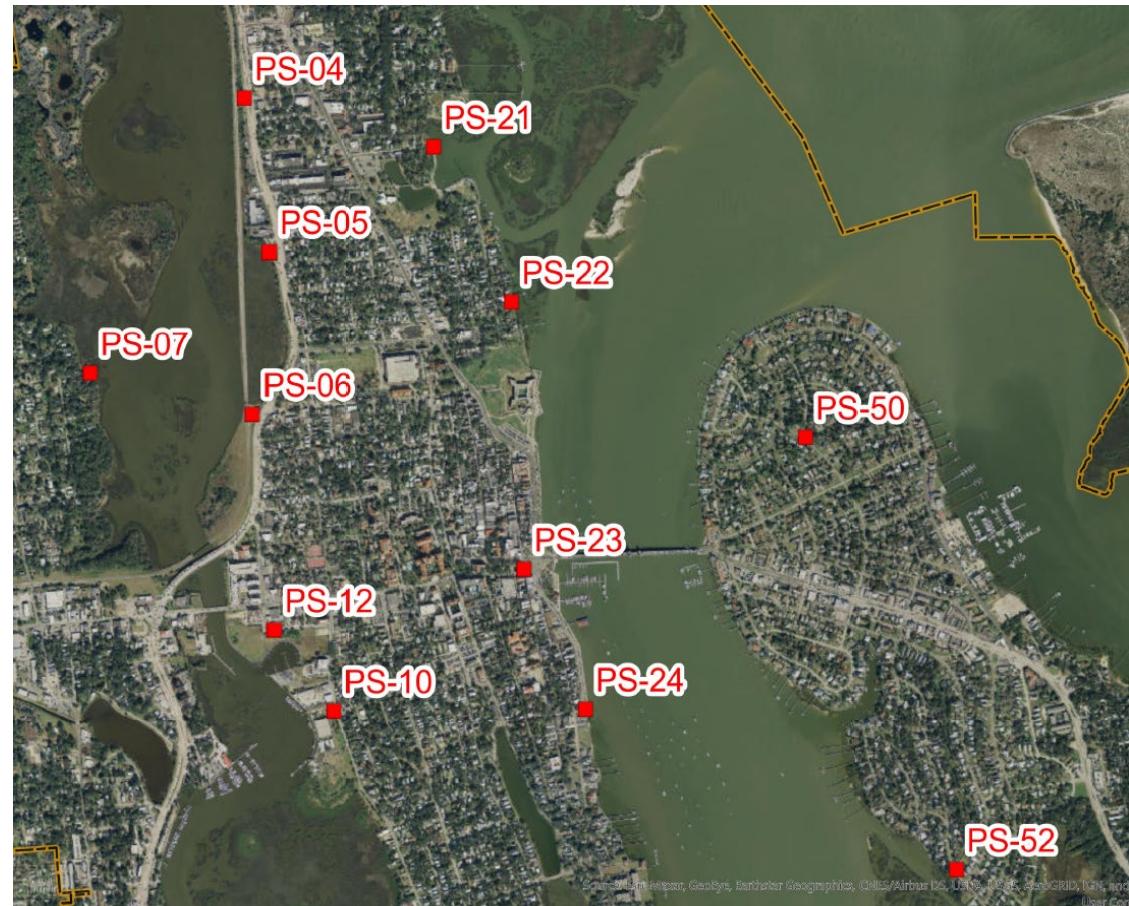
- ❖ **FEMA 13 Lift Station Rehabilitation Project**
- ❖ **Resilience Program Updates**
- ❖ **West Augustine Gravity Sewer Improvements**
- ❖ **Sustainability and Environmental Updates**
- ❖ **Capital Projects Overview and Status**



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# FEMA 13 LIFT STATIONS REHABILITATION

- ❖ Construction Cost \$13.8M
- ❖ Start Construction Jan 2021
- ❖ Finish Construction Feb 2023
  
- ❖ Substantially Complete:
  - ❖ LS-5, 21, 22, 23, 24
- ❖ Under construction
  - ❖ 4, 6, & 7
- ❖ Arricola Ave. Force Main
  - ❖ Summer 2022





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# Resilience Program Updates

## Program Outline





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# Resilience Program Updates

## ❖ Policy

- ✓ Building Code Task Force on Existing Properties met in 2021
  - Ordinance 2021-26 in place to establish an impervious surface ratio
  - Proposed single family lot grading plan guidance in development
- ✓ Seawall Ordinance – started
- ✓ Living Shorelines – started
- ✓ Monitoring State legislative session related to Resiliency bills

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### MEMORANDUM

TO: Planning and Zoning Board

DATE: August 26, 2021

RE: **Building Code Task Force for Existing Properties – Final Report**

On November 9, 2020, the City Commission appointed the Building Code Task Force for Existing Properties. The Task Force was given three specific goals to address the development of private residential properties in our older, established neighborhoods.

Goal #1 – Protect older homes from the flooding impacts of new home construction.

Goal #2 – Provide incentives for property owners to use building techniques (pier and stem wall foundations) which do not require land filling for new home construction.

Goal #3 – Limit the amount of impervious surface that is allowed on residential lots.

The Task Force held four public meetings and produced a final report to the City Commission with their findings and recommendations.

On March 8, 2021, the City Commission accepted the final report of the Building Code Task Force. The City Commission forwarded this report to the Planning and Zoning Board for the board's input and formal recommendation on the adoption of new land development codes.

On June 16, 2021, the Planning and Zoning Board held a public workshop and instructed staff to begin the process of creating a grading and drainage plan requirement, to be included in the building permit process for construction of new single family homes. This addresses goal #1, to protect older homes from the flooding impacts of new home construction. The board also reached a consensus on creating a 70% maximum impervious surface ratio for residential properties. This will come back to the board on September 7, 2021 for a formal recommendation prior to City Commission review. This addresses goal #3 of the Tasks Force's recommendations.

Goal # 2 of the Task Force, creating an incentive for property owners to use pier or stem wall foundations for new home construction, has been discussed and debated by the board, the task force, the public and city staff. So far, there has been no meaningful incentives to achieve this goal. The following incentives have been discussed;

1. Provide an additional 5% lot coverage.
2. Provide additional building height above the current maximum height limit.
3. Allow an additional residential dwelling unit (accessory apartment) on the property.
4. Reduce the minimum lot size to potentially allow for the subdivision of property.



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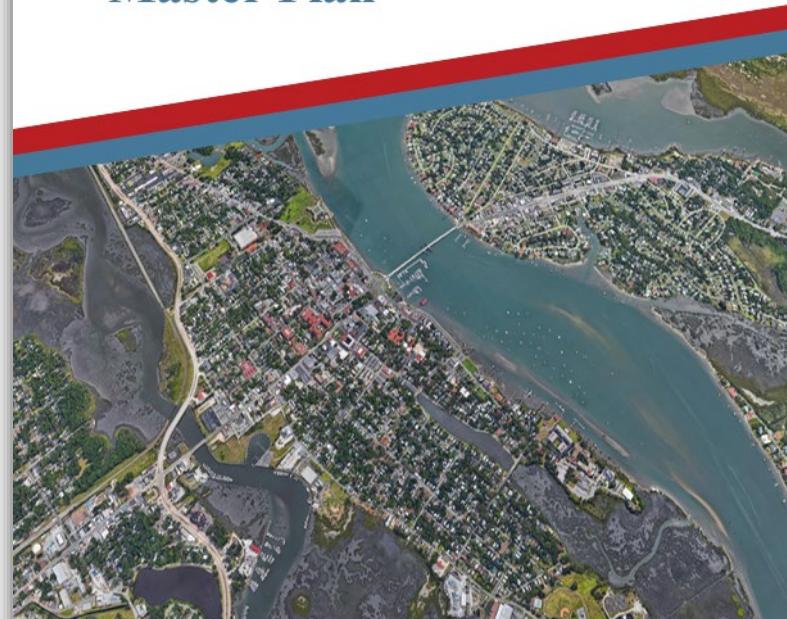
# Resilience Program Updates

## ❖ Planning

- ✓ Draft Stormwater Outfall Resilience Master Plan under review
- ✓ Citywide Stormwater Resilience Master Plan Update proposed for 2022
  - ✓ ARPA Funding proposed for use to initiate plan
  - ✓ If approved, initiate solicitation for request for qualifications to begin the procurement process

DRAFT 2021-11-29

## Stormwater Outfall Resiliency Master Plan



Submitted by:  
Geosyntec Consultants, Inc.  
1200 Riverplace Boulevard, Suite 710  
Jacksonville, Florida 32207

November 2021

**Geosyntec** ▶  
consultants  
engineers | scientists | innovators



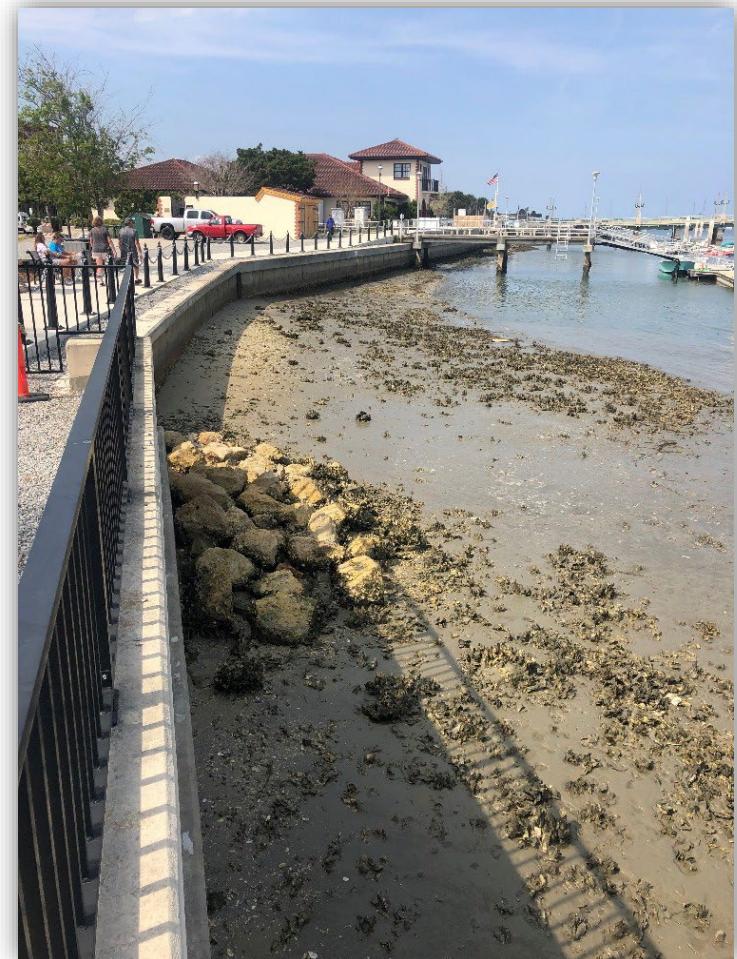
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# Resilience Program Updates

## ❖ Project Implementation

- ✓ FEMA 13 Lift Stations Rehabilitation - under construction ([www.CityStAug.com/FEMA13](http://www.CityStAug.com/FEMA13))
- ✓ Lake Maria Sanchez Flood Mitigation and Drainage Improvement Project (HMPG) – proceeding with design ([www.CityStAug.com/LakeMariaSanchez](http://www.CityStAug.com/LakeMariaSanchez))
- ✓ Avenida Menendez Flood Barrier (HMGP) – Phase 1 @ 100% Design
- ✓ South Whitney West King Street Flood Mitigation (HMGP) – executed Phase 2 contract for construction with the State and FEMA, seeking additional construction funding for local share
- ✓ Stormwater – budgeted for this FY, cleaning, inspection, rehab and/or lining of storm pipe in priority locations





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## ❖ Priorities –

- ✓ Based on input from Commission during the 10-25-2021 Resilience Workshop
  - Seawall Ordinance – establish minimum cap elevations, consider nature-based options and other construction techniques
  - Updating the current Coastal Vulnerability and Strategic Adaptation Plans based on latest data available
  - Include a comprehensive evaluation for cost and benefits for any proposed projects to better prioritize limited resources and needs
  - Continue with Outreach and Education – expand upon current website, consider non-computer users, workshops and neighborhood meetings as needed

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# Resilience Program Updates

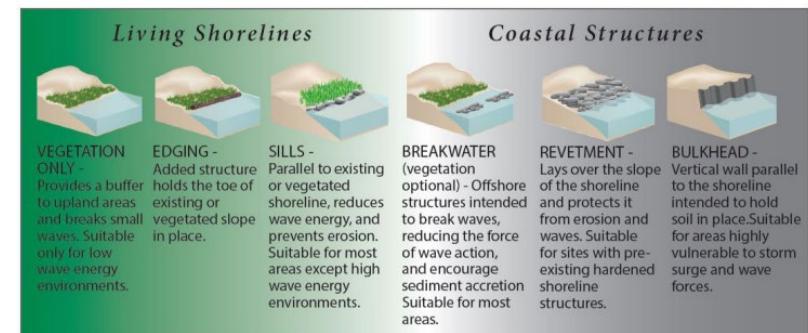


NOAA | Living Shorelines

HOW GREEN OR GRAY SHOULD YOUR SHORELINE SOLUTION BE?

GREEN - SOFTER TECHNIQUES

GRAY - HARDER TECHNIQUES



A continuum of green (soft) to gray (hard) shoreline stabilization techniques.  
Adapted from SAGE 2015 Natural and Structural Measures for Shoreline Stabilization brochure.



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# Resilience Program Updates

## ❖ Payment (Funding) Updates

- ✓ **Resilient Florida** – new from the State Legislature – s. 380.093, F.S.
  - ✓ 11 applications were submitted (3 planning, 7 projects)
  - ✓ \$100 M – FY2022-23 Statewide Flooding and Sea Level Rise Resilience Plan
    - ✓ 76 projects ranked State-wide
    - ✓ City applications were not selected
  - ✓ \$500 M – project implementation applications are still under review
  - ✓ \$20M – planning applications are still under review
- ✓ **Rebuild Florida** – General Infrastructure Program through the Dept. of Economic Opportunity
  - ✓ \$175M for long-term mitigation efforts
  - ✓ Submitted for construction costs for Lake Maria Sanchez project
  - ✓ Applications are still under review **-9-**





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# West Augustine Gravity Sewer Improvements

## West Augustine Sewer Master Plan

- ❖ In Design

## West 3<sup>rd</sup> Street Sewer Extension – Volusia to Duval

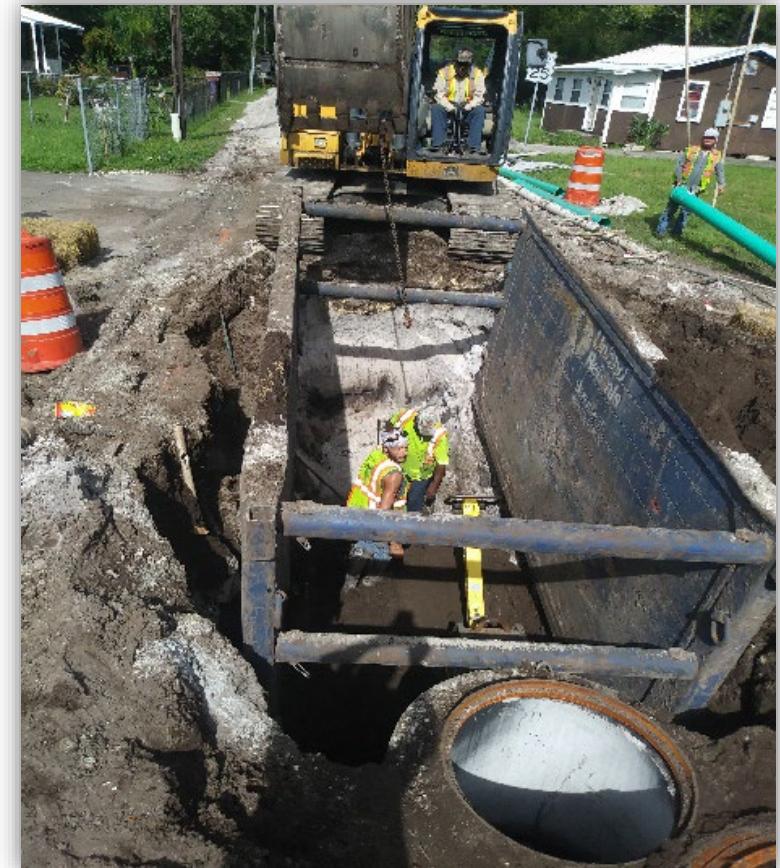
- ❖ In Design
- ❖ Eliminates 20 Residential Septic Tanks

## Septic-to-Sewer Program

- ❖ In Construction: Pkg 5, 7 connections
- ❖ Abandoned 57 septic systems to date

## Pearl Street Gravity Sewer

- ❖ In Design - Expanding gravity sewer from existing lift station





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# Sustainability Updates

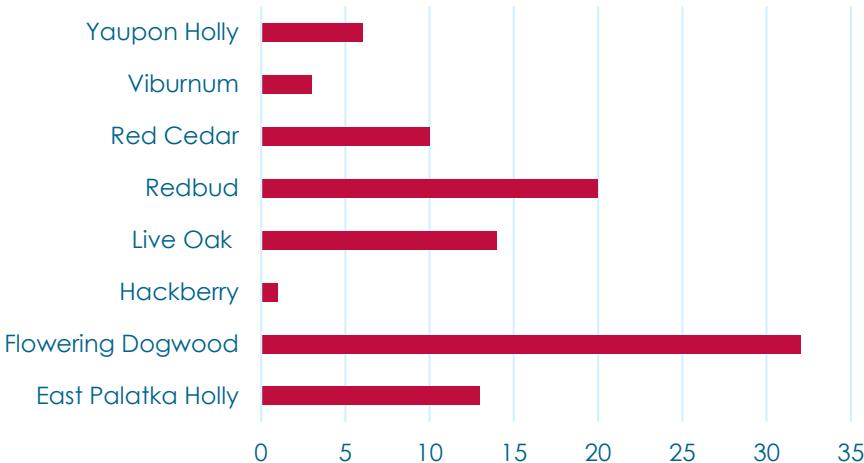
## ❖ Tree Canopy Enhancement Program Status Update

- ❖ 99 locations for tree installation
- ❖ Site assessments completed
- ❖ Maps created for each location
- ❖ In process of collecting legal access agreements for install

## ❖ Other Sustainability Initiatives

- ❖ 2 internal sustainability program area meetings held this quarter
- ❖ Carbon footprint calculator in progress with Wood, LLC

### Tree Species for Installation



## ❖ Upcoming Projects & Initiatives

- ❖ Residential compost bins
- ❖ ecoSTA green business recognition program



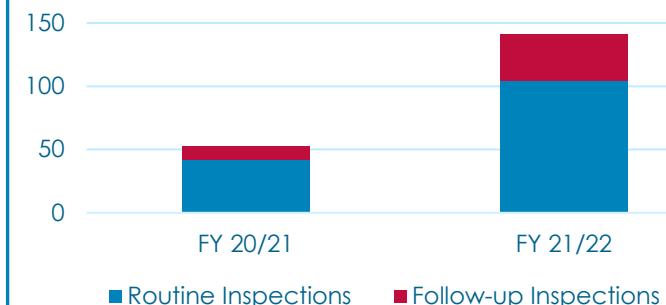
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# Environmental Programs Updates

## ❖ Fats, Oils & Grease Program

- ❖ 141 inspections completed this quarter, 166% increase over first quarter FY 20/21
- ❖ 37 facilities out of compliance & required follow-up

### Fats, Oils & Grease Program Inspections Completed 1st Quarter



## ❖ Cross-Connection Control Program

- ❖ 320 backflow testing notices sent to customers
- ❖ Received more than 250 test reports

## ❖ Illicit Discharge Detection & Elimination Program

- ❖ Monthly & annual pollution prevention inspections completed at fleet & marina
- ❖ 104 proactive illicit discharge inspections completed

# CIP Overall Status Summary

## Capital Improvement Projects – Through January 24, 2022

Project Scope Development	Conceptual Analysis & Studies	Preliminary Design	Final Design	Bidding Construction Contract	Construction Phase	Substantial Completion	Final Completion
Parking Pay Station Flood Proofing	St. Francis Street Utility Improvements	Lake Maria Sanchez Flood Mitigation	Sevilla St Roadway & Utility Improvements	City Marina Crosswalk* S. Whitney & W. King Flood Mitigation <sup>(1)</sup>	S. Orange Street Utility Adjustments (SJC)	Avenue D Utility Adjustments (SJC)	I&I Gravity and Lateral Cleaning, Inspection and Rehabilitation
South Tank Potable Water Fill Line	Lift Station 14 Replacement	San Sebastian WM HDD King Street	Avenida Menendez Seawall (HMGP) <sup>(1)</sup>	WTP Motor Control Center Replacement	Automatic Meter Reading Phase 4	Lift Station 5, 21 22, 23, 24 (FEMA 13)	I&I Sanitary Manhole Rehab Basin 52
SCADA Master Plan	Lift Station 8 Replacement	City-wide TIDE Valve Master Planning	Duero & Cerro Utility and Storm Improvement	WWTP Headworks Rehabilitation	West Augustine Septic to Sewer Connections PKG 5	I&I Smoke Testing Sanitary – 16 Basins	Senate Bill 64
Pearl Street Force Main Improvements	Lift Station 41 Replacement	W Augustine Gravity Sewer Master Plan	King Street Drainage (FDOT)	RO Concentrate Discharge	Hurricane Matthew FEMA 13 Lift Station Rehabilitation		I&I Manhole Inspections for Basins 16, 17 & 20
I&I Prioritize Sanitary Sewer R&R Projects	Stormwater Master Plan Update Phase 2	Inlet Drive Shoreline Restoration*	S. Holmes Utility Adjustments (SJC)	N. Rodriguez Street Utility Adj (SJC)	Arricola Ave Force Main HDD Improvements		
Lighthouse Park Gravity Sewer Improvements	Clean Water SRF Facilities Plan	West 3 <sup>rd</sup> Street Gravity Sewer Improvements	Santa Rosa Utility Adjustments (SJC)	I&I Manhole Rehab Basins 16, 17, 20, & 52	Oyster Creek Force Main HDD (FDOT)		
		Stormwater CIPP Lining for Valves	Downtown Improvement District Phase 2	SR 312 from 207 to Holmes Util Adj (FDOT)	I&I Clean & Inspect Sewer Basins 62, 68, 69, & 71		
		Pearl Street Gravity Sewer Improvements		I&I Sanitary Sewer Main & Lateral Rehab FY 2022	I&I Clean & Inspect Sewer Basins 60, 64, 66, & 70		

### Key:

- (1) Grant Dependent
- (2) Developer Dependent
- (\*) Postponed
- (\*\*) Phase Complete
- Utilizing FY22 Funds**
- Utilizing Loans or Grants FY22**

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# Mobility Program: Nights of Lights Wrap-Up

## 2021 Nights of Lights – Park & Ride Shuttle

### Passenger Count (Round Trip)

Lot Location	Saturday 20-Nov	Friday 26-Nov	Saturday 27-Nov	Saturday 4-Dec	Saturday 11-Dec	Saturday 18-Dec	Sunday 26-Dec	Monday 27-Dec	Tuesday 28-Dec	Wednesday 29-Dec	Thursday 30-Dec	Totals
<b>301 San Marco County Health Dept.</b>	399 563	707 361	653 432	633 568	610 790	698 642	465 168	443 92	456 101	383 75	447 119	5,894 3,911
<b>Broudy's</b>	401	395	325	583	890	618	235	258	179	167	202	4,253
<b>Anastasia Baptist Church</b>	322	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	322
<b>Amphitheatre</b>	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	132
<b>R. B. Hunt School</b>	112	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	112
<b>2021 Totals</b>	<b>1,929</b>	<b>1,463</b>	<b>1,410</b>	<b>1,784</b>	<b>2,290</b>	<b>1,958</b>	<b>868</b>	<b>793</b>	<b>736</b>	<b>625</b>	<b>768</b>	<b>14,624</b>
2020 Totals (Covid)	0	0	0	0	0	0	0	0	0	0	0	0
2019 Totals	3,637	2,299	2,152	1,701	1,931	1,471	1,205	1,522	2,298	903	n/a	19,119
2018 Totals	2,895	1,006	1,769	1,640	1,436	1,862	n/a	n/a	1,125	n/a	n/a	11,733
2017 Totals	2,566	1,442	1,804	1,613	1,628	1,485	n/a	n/a	1,126	n/a	n/a	11,664
2016 Totals	1,190	784	873	1,184	1,159	588	441	454	530	260	456	7,919

\*Approximately 4,875 vehicles parked on the periphery for 2021 NoL\*



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# Additional Questions and Commission Discussion