



PUD/RESIDENTIAL APPLICATION IMPACTS TO FIRE RESCUE SERVICES

HIDDEN LAKE/SW HWY 200 AND SW 80TH AVE AREA/ PARCEL # 35770-055-05



Hidden Lake-SW HWY 200 and SW 80th Ave area



- The request is to modify a 111-acre parcel, originally approved as a PUD under case number 170405Z and is being amended to change the town home width from 25' to 20'. The concept plan as provided, increases the total number of units not to exceed 499 single family residential units.

Common Definitions Used By Fire Rescue



- ISO- The ISO (Insurance Services Office) rating is a crucial assessment for fire departments in the United States, directly influencing both the department's operations and the community it serves.
 - The ISO's Public Protection Classification (PPC) program evaluates a fire department's ability to protect its community from fire-related incidents and assigns a rating that can affect property insurance rates for homes and businesses within the department's jurisdiction.
 - MCFR has an ISO rating of 2/2Y
- NFPA-The National Fire Protection Association (NFPA) is a global nonprofit organization devoted to eliminating death, injury, property, and economic loss due to fire, electrical, and related hazards.
 - Founded in 1896, the NFPA develops and publishes more than 300 codes and standards that are designed to minimize the risk and effects of fire and other hazards.

Common Definitions Used By Fire Rescue



- Resource Reliability- Another consideration as to the ability of MCFR to provide timely services to the community is resource reliability.
 - Within this concept, unit availability to respond to incidents may be impacted by either increased concurrency or by increased workload.
 - As either (or both) of these factors increases, the unit within that zone may not be available and additional incidents may be assigned to other units, resulting in an increased response time.

Common Definitions Used By Fire Rescue



- Workload- Workload is the first factor for consideration. The measure of how much work an individual unit incurs could be as simple as a sum of incidents within a given period of time, such as a year.
 - However, incident duration can vary significantly from minutes to hours and thus this method does not provide the best measure of workload.
 - A more accurate method—while still not a perfect measure—is to consider the amount of time to which a unit is assigned and compare that to the amount of time the unit is in service, a measure referred to as unit hour utilization.
 - The imperfection of this measure is that it does not capture other on-duty activities such as training, station maintenance, apparatus maintenance, hydrant testing, hose testing, pre-incident planning, public education events, etc.



Common Definitions Used By Fire Rescue

- Concurrency- Incident concurrency, the second factor to be considered, refers to the number of incidents occurring simultaneously within the service area.
 - As the number of concurrent incidents increases, the ability to respond to additional calls for service decreases.
 - Displayed in percentage of occurrence.

Level of Concurrency	Percentage
Low	0-10%
Moderate	11-20%
High	21-30% or More

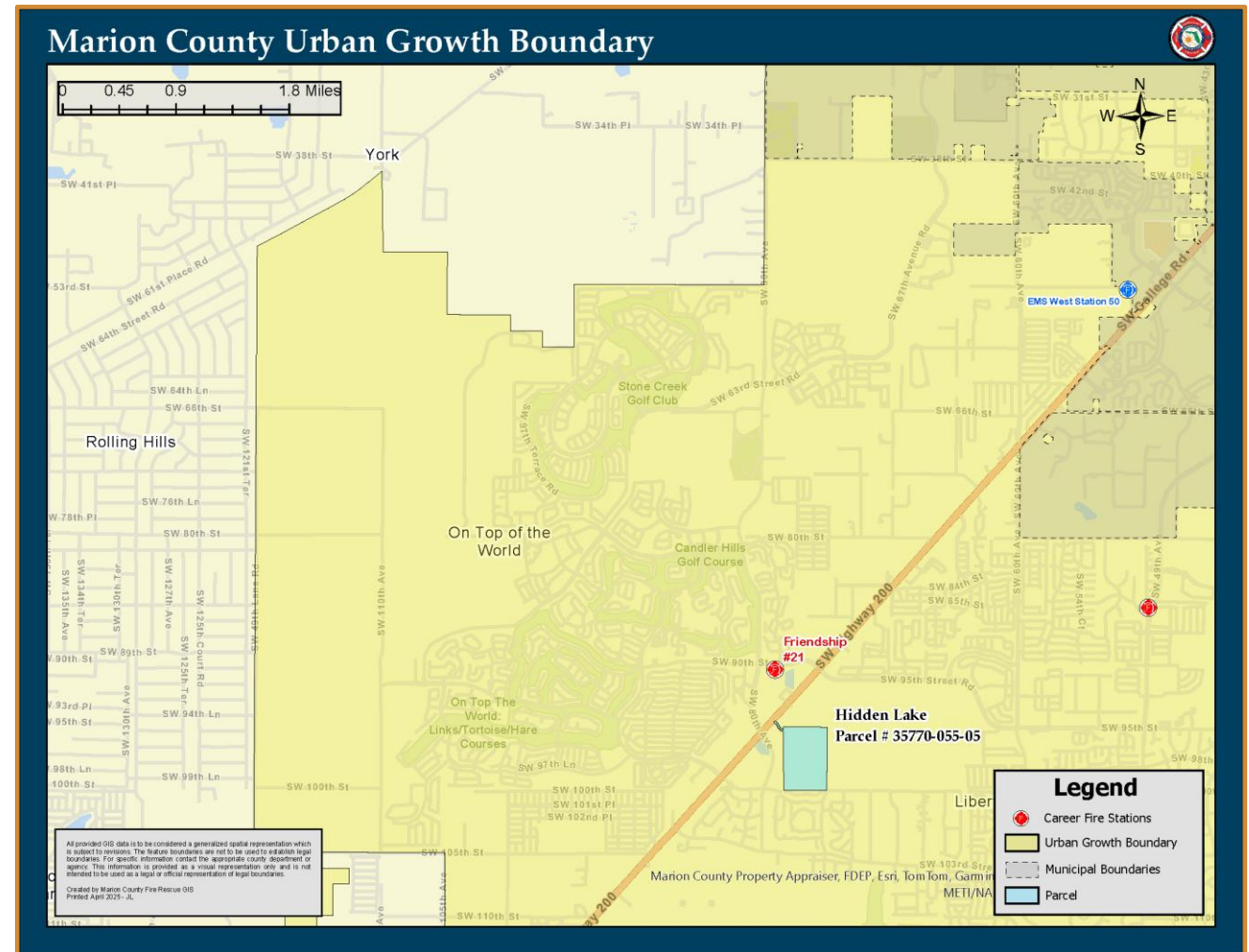
Common Standards Governing Fire Rescue



- NFPA 1061: Standard for Public Safety Telecommunications Personnel Professional Standards Qualifications
- NFPA 1201: Standard for Providing Fire and Emergency Services to the Public
- NFPA 1225, Standard for Emergency Services Communications
- NFPA 1660: Standard for Emergency, Continuity, and Crisis Management: Preparedness, Response, and Recovery
- NFPA 1620: Standard for Pre-Incident Planning
- NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments.
- NFPA 1720, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments.

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CLOSEST FIRE STATION LOCATIONS

THE FOLLOWING FIRE STATIONS ARE LOCATED NEAR THE PARCEL FOR CONSIDERATION:

FIRE STATION 21, 1.1 ROAD MILES

FIRE STATION 31, 4.5 ROAD MILES

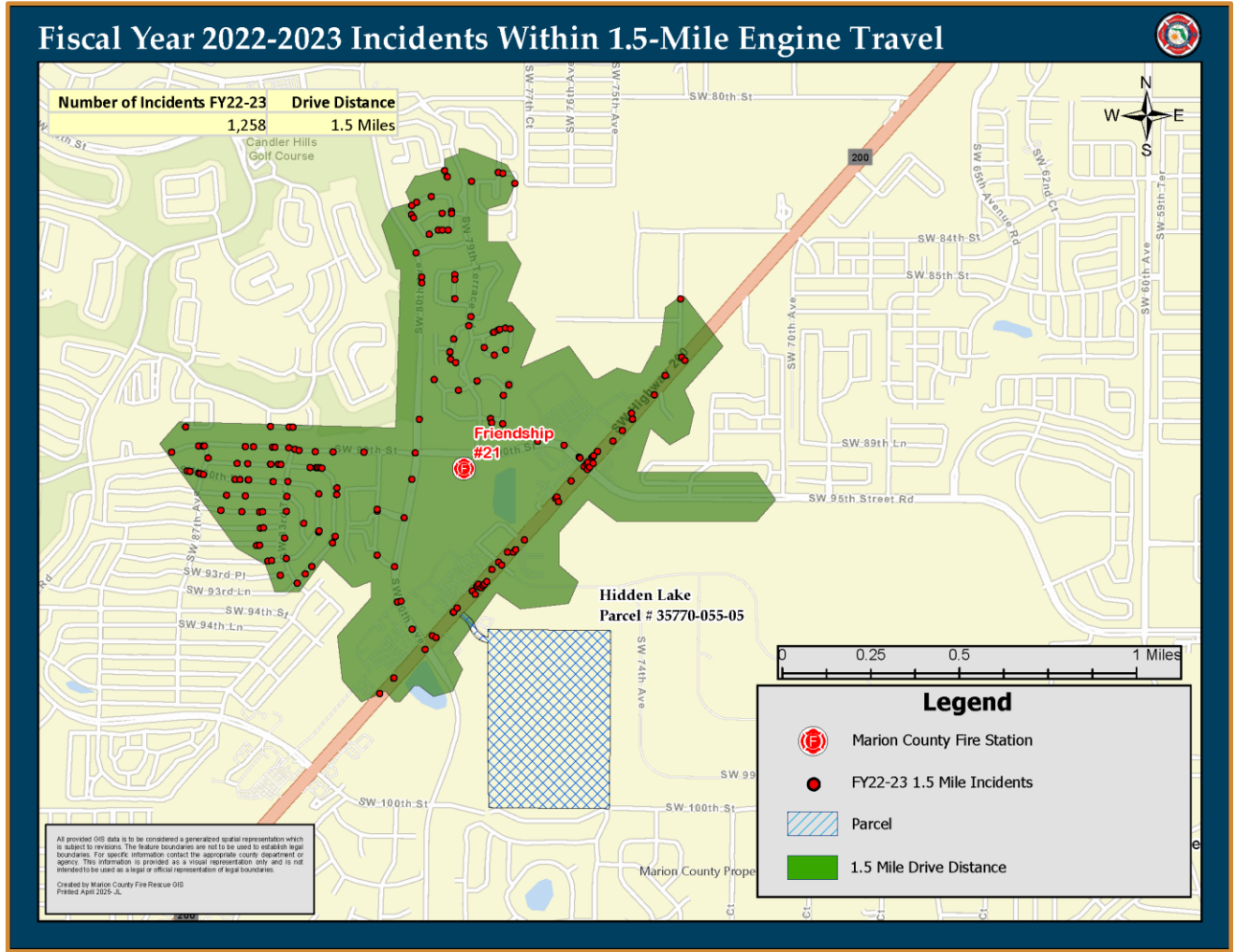
FIRE STATION 23, 4.9 ROAD MILES

FIRE STATION 32, 5.3 ROAD MILES



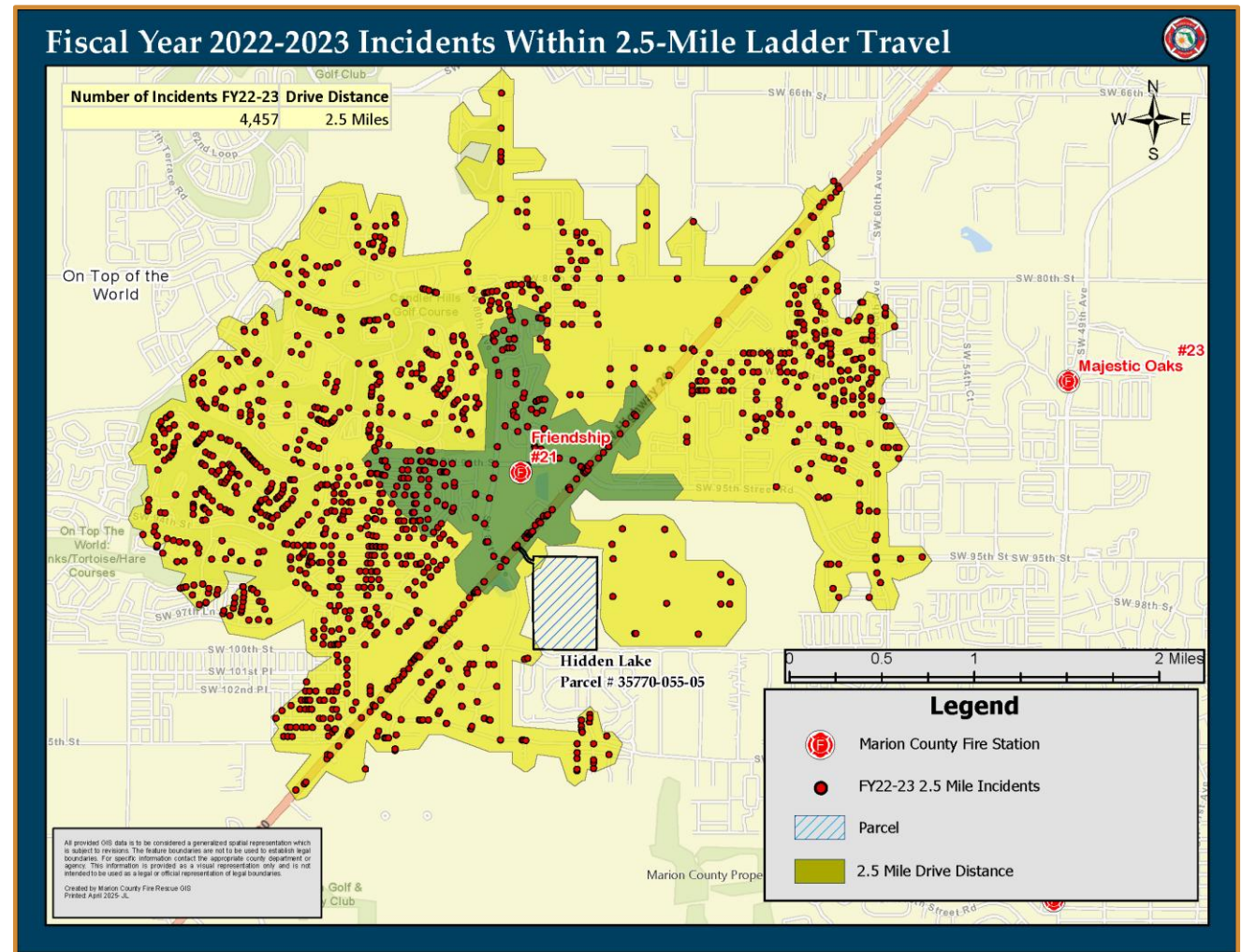
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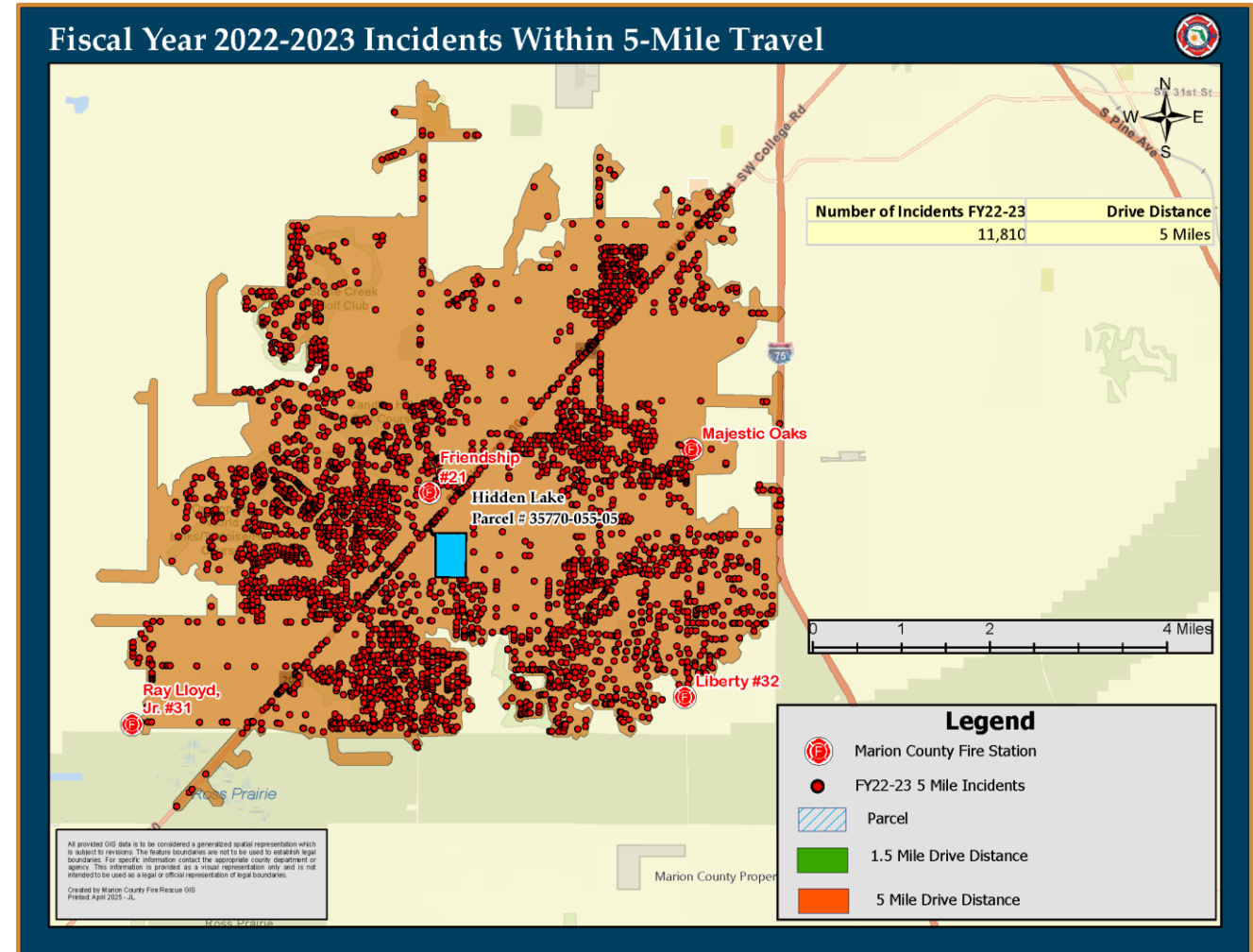
FY 22/23 INCIDENTS WITHIN 2.5-MILE LADDER TRAVEL

THERE WERE 4,457 CALLS FOR SERVICE WITHIN THE 2.5 MILE LADDER TRAVEL FOR FIRE STATION 21.



FY 22/23 INCIDENTS WITHIN 5-MILE TRAVEL

THERE WERE 11,810 CALLS FOR
SERVICE WITHIN THE 5 MILE TRAVEL
FOR FIRE STATION 21.



THIS PARCEL IS WITHIN 1,000 FEET OF
12 FIRE HYDRANTS AND 0 DRY
HYDRANTS.



Closest Fire Suppression Response



- Station 21 (Friendship)
 - 5-minute travel time
 - Low incident reliability per non-transport unit at 0.69% in FY22/23
 - 2,111 incidents/unit (Above Trigger Point)
- Station 31 (Ray Lloyd, Jr)
 - 10-minute travel time
 - Low incident reliability per non-transport unit at 15.82% in FY22/23
 - 1,538 incidents/unit (Below Trigger Point)
- Station 23 (Majestic Oaks)
 - 11-minute travel time
 - Station Opened January 2025
 - 892 Incidents/unit (Below Trigger Point)
- Station 32 (Liberty)
 - 16-minute travel time
 - Moderate incident reliability per non-transport unit at 12.34% in FY22/23
 - 2,162 incidents/unit (Above Trigger Point)

Note: non-transport units with greater than 2,000 incidents is measure to consider adding additional resources.

Closest Ambulance Response

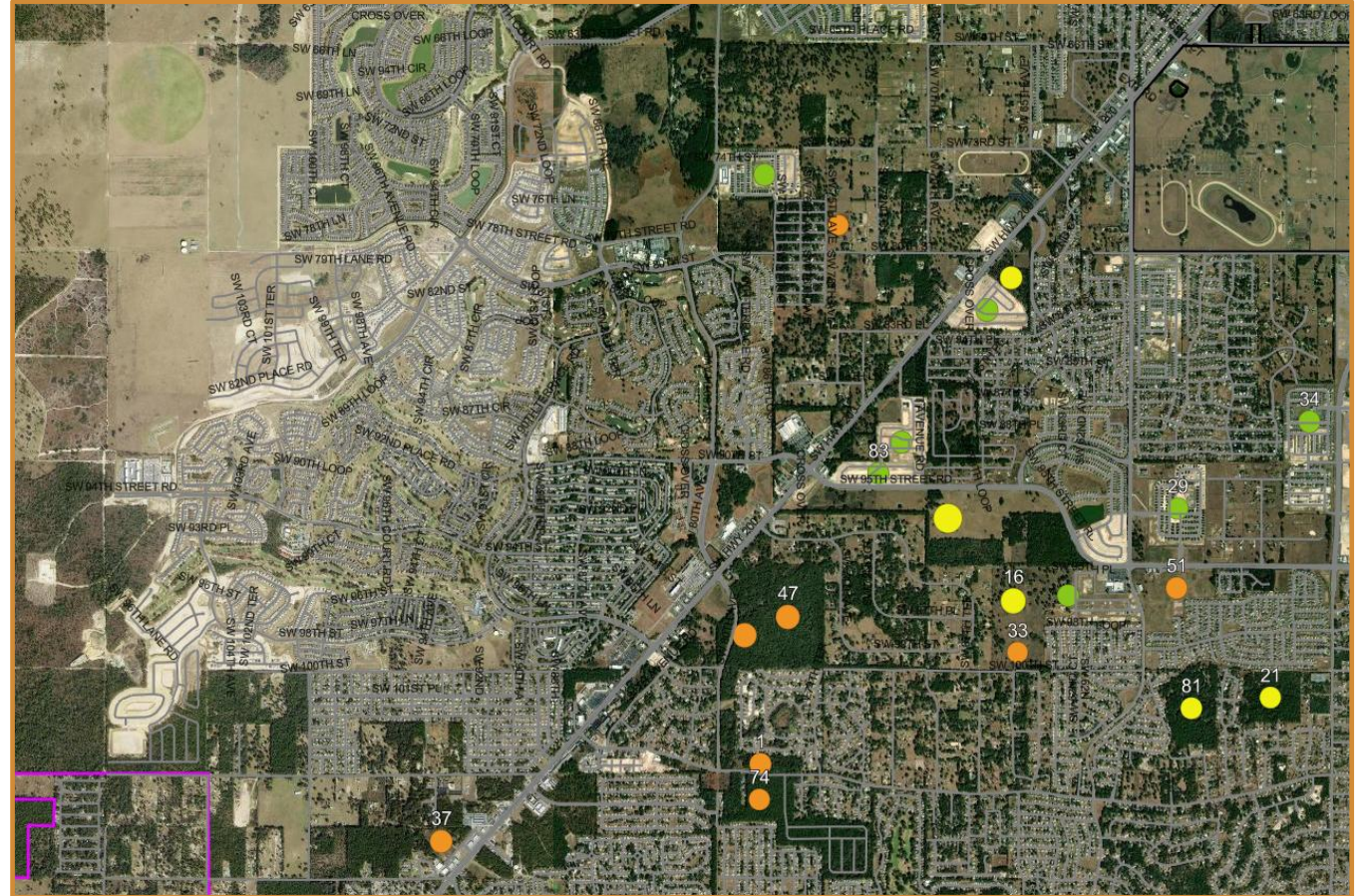


- Station 21 (Friendship)
 - 5-minute travel time
 - Low incident concurrency per transport unit at 1.44% in FY22/23
 - 2,111 incidents/unit (Below Trigger Point)
 - 3 transport units
- Station 31 (Ray Lloyd, Jr.)
 - 10-minute travel time
 - Low incident concurrency per transport unit at 3.61% in FY22/23
 - 1,538 incidents/unit (Below Trigger Point)
 - 2 transport units
- Station 32 (Liberty)
 - 11-minute travel time
 - Moderate incident concurrency non-transport unit at 19.9% in FY23/24
 - 2,162 incidents/unit (Below Trigger Point)
 - 1 transport unit

Note: transport units with greater than 2,500 incidents is measure to consider adding additional resources.

OTHER RESIDENTIAL DEVELOPMENTS

THERE WERE 19 OTHER
DEVELOPMENTS CONSIDERING FIRE
RESCUE SERVICE LEVELS IN
ADDITION TO THIS REQUEST.



Current Status of Fire Rescue Service in the Area.



- There are no additional budgeted units for this area to date.

Recommendations from Fire Rescue



- If approved, additional resources are warranted to handle increased demand from the proposed parcel.
 - The suppression units from two of the four closest fire stations are above the adopted capacity limits currently and additional growth will exacerbate these numbers.
 - Currently, the transport units at the three nearest fire stations are operating within the adopted capacity thresholds; however, continued growth in the area is expected to strain these resources and push utilization beyond acceptable limits.
 - Additional Suppression unit is warranted.

Recommendations from Fire Rescue- Suppression Unit



Engine/Ladder/Heavy Rescue Costs

	Lieutenant/PM	Driver/PM	EMT	Relief Factor (1.17)	Total Per Shift	Total Per Unit
Average Hourly Rate	\$27.45	\$24.00	\$15.25		N/A	N/A
Stipend	\$0.00	\$0.00	\$0.00		N/A	N/A
Total Hourly Rate	\$27.45	\$24.00	\$15.25		N/A	N/A
Regular Salary/Wages (2,756 hours)	\$75,652.20	\$66,144.00	\$42,029.00	\$31,250.28	\$215,075.48	\$645,226.45
Built-in Overtime (173)	\$7,123.28	\$6,228.00	\$3,957.38	\$2,942.47	\$20,251.12	\$60,753.36
Additional Overtime (150)	\$6,176.25	\$5,400.00	\$3,431.25	\$2,551.28	\$17,558.78	\$52,676.33
Subtotal	\$88,951.73	\$77,772.00	\$49,417.63	\$36,744.03	\$252,885.38	\$758,656.14
FICA Taxes (0.062)	\$5,515.01	\$4,821.86	\$3,063.89	\$2,278.13	\$15,678.89	\$47,036.68
Medicare (0.0145)	\$1,289.80	\$1,127.69	\$716.56	\$532.79	\$3,666.84	\$11,000.51
Retirement Contributions (0.25898)	\$23,036.72	\$20,141.39	\$12,798.18	\$9,515.97	\$65,492.26	\$196,476.77
Worker's Compensation (0.02951)	\$2,624.97	\$2,295.05	\$1,458.31	\$1,084.32	\$7,462.65	\$22,387.94
Health Insurance	\$11,896.00	\$11,896.00	\$11,896.00	\$6,066.96	\$41,754.96	\$125,264.88
Life, AD&D, LTD (0.006741)	\$599.62	\$524.26	\$333.12	\$247.69	\$1,704.70	\$5,114.10
Total	\$133,913.84	\$118,578.26	\$79,683.69	\$56,469.88	\$388,645.67	\$1,165,937.02

Engine (As Equipped)

Vehicle	Cost	Expected Life Cycle
Truck	\$ 705,000	10-12 years
Equipment	Cost	Expected Life Cycle
Truck Radio	\$ 9,000	10 years
Portable Radio (4)	\$ 40,000	10 years
Setcom Intercom/Radio Set	\$ 2,500	
Onboard Mobile Gateway	\$ 2,000	10 years
Ruggedized Tablet MDT mount included docking station and pole	\$ 2,355	5 years
Self Contained Breathing Apparatus (4)	\$ 40,000	10 years
SCBA bottle 4500psi (8)	\$ 12,000	10 years
Powered Extrication Equipment (1 set)	\$ 30,000	10 years
Positive Pressure Fan 20"	\$ 4,000	
Thermal Imager Monitor Bullard T3	\$ 10,000	
K-12 950's	\$ 1,700	
Chainsaw	\$ 500	
Nozzles	\$ 7,000	
Fire Hose	\$ 15,000	
Miscellaneous Fire Equipment and Supplies	\$ 7,000	
Cardiac Monitor	\$ 31,000	10 years
Miscellaneous Medical Equipment and Supplies	\$ 8,000	
Subtotal Equipment	\$ 222,055	
Total	\$ 927,055	Revised 2/1/23

Recommendations from Fire Rescue- Transport Unit



Dual-Certified Rescue Costs

	PM	EMT	Relief Factor (1.17)	Total Per Shift	Total Per Unit
Base Hourly Rate	\$18.25	\$15.25		N/A	N/A
Stipend	\$2.00	\$0.75		N/A	N/A
Total Hourly Rate	\$20.25	\$16.00		N/A	N/A
Regular Salary/Wages (2,756 hours)	\$55,809.00	\$44,096.00	\$16,983.85	\$116,888.85	\$350,666.55
Built-in Overtime (173)	\$5,254.88	\$4,152.00	\$1,599.17	\$11,006.04	\$33,018.13
Additional Overtime (150)	\$4,556.25	\$3,600.00	\$1,386.56	\$9,542.81	\$28,628.44
Subtotal	\$65,620.13	\$51,848.00	\$19,969.58	\$137,437.71	\$412,313.12
FICA Taxes (0.062)	\$4,068.45	\$3,214.58	\$1,238.11	\$8,521.14	\$25,563.41
Medicare (0.0145)	\$951.49	\$751.80	\$289.56	\$1,992.85	\$5,978.54
Retirement Contributions (0.25898)	\$16,994.30	\$13,427.60	\$5,171.72	\$35,593.62	\$106,780.85
Worker's Compensation (0.02951)	\$1,936.45	\$1,530.03	\$589.30	\$4,055.79	\$12,167.36
Health Insurance	\$11,856.00	\$11,856.00	\$4,031.04	\$27,743.04	\$83,229.12
Life, AD&D, LTD (0.006741)	\$442.35	\$349.51	\$134.61	\$926.47	\$2,779.40
Total	\$101,869.16	\$82,977.51	\$31,423.93	\$216,270.60	\$648,811.81

Fire-Based Ambulance (As Equipped)

Vehicle	Cost	Expected Life Cycle
Truck With PowerLoad System	\$ 344,000	6 years
Equipment	Cost	Expected Life Cycle
Truck Radio	\$ 9,000	10 years
Portable Radio (2)	\$ 20,000	10 years
Onboard Mobile Gateway	\$ 2,000	10 years
Ruggedized Tablet MDT mount included docking station and pole	\$ 2,355	5 years
Ruggedized Tablet PCR	\$ 2,000	5 years
Self Contained Breathing Apparatus (2)	\$ 20,000	10 years
SCBA bottle 4500psi (4)	\$ 6,000	10 years
Battery Powered Saw	\$ 1,000	
Miscellaneous Fire Equipment and Supplies	\$ 7,000	
Cardiac Monitor	\$ 31,000	10 years
Chest Compression System	\$ 15,000	8 years
Stair Chair	\$ 4,000	10 years
Autovent	\$ 4,000	10 years
Miscellaneous Medical Equipment and Supplies	\$ 15,000	
Lucas		
Stretcher	\$ 25,000	10 years
Subtotal Equipment	\$ 129,355	
Total	\$ 473,355	Revised 2/1/23



QUESTIONS?