



EMS RESPONSE

City Council Workshop
November 24, 2015



PRESENTATION OVERVIEW

1. INTRODUCTION
2. HISTORY AND BACKGROUND
3. DATA AND ANALYSIS
4. CONCLUSION
5. POSSIBLE STRATEGIES





INTRODUCTION



WHY?

- Address City Council Performance Measure
- Analyze Response Times
- Determine if there is a “Duplication” of Services
 - If Duplication, Provide Possible Strategies to Minimize
- Fire Department is Large Portion of General Fund Budget
 - Any efficiency could result in taxpayer savings



CITY COUNCIL PERFORMANCE MEASURE

GOAL 3: To leverage our financial strengths while ensuring the City remains committed to fiscal responsibility in delivering value-added services to residents and businesses

Measurement 3.2.1.30.a: Inventory and evaluate duplication of fire and emergency services between other applicable agencies and present findings to City Council.



QUESTIONS TO BE ANSWERED

- 1. Is there a Duplication of services within the current Fire Department operation and other emergency service providers?**
- 2. Is the Palm Coast Fire Department achieving their response goal of five minutes or less?**
- 3. Can emergency services be more suitably provided for today's requirements ?**



METHODOLOGY

- Historical Data Used
 - EMS Run Reports from April 2014-2015
 - Compared to Other Data Sources
- Qualitative and Quantitative Analysis
 - Including Geographic Information System (GIS)





HISTORY & BACKGROUND



THE NATIONAL SCENE

President Lyndon Johnson signed Public Law 89-563 in 1966, the “National Traffic and Motor Safety Vehicle Act”

Federal EMS Act of 1973 defined an EMS system



SOURCE: LYNDON B JOHNSON "MESSAGE TO THE CONGRESS TRANSMITTED FIRST ARRIVAL REPORT ON TRAFFIC AND MOTOR VEHICLE SAFETY PROGRAM." MAY 13 1968. ONLINE BY GERHARD PETERS AND JOHN T WOOLSEY, THE AMERICAN PRESIDENCY PROJECT. [HTTP://WWW.PRESIDENCY.USCB.EDU/WS/?PID=28854](http://www.presidency.uscb.edu/ws/?PID=28854)



FIRE SERVICE IN PALM COAST BEGINS IN 1973

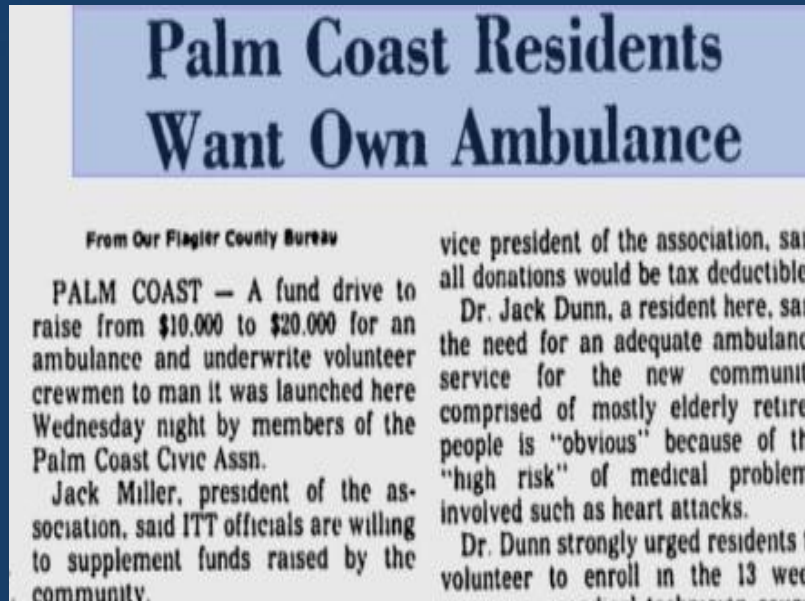


The Volunteer Fire Department was formed in response to community need

- Desire for prompt response to fire and emergency medical calls
- Consisted of 36 volunteers



COUNTY AMBULANCE ISSUES IN 1974



- County Ambulance Issues
 - Mechanical
 - Personnel Needs
- Residents complained to the Palm Coast Civic Association
 - Decided to purchase an ambulance for Palm Coast.
 - Other alternative was service from Daytona Beach



FIRST PUBLICLY OWNED BUILDING IN 1977



Palm Coast Emergency Services Building
a.k.a Station #22



THE 2-TIER SYSTEM IN 1980

- Fire Department added a rescue unit to the fleet in 1980 and began the “two-tier” response system
- Only County ambulance was stationed at the Airport
- Palm Coast volunteers responded until the Ambulance arrived
- 5-10 minute response was the norm



FIRE PROTECTION MASTER PLAN IN 1985

- Palm Coast Fire Protection Master Plan
 - 26 potential fire station sites within Palm Coast
 - Participate in “EMS” by providing “first response” service for rescue
 - Maintain a rescue vehicle with equipment to perform rescue operations



Source: Ryland Research, Inc, Santa Barbara California, August 12, 1985



COUNTY DISCUSSES EMS FUNDING IN 1987



REQUEST BY COMMUNITY FOR ENHANCED SERVICES IN 1989

- Palm Coast Civic Association requested that County add an “Advanced Life Support” ambulance
 - 2 County Ambulances located at Airport
 - Increased call volume
 - Increased response times
 - Palm Coast population was 13,000 with 968 service calls
- Flagler Beach wanted an ambulance as well



2ND FIRE STATION OPENS IN 1989



Palm Coast Opens 2nd Fire Station
a.k.a Station # 21



COUNTY AMBULANCES IN CITY STATIONS FROM 1992-1994



- First Rescue/Ambulance was housed in Station #22 in 1992
 - Station constructed in 1977
 - Palm Coast population was 14,000, total incidents 1,089



- Second Rescue/Ambulance was housed in Station #21 in 1994
 - Station constructed in 1989
 - Palm Coast population was 16,000, total incidents 1,498



CITY INCORPORATION IN 1999



- “Palm Coast Incorporates” on December 31, 1999
 - Population 29, 360
 - Incidents 2,168
- Fire Department becomes apart of City providing Basic Life Support/First Responder service
- 2 County Ambulances still covered the City



CITY SUPPLEMENTS COUNTY EMS IN 2002-2004

- County Rescue/Ambulances covering Palm Coast in 2002 remained at 2
 - Palm Coast population 50,484, total incidents 4,455
- City requested to provide Advanced Life Support non-transport service
 - Concerns about growth and response times
- On January 12, 2004, the City was given permission by County for Advanced Life Support Service non-transport



PALM COAST ADDS 3RD STATION IN 2004



Palm Coast opens 3rd fire station Belle Terre North



PALM COAST ADDS TWO MORE STATIONS IN 2009

Palm Coast opens 2 new and **1 replacement station**

**Replacement
Station #21**



**Palm Harbor
Station #24**



**Town Center
Station #25**





WHY FIRE DEPARTMENTS PROVIDE EMS?

- Provide services for the greater good of the community concerning quality of life issues
- Fire service-based emergency medical services (EMS) systems are strategically positioned to deliver time critical response and effective patient care
 - 95% of career Fire Departments in the U.S. provide EMS Services
 - 80% of career firefighters are cross trained multi-role firefighter-EMTs (BLS)





DATA & ANALYSIS

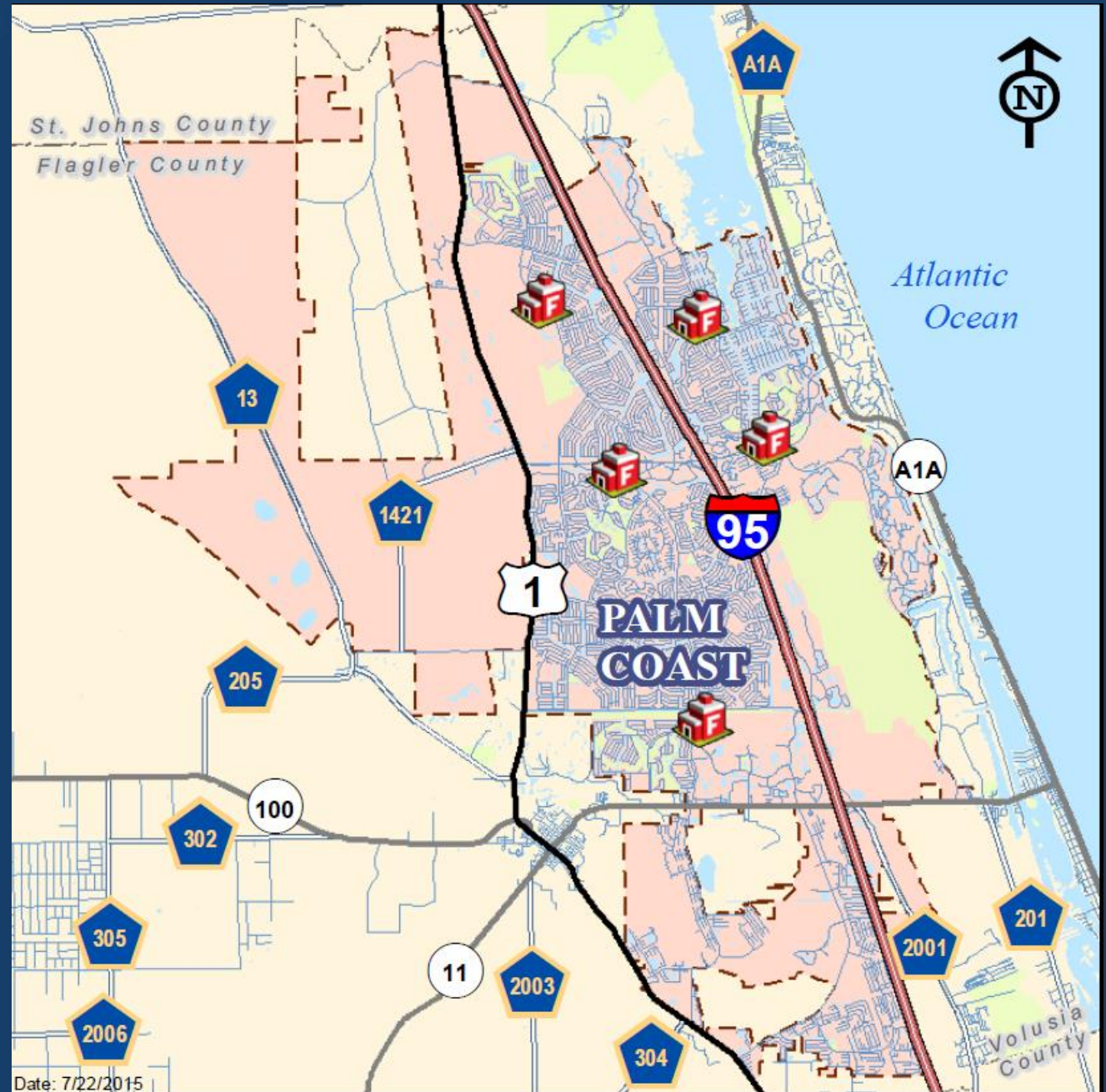


DATA

- Total of 8,040 EMS reports were reviewed from April 1, 2014 through April 30, 2015 for “calls for service”
- Calls for service are called into the 9-1-1 dispatch center operated by FCSO, dispatcher then advises responders per CAD recommendation
- The appropriate state reports are then generated
- This data source is submitted to the State as authentication of calls for service.



FIRE STATIONS



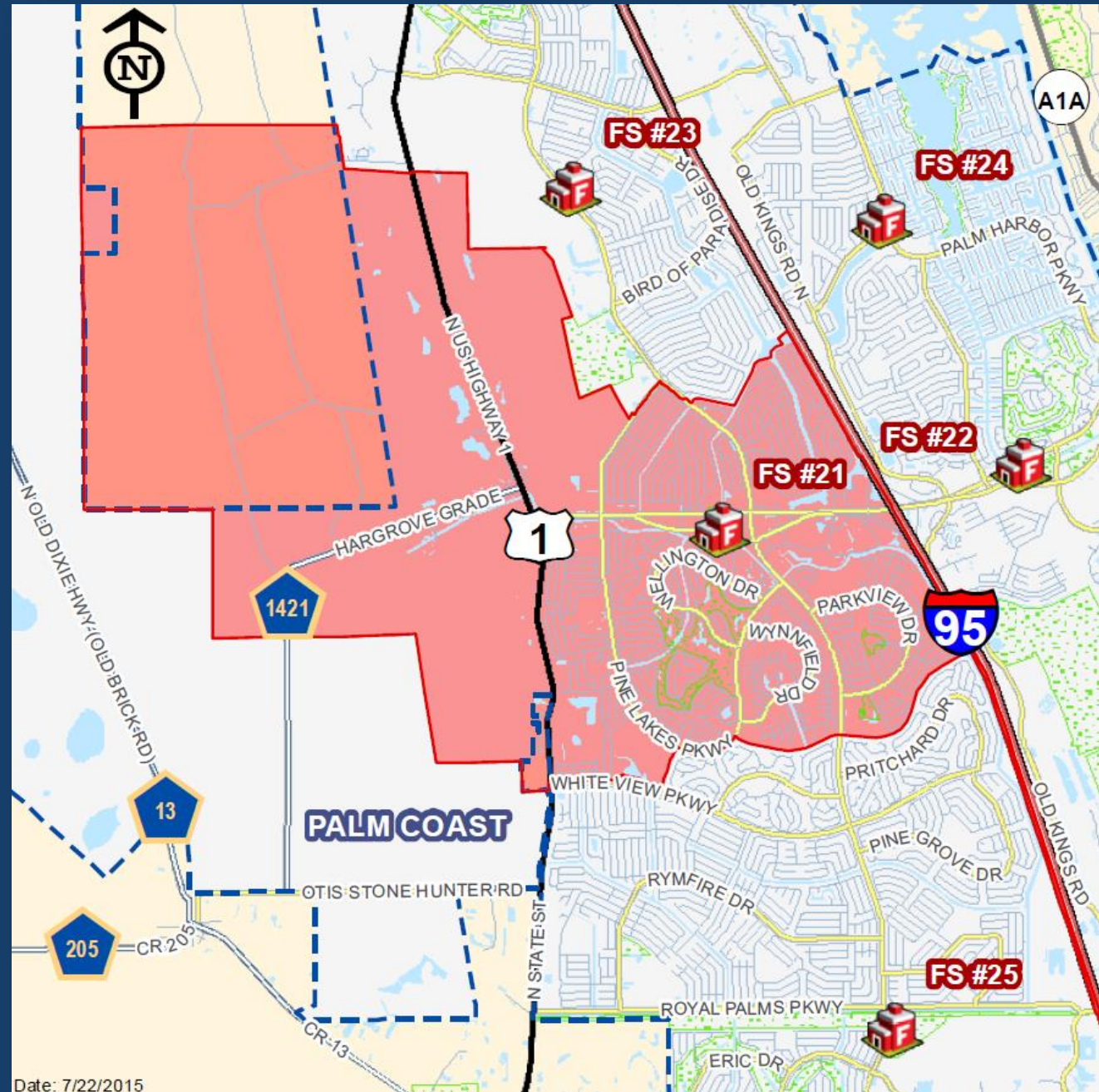
SOURCE: GIS DEPARTMENT "CITY OF PALM COAST"



FIRE STATION #21

(1989/2008)

RESPONSE ZONE



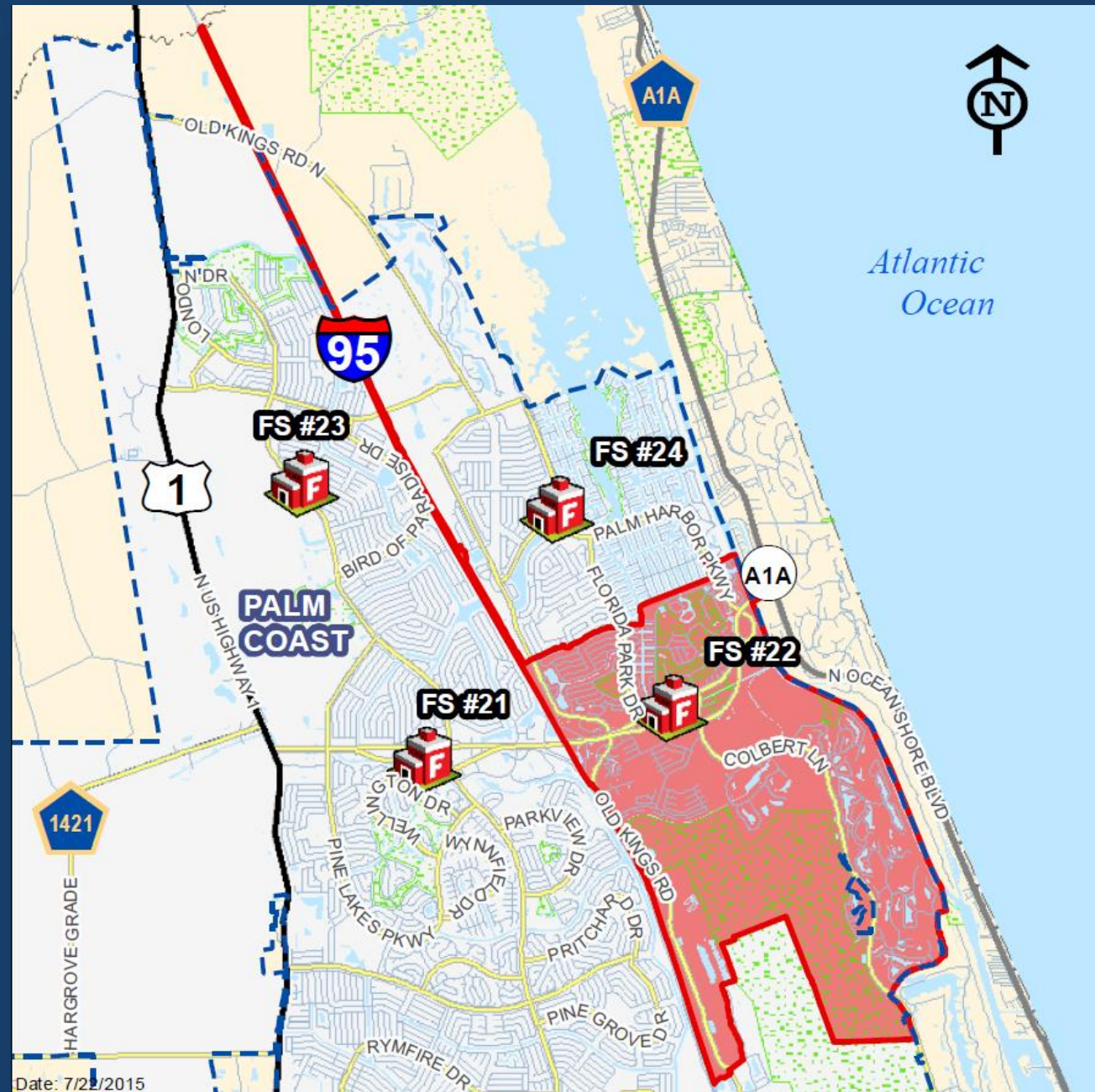
Date: 7/22/2015

SOURCE: GIS DEPARTMENT "CITY OF PALM COAST"

FIRE STATION #22

(1997)

RESPONSE ZONE



SOURCE: GIS DEPARTMENT "CITY OF
PALM COAST"

STATION LOCATION STUDY 2004

- Future Stations were Recommend based on Population, Call Volume and Response Times
- Identified Future Station Locations
 - Station #23 in the Northwest Section of the City
 - Station #24 in the Northeast Section of the City
 - Station #25 in the Southern section of the City

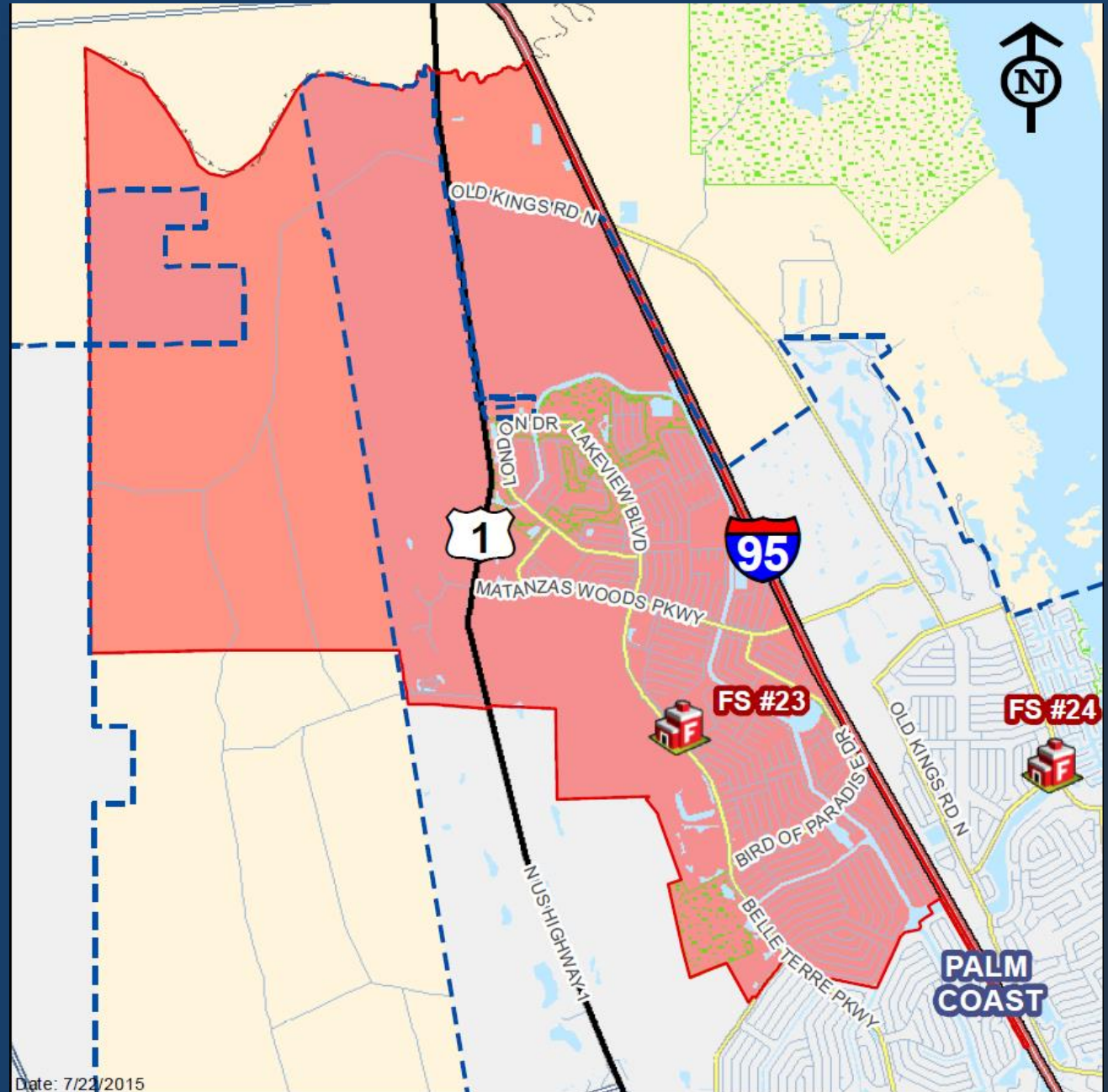
Source: Matrix Consulting Group, Palo Alto Ca.



FIRE STATION #23

(2004)

RESPONSE ZONE

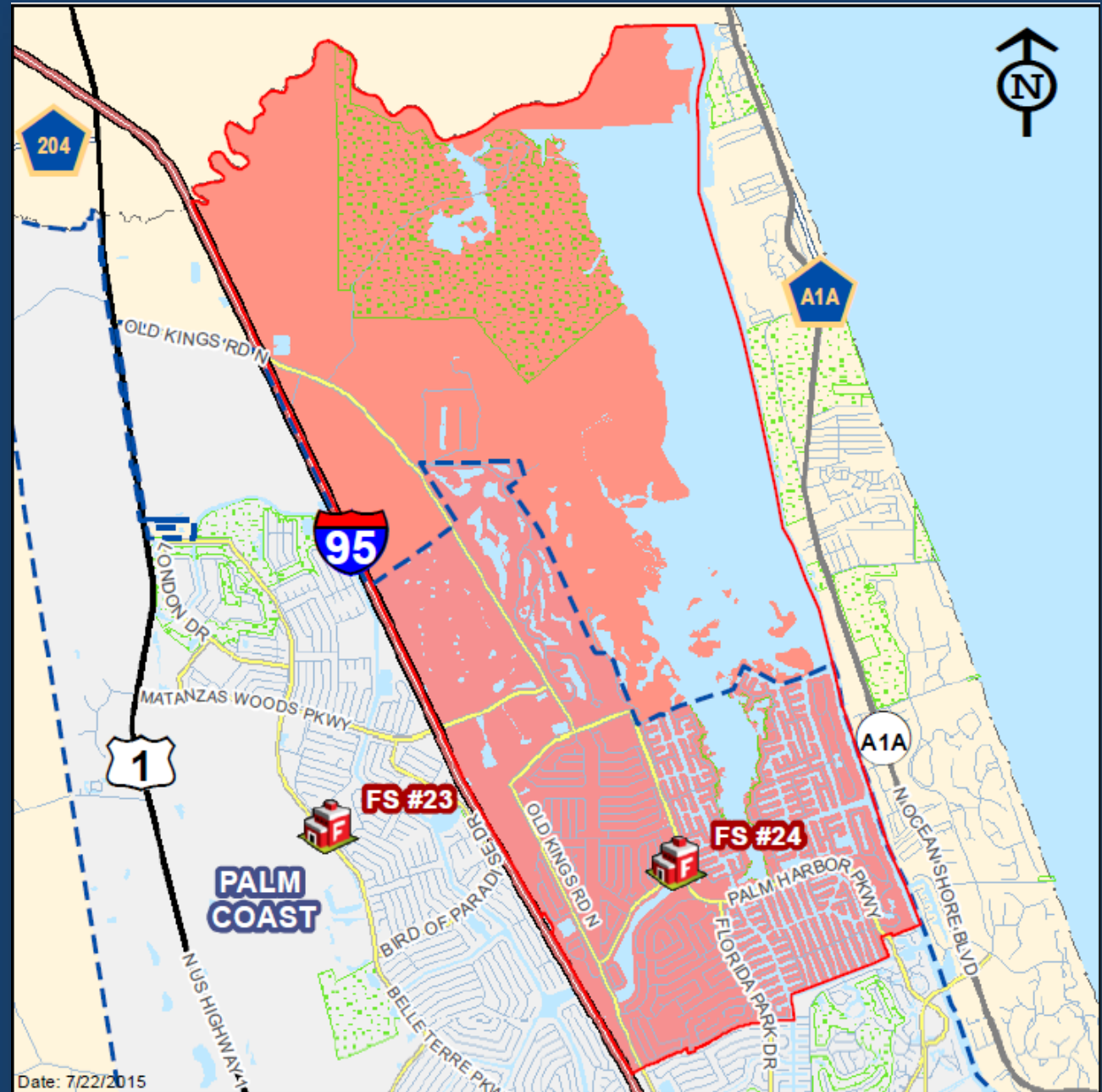


SOURCE: GIS DEPARTMENT "CITY OF
PALM COAST"

FIRE STATION #24

(2009)

RESPONSE ZONE

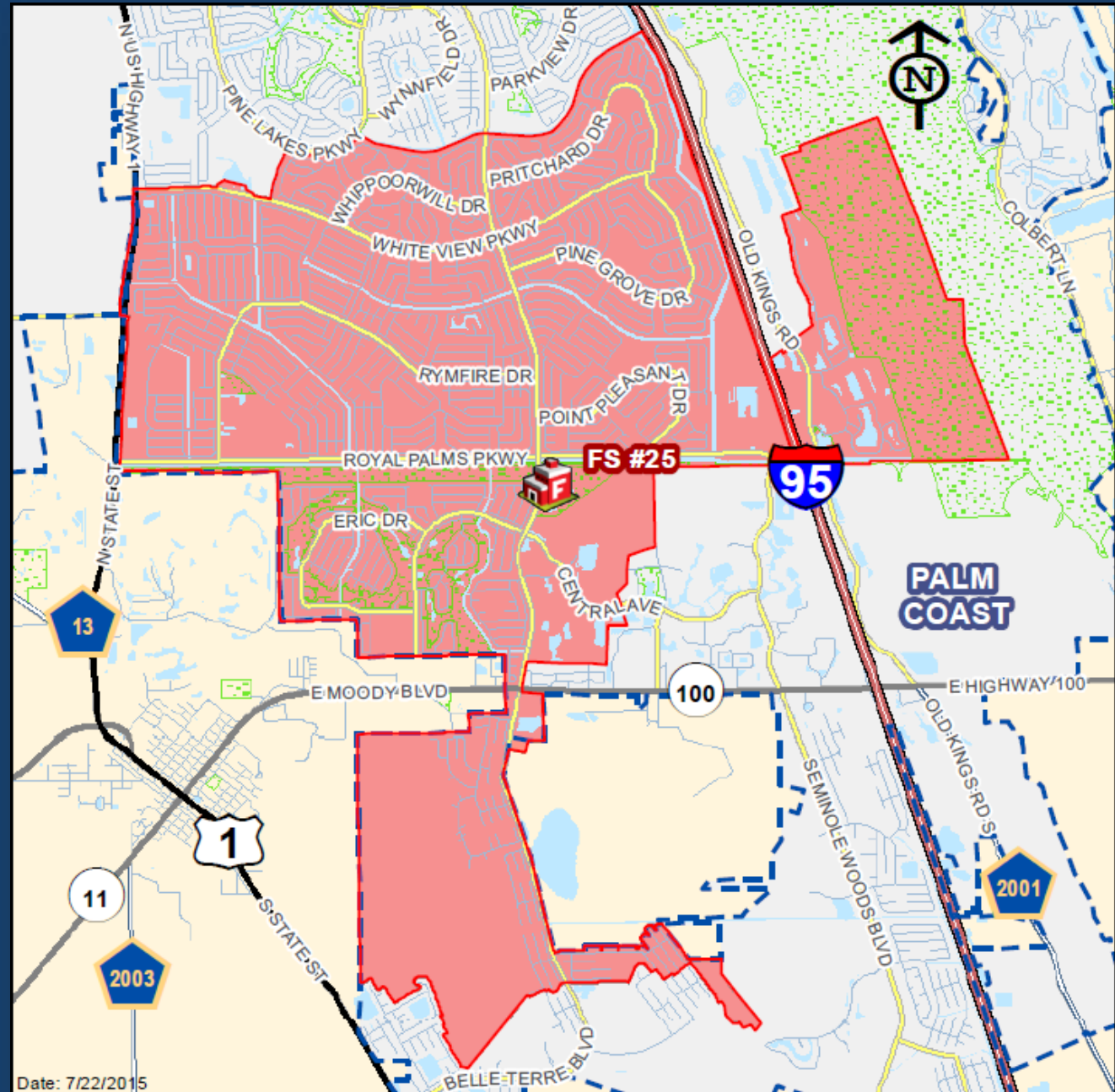


SOURCE: GIS DEPARTMENT "CITY OF
PALM COAST"

FIRE STATION #25

(2009)

RESPONSE ZONE



Date: 7/22/2015

SOURCE: GIS DEPARTMENT "CITY OF
PALM COAST"



STATION LOCATION STUDY 2010

Study Recommendations

- Next Fire Station should be located in Seminole Woods
- Additional Rescue/Ambulance is needed in the Northern Section of the City for Transport
 - Palm Coast provides Advanced Life Support as first response



Source: Matrix Consulting Group, Palo Alto Ca.



FIRE PROGRAMS & EMERGENCY PRO

Enter your username and password.



User Name:

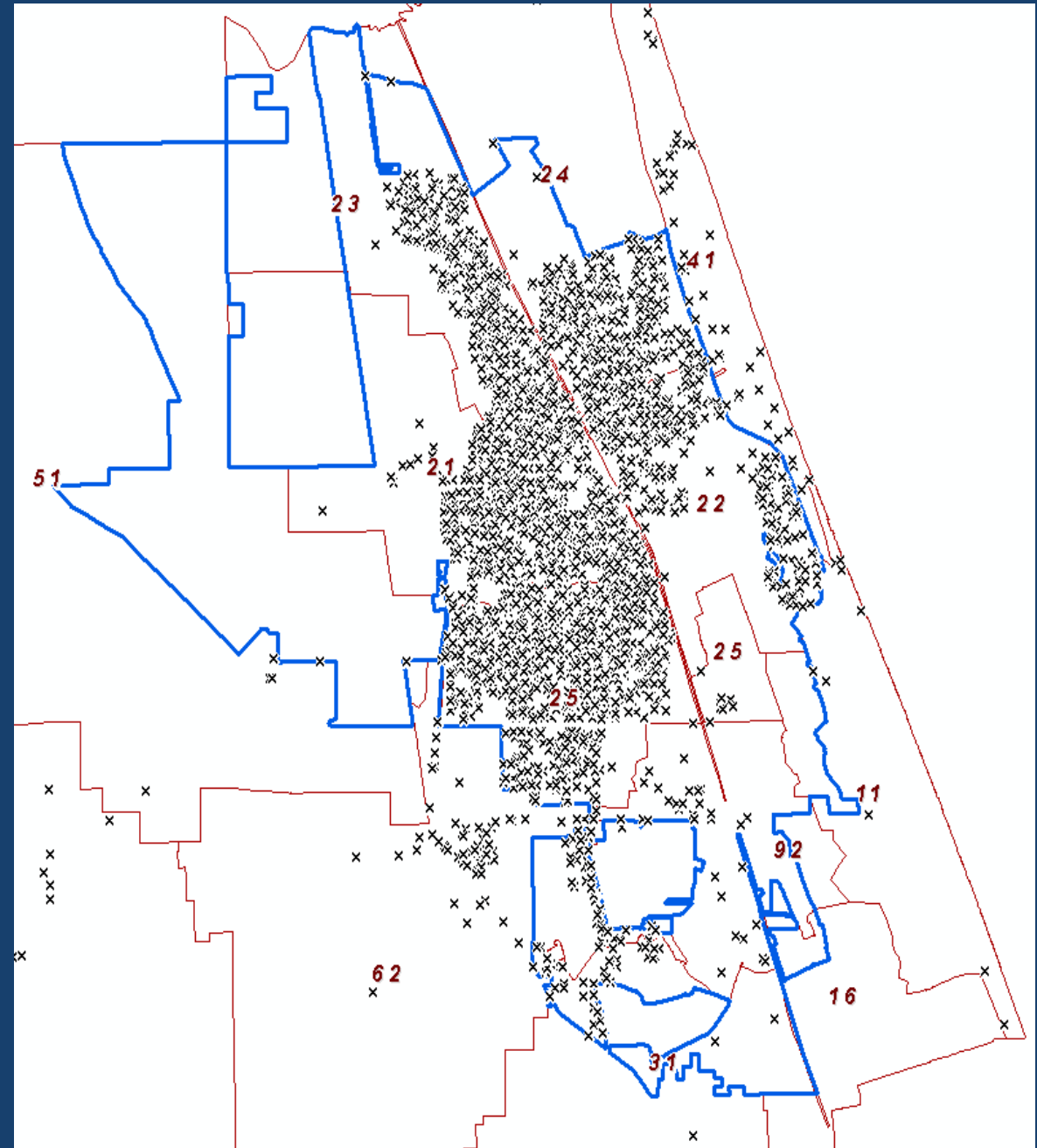
Password:

Login Exit



SUMMARIZE UNIT RESPONSE TIMES TO INCIDENTS

- *Gather* EMS Pro Data
 - April 2014-2015: 8040 total incidents, including call backs
- *Support* Scenarios regarding Unit Response Times
 - Avg. response by district by unit
 - Avg. response by district by call type



EMSPRO DATA

Fire Districts - undivided by City Limits			Fire Districts - divided by City Limits		
Row Labels	Count of NOC	Average of Overall Response Time in Minutes	Row Labels	Count of noc	Average of Overall Response Time in Minutes
⊗ District 11	12	11.17	⊗ District 11, Outside City Limits	12	11.17
⊗ District 21	2348	6.04	⊗ District 21, Inside City Limits	2345	6.04
⊗ District 22	1166	5.80	⊗ District 21, Outside City Limits	3	7.00
⊗ District 23	721	6.23	⊗ District 22, Inside City Limits	1166	5.80
⊗ District 24	903	5.70	⊗ District 23, Inside City Limits	718	6.22
⊗ District 25	1760	6.70	⊗ District 23, Outside City Limits	3	12.00
⊗ District 31	198	8.42	⊗ District 24, Inside City Limits	899	5.68
⊗ District 41	59	10.61	⊗ District 24, Outside City Limits	4	11.00
⊗ District 51	10	9.60	⊗ District 25, Inside City Limits	1759	6.70
⊗ District 62	140	7.57	⊗ District 25, Outside City Limits	1	
⊗ District 71	23	19.50	⊗ District 31, Inside City Limits	194	8.42
⊗ District 92	85	6.59	⊗ District 31, Outside City Limits	4	
⊗ (blank district value)	615	6.54	⊗ District 41, Outside City Limits	59	10.61
Grand Total	8040	6.25	⊗ District 51, Outside City Limits	10	9.60
			⊗ District 62, Inside City Limits	9	10.29
			⊗ District 62, Outside City Limits	131	7.23
			⊗ District 71, Outside City Limits	23	19.50
			⊗ District 92, Inside City Limits	84	6.57
			⊗ District 92, Outside City Limits	1	7.00
			⊗ (blank district value)	615	6.54
			Grand Total	8040	6.25

EMSpro data April 1 2014 – April 30 2015

Fire Programs data April 1 2014 – April 30 2015

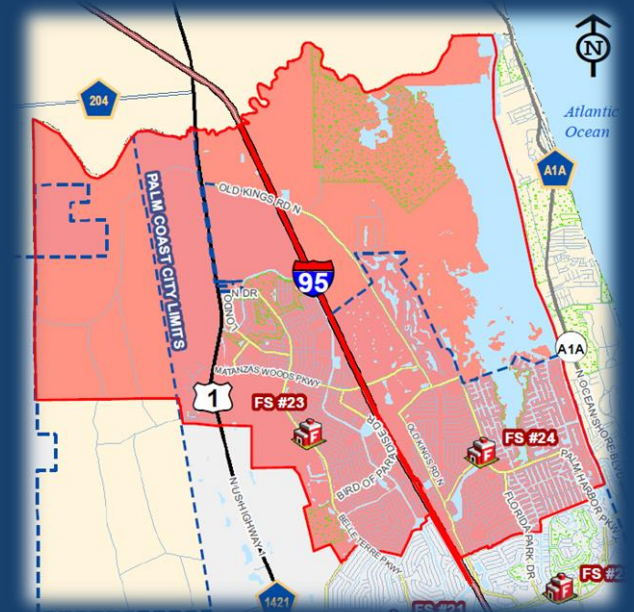
Fire Districts – undivided by City Limits	EMS calls only		Fire Districts – undivided by City Limits	All types of Calls	
District	Count of EMS calls	Average Response Time in Minutes	District	Count of NOC calls	Average Response Times In Minutes
District 11	12	11.17	District 11	29	5.07
District 21	2348	6.04	District 16	6	4.83
District 22	1166	5.8	District 21	2629	5.63
District 23	721	6.23	District 22	1791	5.11
District 24	903	5.7	District 23	944	6.13
District 25	1760	6.7	District 24	1199	5.55
District 31	198	8.42	District 25	2042	6.21
District 41	59	10.61	District 31	221	5.71
District 51	10	9.6	District 41	212	2.92
District 62	140	7.57	District 51	9	7
District 71	23	19.5	District 62	187	4.78
District 92	85	6.59	District 71	44	7.8
(blank district value)	615	6.54	District 92	210	3.3
		38028 minutes / 6081 calls where minutes are > 0 = 6.25 minutes			53137 minutes / 8252 calls where minutes >= 0 = 6.44 minutes
Grand Total	8040	38028 minutes / 8040 calls where minutes are >= 0	Grand Total	9523	53137 minutes / 9523 calls where minutes >= 0 =



TOTAL EMS INCIDENTS BY GEOGRAPHICAL LOCATION

Station	Year Built	Calls for Service	%	Ambulance
#23 North Belle Terre	2004	721	9%	No
#24 Palm Harbor	2009	903	11%	No
#21 Corporate Drive	1989/2008	2,348	29%	Yes
#22 Clubhouse Drive	1977	1,166	15%	Yes
#25 South Belle Terre	2009	1,760	22%	No
#92, #31, & #62 Inside City	n/a	287	4%	Yes (#92 PT)
All Other County Responses	n/a	240	3%	
Non Geo-located Calls	n/a	615	7%	

AMBULANCE/RESCUE IN NORTHERN SECTION OF CITY



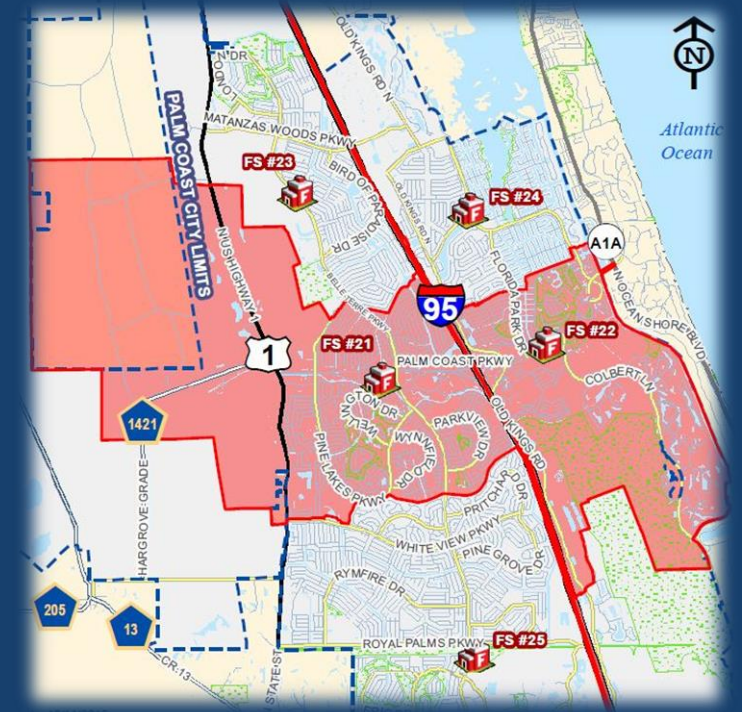
Station	Year Built	Calls for Service	%	Ambulance
#23 North Belle Terre	2004	721	9%	No
#24 Palm Harbor	2009	903	11%	No
TOTAL		1,624	20%	



SOURCE: COMPILED FROM PALM COAST FIREPROGRAMS AND EMSPRO RMS DATA APRIL 2015



AMBULANCE/RESCUE IN CENTRAL SECTION OF CITY



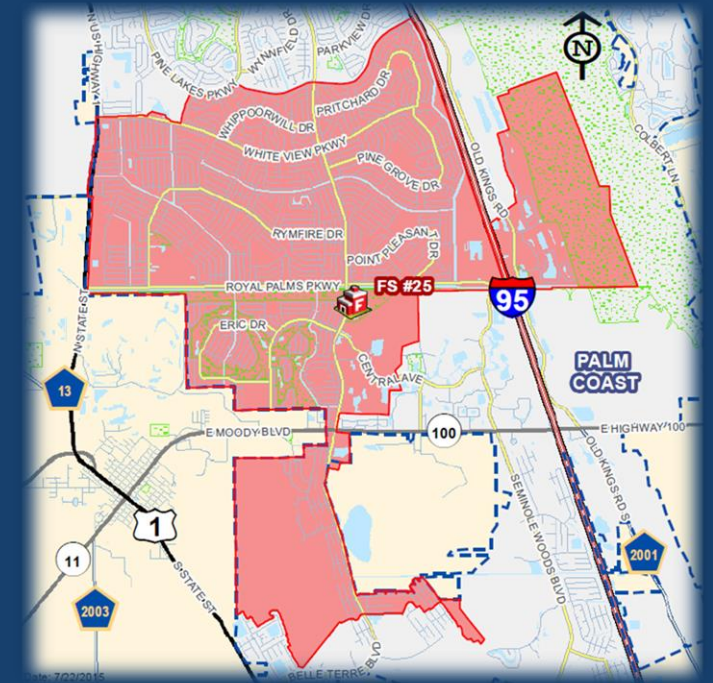
Station	Year Built	Calls for Service	%	Ambulance
#21 Corporate Drive	1989/2008	2,348	29%	Yes
#22 Clubhouse Drive	1977	1,166	15%	Yes
TOTAL		3,514	44%	



SOURCE: COMPILED FROM PALM COAST FIREPROGRAMS AND EMSPRO RMS DATA APRIL 2015



AMBULANCE/RESCUE IN SOUTHERN SECTION OF CITY



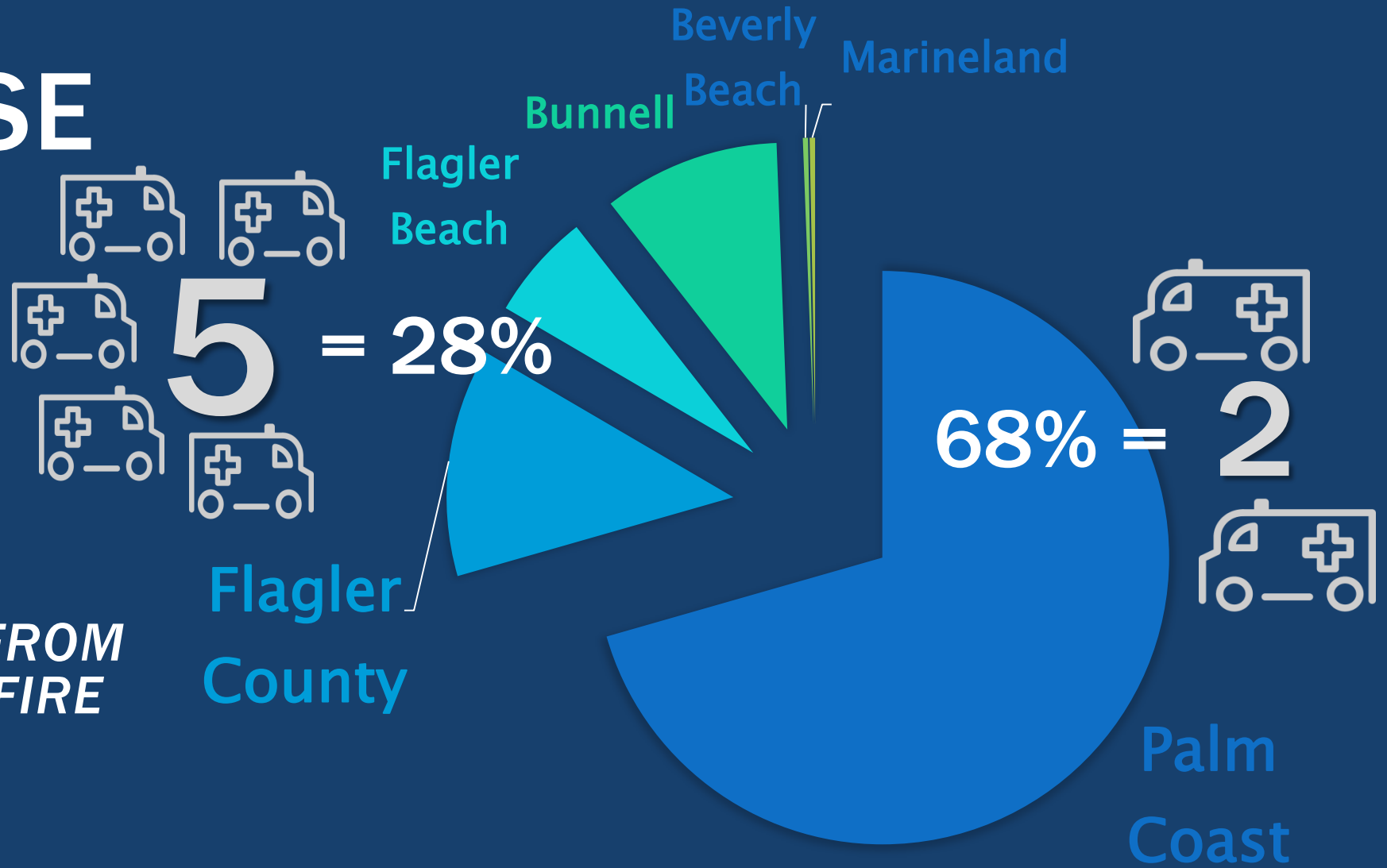
Station	Year Built	Calls for Service	%	Ambulance
#25 South Belle Terre	2009	1,760	22%	No (#92 PT)



SOURCE: COMPILED FROM PALM COAST FIREPROGRAMS AND EMSPRO RMS DATA APRIL 2015



COUNTY RESPONSE DATA



DATA COLLECTED FROM
FLAGLER COUNTY FIRE
RESCUE ANNUAL
REPORT FOR 2014



SOURCE: "FLAGLER COUNTY FIRE RESCUE, 2014 ANNUAL REPORT." [HTTP://FLAGLEREMERGENCY.COM/DOC/FIRERESCUE/ANUAL_REPORT_2014-2.PDF](http://FLAGLEREMERGENCY.COM/DOC/FIRERESCUE/ANUAL_REPORT_2014-2.PDF) ACCESSED: SEPTEMBER 22, 2015



PALM COAST RESPONSE TIME ANALYSIS

Ahead 1 Minute



Within 1 Minute of Each Other =22.2%

Behind 1 Minute



24.3% =



Cancelled

24.3% =





CONCLUSION



IS THERE A DUPLICATION OF EMS SERVICES?

YES

- Increase Population = Increase Call for Service
- No Additional Rescue/Ambulances to Keep Up
- Palm Coast has added additional stations and resources to ensure adequate timely response is maintained
- County Policy is to relocate Rescue/Ambulances when needed



IS PALM COAST MEETING RESPONSE TIME GOALS?

NO

- Goal established by Council in 2001 for 5 minute or less is not attainable
- “Reaction time” of station personnel is reflected within the “5 minute or less” goal from the time the apparatus leaves the station to arrival at the emergency scene
- Clarifying the goal to “7” minutes takes the reaction time into consideration and reflects a “5” minute response time



CAN EMS SERVICE BE MORE
EFFICIENTLY PROVIDED?

YES





POSSIBLE STRATEGIES



STATUS QUO

- Continue to respond and provide ALS with City resources (both staff and fire engines) in order to provide desired level of service to supplement County EMS Service



POSSIBLE STRATEGIES

1. Change Response Protocols
2. County Only Responds to EMS Calls
3. Use Alternative Vehicles for EMS Calls
4. Rescue Vehicles in All Fire Stations
5. Eliminate Duplicate Taxing for EMS Services
6. Consolidation of City and County Fire/EMS
7. Improved Coordination with Flagler County



#1 CHANGE RESPONSE PROTOCOLS

- Currently, Computer Automated Dispatch, (CAD) utilizes a “call type” of “Medical” for ALL medical incidents.
- With planned upgrades to the system (Spring 2016), the call type “Medical” will be expanded into specific calls for service and should reduce the number of responders needed based upon the information received.



#2 COUNTY ONLY RESPONDS TO EMS CALLS

- In 2004, City began to provide ALS non-transport service to ensure an adequate level of service, since County did not provide additional dedicated rescue/ ambulance units
- Response Data indicates need for City ALS service
 - County Rescue only arrives 1.67% of time ahead of City Engine
- Furthermore, additional County staffing on rescue (3 per unit) could further reduce need for City Fire Department response
 - Increase in County EMS Expenditures



#3 USE ALTERNATIVE VEHICLES FOR EMS CALLS

- “Jump” Trucks could be used to respond to EMS Calls
 - With existing staff, Engine would be out of service during EMS calls
 - With additional staff, Engine would be able to respond to other calls while jump truck in use
 - Additional staff = Increased costs



#4 RESCUE VEHICLES IN ALL FIRE STATIONS

- Preferred vehicle to respond to EMS Calls
- Five (5) Different Alternatives
 - County Provided Rescue Vehicle and County Staff
 - County Provided Rescue Vehicle with Existing City Staff
 - County Provided Rescue Vehicle and Additional City Staff
 - City Provided Rescue Vehicle with Existing City Staff
 - City Provided Rescue Vehicle and Additional City Staff



#4 RESCUE VEHICLES IN ALL FIRE STATIONS

- Alternatives increase costs to either the City or County
 - Rescue Vehicles (Type III) @ \$210,000 each
 - Increased Personnel Costs for three (3) of the Alternatives
- County approval needed for City to transport
 - May decrease County costs & revenues if City transports



#5 ELIMINATE DUPLICATE TAXING FOR EMS SERVICES

- Create a Municipal Service Taxing Unit (MSTU) as a funding mechanism for Fire/EMS Services
- Eliminates City residents paying for City Fire/EMS Services plus Countywide Fire/EMS
- Shift Costs of County Fire/EMS from Countywide to only unincorporated areas



#6 CONSOLIDATION OF CITY AND COUNTY FIRE/EMS

- Prior to Palm Coast as a community, Fire/EMS was provided by County Only
 - City provided Fire/EMS services in response to community desire for higher level of service
- Consolidation Issues (*Union Contracts, Separate Policies and Procedures, Pay Scales / Retirement Plans*)
- Decrease Taxes to City Residents?
- Increase Taxes to County Residents?
- Level of Service?



#7 IMPROVED COORDINATION WITH COUNTY FOR EMS CALLS

- Monthly Coordination Meetings
 - Address Issues
 - Review Collected Data
 - Establish Long Range Plan
- Palm Coast staff to ride on Rescue/Ambulance
 - Eliminate Need to run Fire Engine to Medical Call
 - 3 EMT/Paramedics to Medical Call
 - 2 Firefighters remain at Fire Station to run Fire Engine





QUESTIONS

