March 2016

Draft Executive Summary Report

Martin County Fire Rescue and Stuart Fire Rescue
Fire and EMS Consolidation Feasibility Study
Martin County, Florida

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CONSULTANT DRAFT REPORT

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EXECUTIVE SUMMARY

Martin County and the City of Stuart collectively conducted a sealed bid procurement process for consulting services to conduct a Feasibility Study for Fire and EMS Consolidation throughout Martin County, including the City of Stuart, the Town of Sewall's Point, the Town of Ocean Breeze, and the Town of Jupiter Island.

In April of 2015, *FITCH* & Associates, LLC entered into a contractual agreement with Martin County, FL to complete the study.

General Observations and Conclusions

It was evident throughout the project that the concept of countywide consolidation of fire and rescue services was not a newly developed theoretical construct. However, the operational, economic, and political environments were not conducive to move the concept forward previously.

At this time, the *FITCH* team believes that the County and their municipal partners retain the requisite operational and economic efficiencies to elevate the concept of countywide consolidation for consideration and implementation. The operational and financial models developed through this process provide broad flexibility for policy to be established in a successful manner and optimizations are not intended to be overly prescriptive but rather demonstrate potentiality.

This report, analyses, and subsequent recommendations converge on the value of creating an independent fire district for Martin County, FL that provides both operational and economic efficiencies. In addition, the alternative governance models developed incorporate critical political pillars for representativeness, fairness, and equity.

Finding #1:

Sufficient operational and economic efficiencies exist to recommend pursing the creation of an independent fire district for Martin County that will naturally consolidate fire and rescue service delivery.

Report Structure and Methodology

This report is the culmination of two distinct sections consisting of a summary report and the supporting data report.

While the data report has individual agency performance identified, this summary report attempts to provide only system level data pertinent to a theoretically consolidated system. In this manner, stakeholders and policy discussions can focus on issues related to future collaborative efforts and not focus on historical perspectives and legacy issues.

The *FITCH* team utilized a combination of structured interviews, document reviews, direct observations, and comprehensive quantitative, temporal and GIS analyses. Performance data was provided by the 911 Center and were evaluated in conjunction with the available internal records management system information from each department.

The *FITCH* team met with elected officials from each community with the exception of the Town of Jupiter Island. In addition, structured interviews were completed with each participating community's administrations throughout this project. Specifically, the *FITCH* team met with each Martin County and Stuart City Commissioner throughout the project study period.

Each fire department administration's participated in structured interviews at the beginning of the project and then was provided draft concepts near the conclusion. Draft performance data was provided to each fire administration for review and feedback prior to the completion of this report. This validation strategy is an integral milestone to ensure future oriented discussions focus on strategic pathways rather than the underlying assumptions.

Similarly, all financial models were presented to the both the City and County administrations and financial teams to both understand and validate each model's assumptions.

Finally, the *FITCH* team met with each of the International Association of Firefighters (IAFF) locals to solicit input.

REVIEW OF COMMUNITY CHARACTERISTICS, CURRENT SERVICES, AND COMMUNITY EXPECTATIONS FOR SERVICE

Community Characteristics

Martin County, FL is located on the coast in Southeastern Florida consisting of approximately 544 square miles with an estimated population of approximately 156,000.[1] Martin County Fire Rescue provides fire and rescue services, including Advanced Life Support and patient transportation services, throughout all of the unincorporated areas and through a contractual relationship with the Towns' of Jupiter Island and Ocean's Breeze.

The City of Stuart is the county seat and retains an urban density of greater than 2,300 population per square mile over the City's nearly seven square mile area.[2] Stuart Fire Rescue provides fire and rescue services, including Advanced Life Support and patient transportation services, throughout the incorporated city limits and through a contractual relationship with the Town of Sewall's Point.

In addition, Interlocal agreements (ILA) have been established that support the best practice of closest unit dispatching. Therefore, enclaves exist where Stuart Fire Rescue has the responsibility for primary response services in unincorporated Martin County and the reciprocal is true of Martin County Fire Rescue having primarily responsibility for portions of the City's incorporated limits.

The Town of Jupiter Island also operates a public safety department on the island for initial response for fire and emergency medical services supplemented through a contractual relationship with Martin County for a dedicated Paramedic and automatic fire and EMS support.

Current Services and Existing Capital Infrastructure

Resources are deployed with a variety of unit types out of 15 fixed facilities. The Martin County operation is supported out of an administrative building shared with the sheriff's office in addition to a fleet maintenance facility and Ocean Rescue headquarters facility.

Martin County has demonstrated a strategic and mindful approach to their facilities and apparatus. Although several stations are in need of renovation and replacement, the county has been proactive in providing excellent quarters for their apparatus and personnel. The Martin County Capital Improvement Plan currently accounts for every station in need of renovation or reconstruction. The balance of the fire stations are well organized and meet or exceed best practices in their layout, functionality and design. For instance, in the newer stations, a separation of sleeping and shower facilities has been provided to accommodate a diverse workforce. These stations are also exemplary in their storage of firefighter PPE meeting all recommendations of NFPA 1851.

[1] U.S. Census Quickfacts. Retrieved from http://www.census.gov/quickfacts/table/PST045215/1268875,12085,00
[2] Ibid.

Apparatus in the system is also well provided for. The county maintains a vehicle replacement plan based on an apparatus life of 15 years; 10 years frontline and 5 years reserve. The county provides for all repair, maintenance, and testing required of these vehicles through a dedicated fleet maintenance facility. The following provides an overview of facilities and apparatus within Martin County.

Units in blue provide Advance Life Support (ALS) services while all others are Basic Life Support (BLS) capable.

Martin County Fire Rescue Fleet Maintenance Facility

This is a state of the art, 5-year-old facility that services only the County's fire rescue vehicles. The operation is 100% self-sustained and sufficient with the ability to perform nearly all repair work, service testing and certifications including pump and hose testing. Ladder testing and certification is contracted out to a third party provider. Martin County's reserve apparatus are stored here under cover and are listed in the accompanying table. The facility also acts as the supply hub for the fire department. All supplies, office materials, uniforms, parts etc. are stocked and distributed from this location. The facility utilizes a standard asset management tracking software. However, the software is not fleet specific and therefore despite capturing the elements related to cost of ownership, it does not facilitate the aggregate reporting necessary to strategically manage apparatus replacement by cost of ownership. Instead, the replacement schedule is based on age with millage as a consideration.

Unit	Year	Replacement	Estimated Cost
B/U Rescue	2001	N/A	N/A
B/U Rescue	2001	N/A	N/A
B/U Rescue	2001	N/A	N/A
B/U Rescue	2003	N/A	N/A
B/U Rescue	2005	N/A	N/A
B/U Engine	1997	N/A	N/A
B/U Engine	1997	N/A	N/A
B/U Engine	1997	N/A	N/A
B/U Engine	1997	N/A	N/A
B/U Engine	2001	N/A	N/A

Station 11 – Flight Station

This is an older facility located at the airport. This station is home to the County's air transport service LifeStar. The LifeStar unit is operated by PHI with two Martin County flight medics and one PHI pilot. When air ship is O.O.S. for greater than 2hrs, the County medics staff and place Rescue 11 in service from this location. Station is also home to Battalion 3 who serves as a float fill-in commander between Battalion 1 and 2 depending on which is off. Battalion 3 doesn't relocate to the quarters of the battalion they are covering. This station can adequately house a diverse crew of four persons.

Unit	Year	Replacement	Estimated Cost
Rescue 11	1997	2001 B/U	N/A
Battalion 3			
LifeStar	N/A	N/A	N/A

Station 14 – Hutchinson Island

Unit	Year	Replacement	Estimated Cost
Quint 14	2006	2021	$850,000
Rescue 14	2003	2015	$250,000

Built in 1981, the station is clean but in need of replacement. This station can sleep 7 personnel but provides no gender separation. Sleeping quarters are open bunks with the exception of the officer's quarters. There are two bathrooms with showers for male and female personnel. Two apparatus bays are fully occupied. This station is planned for replacement by FY2022.

Station 16 – Jensen Beach

Unit	Year	Replacement	Estimated Cost
Engine 16	2007	2018	$650,000
Rescue 16	2007	2015	$250,000
Tanker 16	2007	2022	$250,000
Brush 16	1973	Rebuild	$50,000
Rescue Sup1			

Built in 2005, the station is clean, well kept, and fully functional. The station can sleep 11 personnel with 11 separate bunkrooms and three bathrooms with showers. Station has adequate office space including a classroom for training. Six apparatus bays are fully occupied.

Station 18 – North River Shores

Unit	Year	Replacement	Estimated Cost
Engine 18	2001	2015	$550,000
Rescue 18	2007	2017	$275,000
HazMat 18	2001	2021	$400,000
Squad 18	2006	2021	$85,000

Built around 1992, the station is clean but challenged for adequate space and accommodations. The station can sleep 7 personnel but provides no gender separation. Sleeping quarters are two open bunkrooms. There are two bathrooms with showers with no gender specification. The office space is limited. Three apparatus bays are fully occupied.

Station 21 – Palm City

Unit	Year	Replacement	Estimated Cost
Engine 21	2007	2018	$625,000
Rescue 21	2013	2023	$300,000
Tanker 21	2001	2020	$250,000
Brush 21	1953	Rebuild	
Battalion 1			

Built in 2004, the station is clean, well kept, and fully functional with plenty of space and capacity. The station can sleep 11 personnel and provides three bathrooms with showers. The station includes a separate officer and battalion's quarters. The station has six apparatus bays, a large classroom and is home to the SCBA maintenance and repair shop.

Station 22 – Tropical Farms

Unit	Year	Replacement	Estimated Cost
Engine 22	2007	2018	$650,000
Rescue 22	2009	2019	$275,000
Tanker 22	1999	2020	$250,000
Brush 22	1968	Rebuild	$50,000

Built in 2012, the station is clean, well kept, and fully functional. The station can sleep seven personnel and provides three bathrooms with showers. The station includes a separate officer's quarters and has three apparatus bays fully occupied.

Station 23 – Kanner Highway

Unit	Year	Replacement	Estimated Cost
Quint 23	2012	2027	$900,000
Rescue 23	2009	2019	$285,000
Rescue Sup 2			

Built in 2008, the station is clean, well kept, and fully functional with plenty of space and capacity. The station can sleep seven personnel and provides three bathrooms with showers. The station includes a separate officer's quarters. The station has four apparatus bays (2 drive through), adequate office space and day room space.

Station 24 – Indiantown

Unit	Year	Replacement	Estimated Cost
Engine 24	2007	2018	$625,000
Rescue 241	2014	2024	$300,000
Rescue 242	2007	2017	$275,000
Tanker 24	1996	2020	$250,000
Brush 24	1973	Rebuild	$50,000
Brush 242	1980	Rebuild	$50,000

Built in 1998, the station resides in a shared county facility. The station is clean, well kept, and fully functional. The station can sleep 11 personnel and provides three bathrooms with showers. The station includes a separate officer's quarters. The station has three apparatus bays that are full.

Station 28 – Is an old station that existed prior to merger and formation of Martin County Fire Rescue. This facility is in the far northwest corner of the County and is not used to deploy resources. The station would not be suitable for occupancy and is currently being used for storage.

Station 30 –Port Salerno

Unit	Year	Replacement	Estimated Cost
Engine 30	2014	2025	$750,000
Rescue 30	2009	2019	$275,000
Brush 30	1972	Rebuild	$50,000
Battalion 2			

Built in 2001, the station is clean, well kept, and fully functional with plenty of space and capacity. The station can sleep 11 personnel and provides three bathrooms with showers. The station includes a separate officer and battalion's quarters. The station has six apparatus bays (3 drive through) with room to house more apparatus and a large classroom.

Station 32 – Hobe Sound

Unit	Year	Replacement	Estimated Cost
Engine 32	2003	2018	$625,000
Rescue 32	2007	2015	$250,000
Tanker 32	2001	2020	$250,000
Brush 32	1980	Rebuild	$50,000

Engine 32 BLS, Rescue 32, EMS Supervisor 3, Tanker 32, and Brush 32. Eight bunks, 2+1 showers. The station was remodeled 4 years ago and is in excellent condition. Adequate space for current crew and could house more. 6 bays (3 drive through) all occupied. This station also houses the department's communications truck and trailer.

Station 33 – Ridgeway

Unit	Year	Replacement	Estimated Cost
Quint 33	1997	2015	$753,000
Rescue 33	2013	2023	$300,000
Dive 33	1997	2020	Refurb B/U
Dive Boat	2008	2020	$50,000
Tert 33	1999	2020	$500,000

Built in 1988, the station is clean but in need of replacement. This station can sleep 7 personnel but provides no gender separation. Sleeping quarters are open bunks with the exception of the officer's bunk. There are two bathrooms with showers. Living and office space is very limited. Two apparatus bays are fully occupied with one vehicle being stored outside. This station is planned for replacement by FY2020.

Station 34 – Jupiter Island

Unit	Year	Replacement	Estimated Cost
Medic 34	N/A		

Facility belongs to Jupiter Island Dept. of Public Safety. Small living quarter accommodates only one Martin County paramedic staffing an ALS SUV. Jupiter Island Public Safety maintains one commercial cab mini pumper. Small quarters for one medic staffing for ALS SUV M34.

Station 36 – County Line

Unit	Year	Replacement	Estimated Cost
Engine 36	2003	2018	$625,000
Rescue 36	2007	2017	$275,000
Brush 36	1967	Rebuild	$50,000

Built in the 1970s, the station needs replacement. This station can sleep 5 personnel but provides no gender separation. Sleeping quarters are open bunks. There are two bathrooms with showers. Living and office space is very limited. Two apparatus bays are fully occupied with the brush truck being stored outside. This station is planned for replacement by FY2017.

Stuart Fire Rescue Station 1

Unit	Year	Replacement (RP) / Refurbish (RF)	Estimated Cost
Engine 1	1997	2022 (RP)	$350,000
Rescue 1	2004	2017 (RP)	$200,000
Quint 1	2006	2020 (RF)	$400,000
Brush 1	1970	>10 years	$150,000
Battalion 5	2005	2016 (RP)	$60,000

Built in 2005, the station resides in a shared city facility. The station is clean, well kept, and fully functional with plenty of space and capacity. The station can sleep 11 personnel with five full bathroom/showers. There is plenty of office, training, and living space. The station has eight apparatus bays fully occupied and is home to the SCBA maintenance and repair shop and PPE cleaning.

Stuart Fire Rescue Station 2

Unit	Year	Replacement	Estimated Cost
Engine 2	1997	2025 (RP)	$350,000
Rescue 2	2007	2016 (RF)	$60,000

Built in 2004, the station is in adequate condition to house its current personnel. The station can sleep seven personnel with three full bathroom/showers. There is adequate office and living space. The station has two bays fully occupied.

Community Expectations for Service

The *FITCH* team conducted structured interviews with fire chiefs, elected officials, and County, City, and Town managements. In addition, both labor executive boards provided input that was utilized to shape our overall impression of community expectations.

A commonly held expectation across all groups is that the level of service should either be held constant or improved. While the opportunity remained open to find new operational and fiscal efficiencies, the overall impression is that the services provided were of a high quality and meeting or exceeding community expectations.

The Town of Jupiter Island funds their own services internally and contracts for ALS capability and support services from Martin County. While the community is satisfied with the current provision of services, the Town understands that there is an upper threshold that they are willing to pay for services and would consider alternative strategies if exceeded.

The Towns of Ocean's Breeze and Sewall's Point are approving of the current services and the contracted fiscal limits of said services.

Finding #2:
Stakeholders believe that the communities' are receiving high quality services and the services are meeting or exceeding expectations.
Finding #3:
While open to new operational and economic efficiencies, stakeholders have a common expectation that current performance should either be maintained or improved.

COMMUNITY RISK ASSESSMENT

Risk Density

Martin County has a total service area of approximately 544 square miles. As found in other larger counties, the population density and prospective, or potential, risk varies across the jurisdiction. For example, the taxable value in Sewall's Point and Jupiter Island is generally higher than in the unincorporated areas of the county and the City of Stuart, but may have lower population densities. The City of Stuart has an urban population density at greater than 2,300 people per square mile. The unincorporated county area has large expanses of very low population in areas that are predominantly agricultural and urban densities along the eastern expanse.

For a risk-based planning process, an analysis was conducted to examine the relative densities of urban level requests for service and suburban/rural level requests for service.

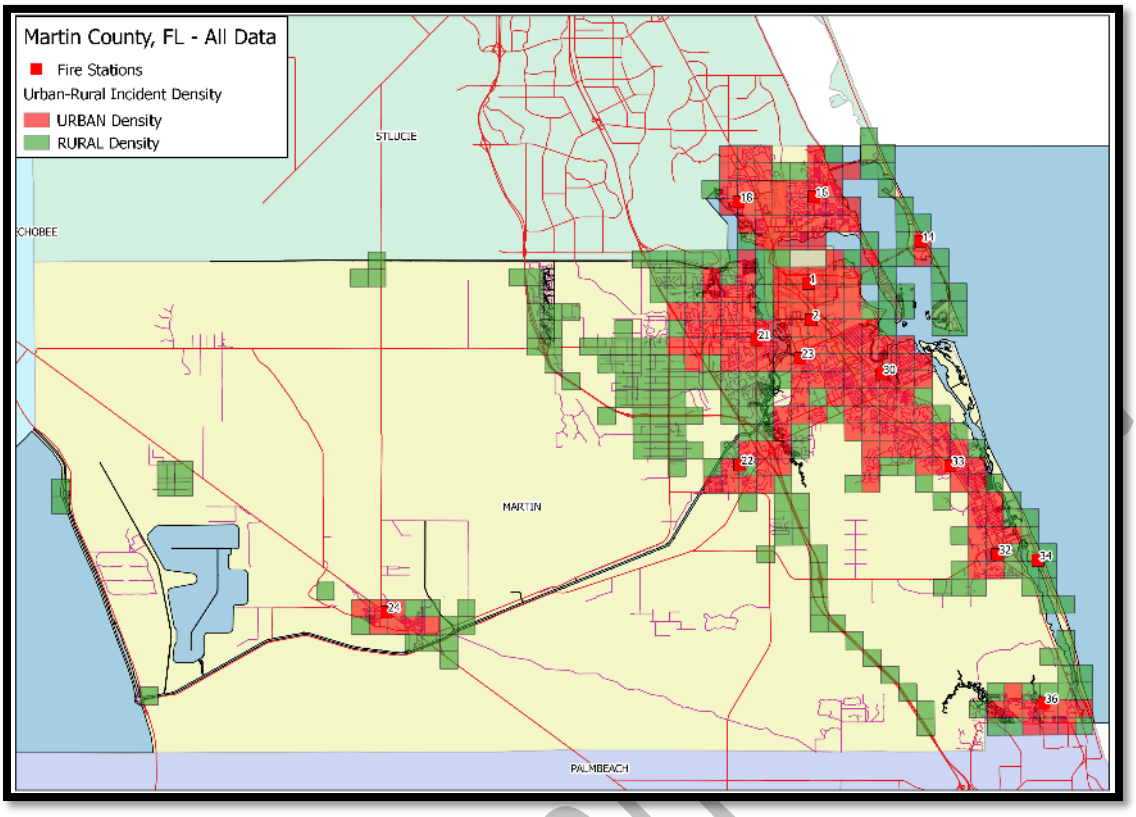
There are three steps to determine Urban (high risk) and Suburban/Rural (low risk) incident zones:

1. Use the predetermined political boundaries of Martin County as the mapping area.
2. Import the historical data for demands for service onto this map.
3. Create a grid of approximately 0.5 miles (0.56 mi) squares that covers the area to be evaluated. For all squares in the half-mile grid, the analysis counts the number of incident locations that fall within each square. For each half-mile square, the analysis also determines the number of incidents that fall within the eight adjacent half-mile squares in the grid. This methodology removes the artifact or potential that a singular address, such as a nursing home, can affect a square to such a degree that it becomes Urban (high density demand) without truly exhibiting high-density demand over the whole square.

The outcome of this process results in the map of incident zones presented in Figure 1 below:

- **RED**: Urban Incident Zones—two calls per half mile per month with at least half the adjacent square half miles having the same number of calls per month.
- **GREEN**: Suburban/Rural Incident Zones —at least one call per half mile square every six months with at least half the adjacent square half miles having the same number of calls per month.
- **No Color**: Remote Incident Zones —less than one call per square half mile every six months.

Figure 1: All Community Service Demands Density Map



The results of this analysis demonstrates that the overall community demand for services is concentrated on the eastern corridor and generally follows the population densities. Two other areas that aren't specifically congruent to the rest of the urban demand areas occur around Station 24 (Indiantown) and Station 36 (County Line). In addition, this analysis demonstrates that for much of the County's geographic territory is defined as remote, requests for services occur less than once per square half-mile every six months.

Overall, the variability in socioeconomic status between the County and the City of Stuart is not sufficiently distant to impact service demands that aren't explained by population density.

Finding #4:
Overall, risk is predominantly located in and around the urban areas on the eastern side of the County.
Finding #5:
The County has large geographic areas with a Remote designation of less than one call per square half-mile every six months.

Categorization of Risk

In an effort to understand the differences between types of risk, community demands for services were categorized by call type. The data demonstrates that, like most fully integrated fire and rescue organizations, EMS is the predominant risk center as it accounts for approximately 78% of all requests for service throughout Martin County. While fire related incidents accounted for approximately 14% of the remaining incidents, actual fires (structure fire, outside fire, vehicle fire, marine fire, and fire other) accounted for less than 3% of the community's demands for service. Data are presented as Table 1 below.

Table 1: Number of Incidents Dispatched by Category – All Jurisdictions Included

Call Category	Number of Calls	Calls per Day	Call Percentage
Cardiac and stroke	2,685	7.4	12.1%
Seizure and unconsciousness	1,696	4.6	7.6%
Breathing difficulty	1,929	5.3	8.7%
Overdose and psychiatric	638	1.7	2.9%
MVA	1,275	3.5	5.7%
Fall and injury	4,535	12.4	20.4%
Illness and other	4,626	12.7	20.8%
EMS Total	**17,384**	**47.6**	**78.1%**
Structure fire	79	0.2	0.4%
Outside fire	226	0.6	1.0%
Vehicle fire	69	0.2	0.3%
Marine fire	6	0.0	0.0%
False alarm	1,013	2.8	4.5%
Good intent	190	0.5	0.9%
Public service	1,325	3.6	6.0%
Fire other	253	0.7	1.1%
Fire Total	**3,161**	**8.7**	**14.2%**
Rescue	18	0.0	0.1%
Hazmat	89	0.2	0.4%
Mutual aid	390	1.1	1.8%
Canceled	1,226	3.4	5.5%
Total	**22,268**	**61.0**	**100.0%**

Finding #6:

Throughout Martin County, the most frequent community demand for service is for emergency medical services at 78% of all community requests for service.

Finding #7:

Fire related incidents account for 14% of the community demands and actual fires account for less than 3% of the County's aggregated demand.

Distribution of Risk Across Communities

Similarly, community demands for service were stratified by community. Data is presented as Table 2 below.

Table 2: Number of Incidents Dispatched by Category and Jurisdiction

Call Category	MCFR	SFR	Sewall's Point	Jupiter Island	Other
Cardiac and stroke	2,096	558	13	18	0
Seizure and unconsciousness	1,298	382	12	4	0
Breathing difficulty	1,460	450	9	10	0
Overdose and psychiatric	495	139	3	1	0
MVA	1,043	220	9	3	0
Fall and injury	3,311	1,150	40	34	0
Illness and other	3,513	1,049	28	36	0
EMS Total	**13,216**	**3,948**	**114**	**106**	**0**
Structure fire	66	10	1	2	0
Outside fire	198	26	1	1	0
Vehicle fire	62	7	0	0	0
Marine fire	6	0	0	0	0
False alarm	737	243	21	12	0
Good intent	176	13	1	0	0
Public service	1,237	79	5	4	0
Fire other	205	44	2	2	0
Fire Total	**2,687**	**422**	**31**	**21**	**0**
Rescue	8	10	0	0	0
Hazmat	69	14	4	2	0
Mutual aid	0	0	0	0	390
Canceled	1,078	126	15	7	0
Total	**17,058**	**4,520**	**164**	**136**	**390**
Percentage	**76.6**	**20.3**	**0.7**	**0.6**	**1.8**
Calls per Day	**46.7**	**12.4**	**0.4**	**0.4**	**1.1**

Finding #8:

Nearly 87% of all of the community's requests for service were answered by either Martin County or the City of Stuart, excluding calls in Sewall's Point and Jupiter Island.

Temporal Distributions of Community Demands

Temporal analyses were conducted to determine if the community demands for service varied significantly across month of year, day of week, or hour of day. Analyses reveal that the monthly and weekly demand did not vary significantly to suggest adjusting the allocation of resources based on this variability. Data for month of year and day of week are presented as Figures 2 and 3, respectively.

However, the temporal distribution of community demand for services by hour of day does vary significantly. The countywide average hourly call rate varies from a low of 1 call per hour at 3am to 5am to a high of 3.7 calls per hour at the peak of the day. The data illustrates a distinct "peak" period of the day between 8 am and 8 pm. Data is presented as Figure 4 below.

Figure 2: Overall: Average Calls per Day by Month

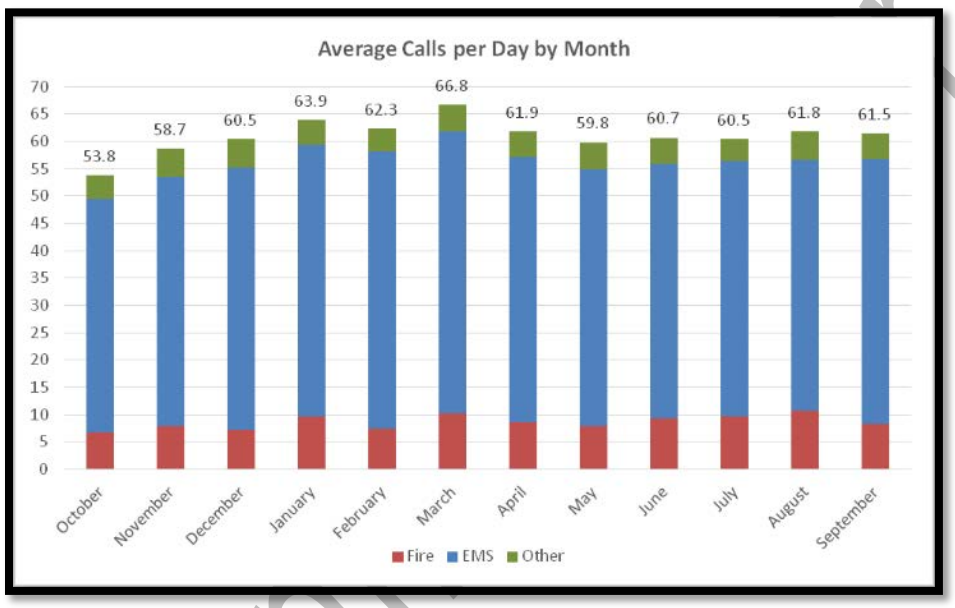


Figure 3: Overall: Average Calls per Day by Weekday

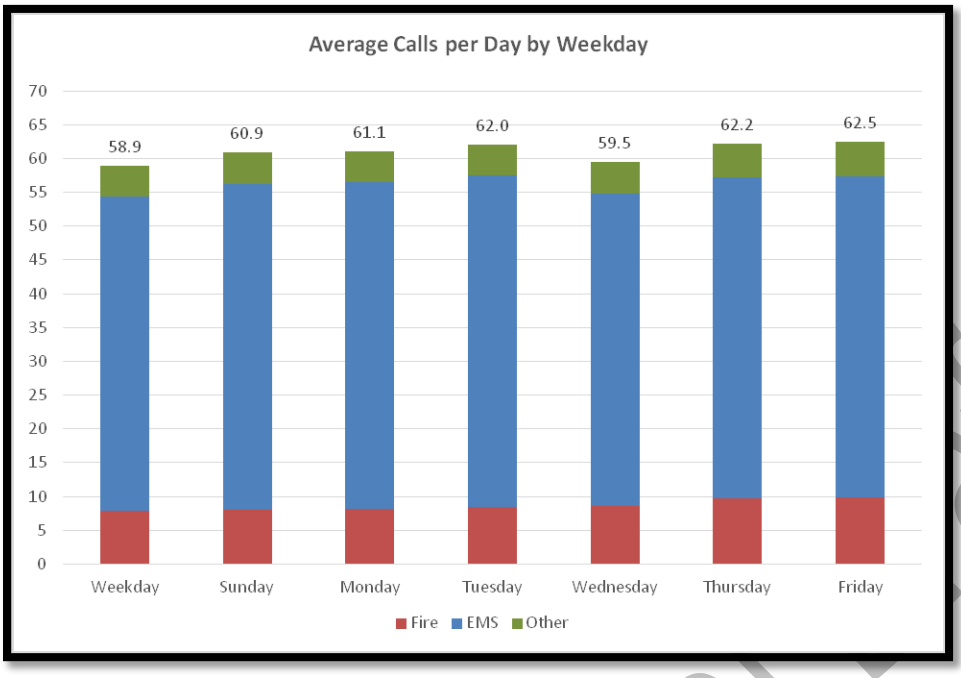
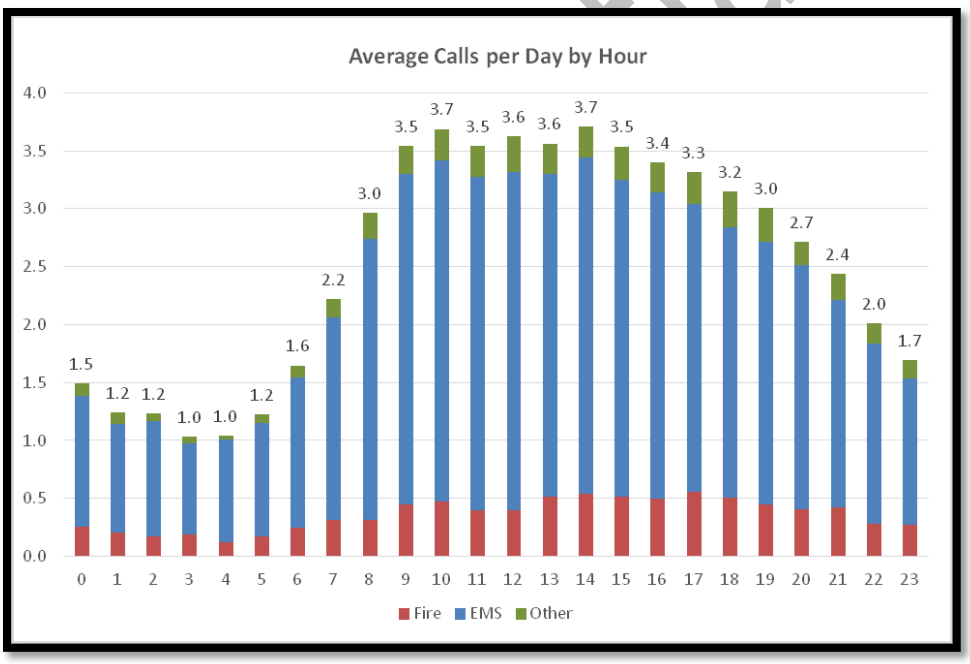


Figure 4: Overall: Average Calls per Day by Hour



Finding #9:

The community's demand for services is disproportionately distributed during the peak of the day from 8 am to 8 pm.

Natural and Man-made Risks

The City and County have a robust understanding of the regional risks associated with natural and manmade disasters. It is assumed that all institutional knowledge and planning efforts would be retained in the system. In addition, the County and the City may continue to provide Emergency Management activities and coordinate with the District where applicable.

All of Martin County is subject to similar risks associated with natural disasters such as found with tropical events; with the coastal communities have a higher risk of wind damage and storm surges. The City of Stuart and Martin County maintain the majority of risk associated with transportation, railway, and hazardous materials.

This study did not specifically analyze the potential impacts of the expansion of All Aboard Florida into Martin County. As local efforts may ultimately influence the outcome, the degree of variability would threaten the validity of any assumptions. However, in anticipation of the impact, this study does provide alternative deployment strategies to allow the District the greatest flexibility in managing the changing environment.

HISTORICAL SYSTEM PERFORMANCE

Methodology

Three different data sets were collected: CAD, MCFR NFIRS, and SFR NFIRS. We cross-validated CAD and NFIRS databases. In this report, we used NFIRS incident type to accurately categorize call types, and then we primarily used CAD data in our analysis. This report focused analyses on the 2014 fiscal year from October 2013 through September 2014.

In this report, we utilized two distinct measures of call volume and workload. First, is the number of requests for service that are defined as either "dispatches" or "calls". Dispatches/calls are the number of times a distinct incident was created involving either MCFR or SFR units. Conversely, "responses" are the number of times that an individual unit (or units) responded to a call. Responses will be utilized on all Unit and Station level analyses, which account for all elements of workload and performance. Calls have been categorized as EMS, Fire, Rescue, Hazard, Mutual aid, and Canceled, respectively. Since we are studying two agencies together, mutual aid calls are defined as outside of both MCFR and SFR's jurisdictions. A canceled call means that all responding agencies indicated the incident was canceled.

Thirty-one percent (31%) of the total emergency requests are from 911, and the majority of requests are either transferred from the sheriff's office, or other sources. For 911 calls, the CAD system only captures the time an incident was created in the system. However, if a transferred request was dialed via a cell phone, the system captures the call-received time. In our response time analysis, we compared dispatch time by call source and pointed out that the dispatch time of 911 calls is not complete. Instead, we focused our discussions on turnout time, and travel time. Since MCFR is contracted to provide emergency services to Jupiter Island and SFR is contracted to provide emergency services to Sewall's point, we discussed the demand and workload distribution and response time performances by jurisdiction.

Aggregate System Performance – Turnout Time

A response time continuum was utilized to examine the individual time elements of turnout time, travel time, and total response time. Turnout time is defined as the time interval from when the stations or units are dispatched to an incident until the unit is responding to the incident. Travel time is defined as the time interval from when the unit first began responding until arrival at the scene of the incident. Response time is defined as the time interval from dispatch until arrival.

At the 90th percentile, the turnout time is 2.8 minutes, or 2:48 for all call types. The travel time ranges from 7.7 minutes to 9.4 minutes and has an aggregate value of 7.9 minutes, or 7:54. The total response time (turnout and travel) is 10 minutes at the 90th percentile. Data is presented as Table 3 below.

Table 3: 90th Percentile Turnout and Travel Time of First Arriving Units by Program

Program	Turnout Time	Travel Time	Turnout and Travel	Sample Size
EMS	2.7	7.7	9.7	16,581
Fire	3.0	9.3	11.4	2,974
Rescue	2.6	9.4	10.8	17
Hazmat	3.2	8.3	10.8	83
Total	**2.8**	**7.9**	**10.0**	**19,655**

Two notable national recommendations for response time performance are noted in NFPA 1710[3] (4 minutes) and the Commission on Fire Accreditation International[4] (5 minutes and 21 seconds) for an urban population density. The current performance for travel time is outside of these national recommendations, but within the general national experience of six to eight minutes. A very small percentage of departments are able to meet the national best practice for travel time recommendations due to the costs associated with a higher concentration of fire stations and resources.

However, a no-cost option for improvement does exist that could improve system performance by up to one minute. The NFPA recommends a 60 second turnout time for all EMS incidents and 80 seconds for fire and special operations incidents.[5] The Commission on Fire Accreditation International (CFAI) follows the same recommendations for optimal performance but will allow up to 90 seconds for turnout time.[6] Currently, the aggregate performance at 2 minutes and 48 seconds at the 90th percentile is nearly double the most lenient national recommendation.

Seizing the opportunity to hold the system accountable and to manage turnout time performance may provide an equivalent value multi- million dollars in service enhancements at no cost. In other words, if the system chose to purchase a minute improvement in travel time, it may require considerable investment in new stations, equipment, and personnel.

In an effort to demonstrate the value to the system and the customer, consider that the overall performance is currently 2:48 and the most lenient recommendation is 1:30 seconds. Conservatively, if the system were able to improve the total response time that the customer would experience by one minute, it would be the equivalent improvement of purchasing approximately two fully staffed fire stations. For example, if the theoretically consolidated system were to have a 10-minute travel time rather than an 8-minute travel time, the system would only require 6 fire stations rather than 10.

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[3] National Fire Protection Association. (2016). 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*. Boston, MA: National Fire Protection Association.

[4] CFAI. (2009). Fire & Emergency Service Self-Assessment Manual, 8th (ed.). Chantilly, Virginia: Author. (p. 71)

[5] National Fire Protection Association. (2016). 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*. Boston, MA: National Fire Protection Association.

[6] CFAI. (2009). Fire & Emergency Service Self-Assessment Manual, 8th (ed.). Chantilly, Virginia: Author. (p. 71)

As a rough estimate, one minute would equate to two fire stations at an estimated annual cost of $3 million.

This no cost area of improvement is obtainable as agencies accredited by the CFAI are either currently meeting 90 seconds 90% of the time or have a clear pathway for improvement over the first 5-year rating period to meet the recommendations. In all cases, accredited agencies have made the commitment to meet the adopted baseline performance.

Finding #10:
A no-cost opportunity exits to improve turnout performance to meet best practice on turnout time (90 seconds 90% of the time) within a reasonable improvement period.

System Performance Standards for Travel Time

Martin County has adopted the following performance measures as part of the Comprehensive Growth Management Plan (CGMP):[7]

1. Advanced Life Support 8 minutes 90% of the time in Urban areas
2. Advanced Life Support 20 minutes 90% of the time in Rural areas
3. Basic Life Support 6 minutes 90% of the time in Urban Areas
4. Basic Life Support 15 minutes 90% of the time in Rural Areas
5. Fire Response 6 minutes 90% of the time in Urban areas
6. Fire Response 15 minutes 90% of the time in Rural areas

Martin County fire Rescue has identified the station territories as Urban/Suburban, Suburban/Rural combination, and Rural. Both of the Stations in the City of Stuart are of Urban density. A summary table of the all system stations is provided as Table 4 below.

Table 4: Countywide Fire Stations Categorized by Population Density[8]

Urban/Suburban	Suburban/Rural	Rural
Station 1	Station 21	Station 22
Station 2	Station 32	Station 24
Station 14		
Station 16		
Station 18		
Station 23		
Station 30		
Station 33		
Station 34		
Station 36		

[7] Martin County. (1990). Section *14.4.1A.7 Fire/Rescue.* Retrieved from https://www.municode.com/library/fl/martin_county/codes/comprehensive_plan?nodeId=COGRMAPL_CH14CAIM_S14.4GOOBPO

[8] Martin County Fire Rescue Stations provided by MCFR (2015).

Analyses of actual historical system performance reveal that the system is not meeting the adopted performance or level of service standards for urban level basic life support or fire responses. In addition, no single station response territory met the 6-minute standard for urban travel time for fire or basic life support incidents.

In contrast, the system was able to meet the 8-minute travel time objective for advanced life support incidents in all but one of the urban density stations. Similarly, system and all stations within the system are capable of meeting the 15-minute and 20-minute response time standards for rural responses. Station level data are presented as Table 5 below.

Finding #11:

The aggregate system performance, and all individual stations, is not meeting the Martin County adopted performance, or level of service, standard of a 6-minute travel time to 90% of fire and BLS incidents in Urban/Suburban density stations.

Table 5: 90th Percentile First Arrival Performance by Station FDZ

Agency	First Due Station	Turnout Time	Travel Time	Turnout and Travel	Sample Size
MCFR	14	2.9	8.3	10.3	527
	16	2.8	7.1	9.3	2,049
	18	3.0	7.0	9.4	1,120
	21	2.9	9.6	11.6	2,692
	22	3.0	10.7	12.8	940
	23	2.8	6.3	8.4	1,073
	24	3.0	13.7	15.7	1,000
	30	2.8	7.1	9.1	2,598
	32	2.9	6.7	9.1	908
	33	2.7	7.5	9.5	1,693
	34	2.3	6.8	8.1	117
	36	3.1	9.5	11.6	588
SFR	SFD1	2.0	7.4	8.8	2,196
	SFD2	1.9	6.7	8.2	2,147
	Overall	**2.8**	**7.9**	**10.0**	**19,648**

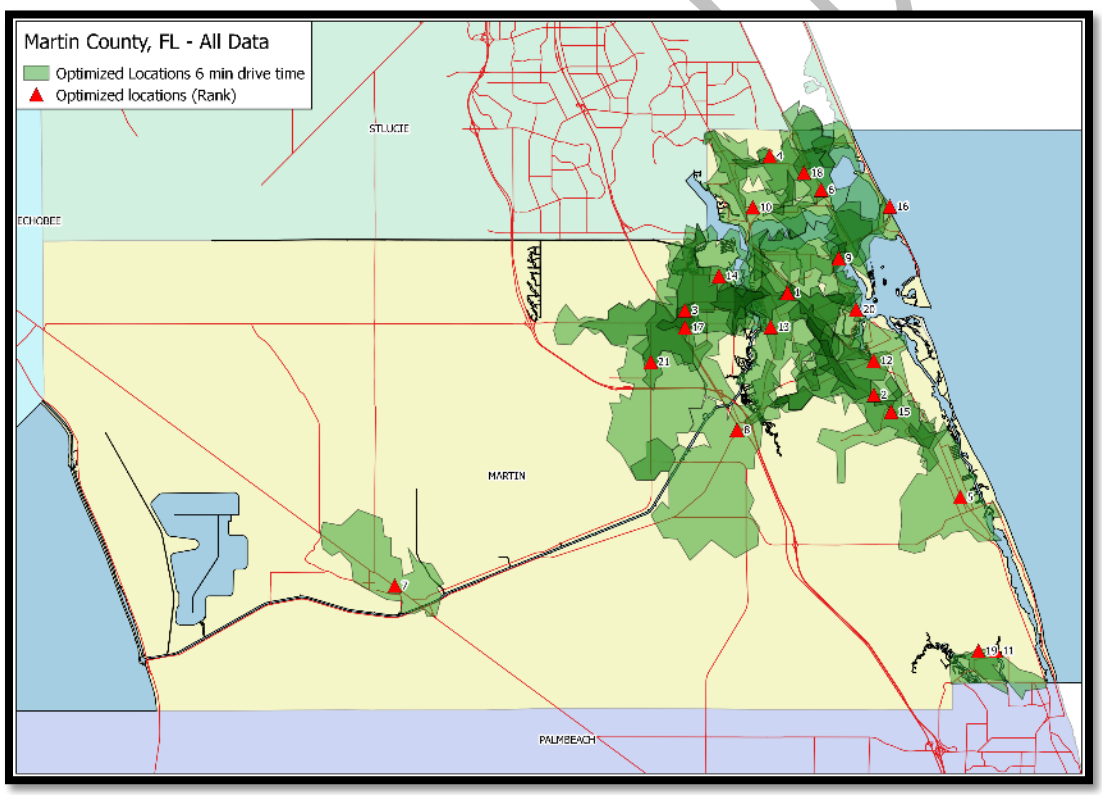
Establishing Current System Performance

A universal expectation from the key stakeholders was to ensure that any theoretical consolidated system either maintains or improves system performance. Therefore, it is important to define and establish the current baseline performance for the system. Results are utilized as baseline assumptions for system design and future oriented planning efforts.

First, it is assumed that all firefighters are driving at the safest and most expedient manner for the road conditions and incident severity. Therefore, the difficulty in meeting a 6-minute travel time is a system design and distribution limitation rather than a performance deficiency. Unlike turnout time this is outside of the control of the Departments' day to day management capability.

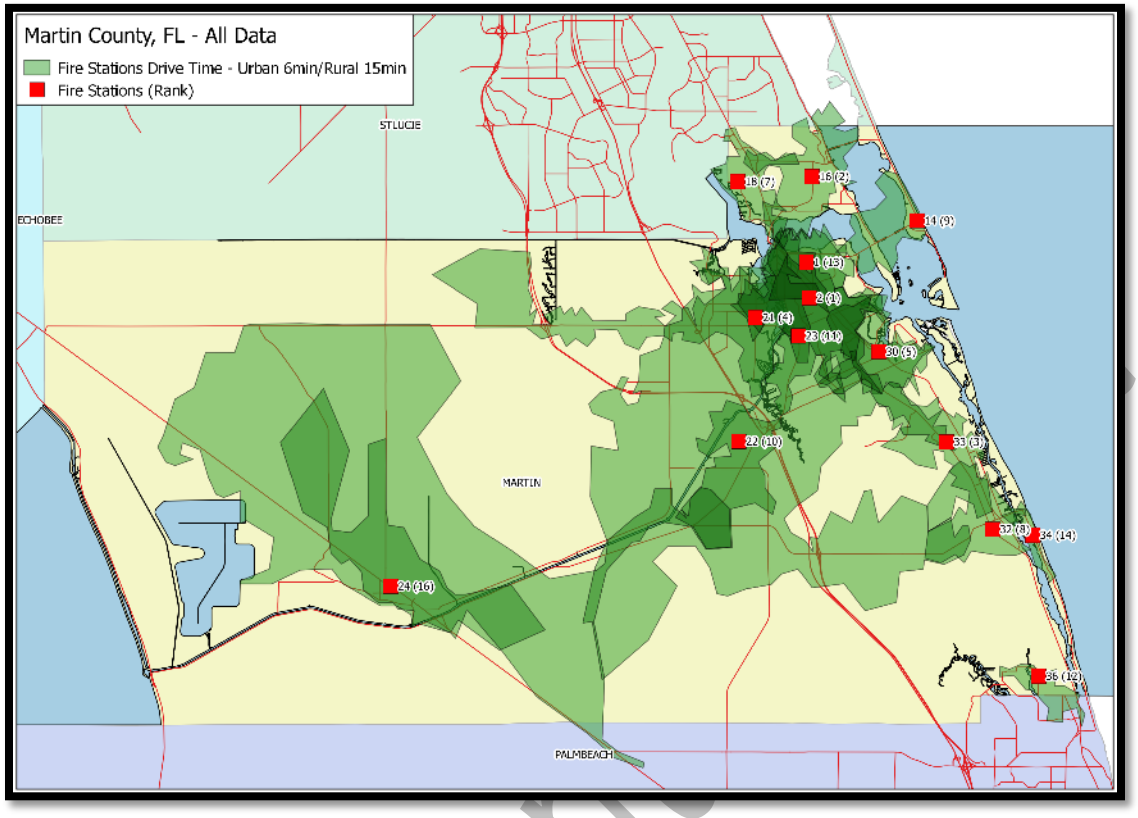
Geospatial analyses were utilized to test the assumptions and to quantify the limitations in system design. First, analyses were completed to identify how well the current aggregate system could perform utilizing the current station locations and existing road networks to meet a countywide 6-minute travel time to 90% of all requests for service. The countywide system does not currently have enough stations to complete the analysis, as the maximum coverage the system could accomplish is 80% of the incidents. Therefore, optimized station locations were created to complete the analysis for the system to accomplish a 6-minute travel time to all incidents countywide. Results found that it would require 21 fire station locations to meet this standard for 90% of the incidents. Graphic results are provided as Figure 5 below.

Figure 5: Optimized System Design for 6-Minute Travel Time to 90% of All Incidents



Understanding these limitations and the deployment realities of the urban and rural zones, Martin County's level of service standards of 6 minute for urban and 15 minute rural travel times was evaluated. This analysis had similar results, as the maximum capacity to meet the 6-minute travel time in urban coverage areas was 79% and 85% in the rural coverage areas utilizing all existing active stations. Results are presented as Figure 6 below.

Figure 6: Current Stations 6-Minute Travel Urban and 15-Minute Rural Travel Time to 90% of Incidents



Note: a) Station 22 is labeled as (15) but is utilized as the 10th Station for Urban response and again as the 15th Station for Rural Capacity; b) Station 24 is utilized as the 6th station for urban response and again as the (16th) station for rural coverage.

Historical performance and geospatial analyses suggests that the currently adopted performance standards are not and cannot be met with the existing system design, therefore, it is necessary to establish obtainable baseline performance or level of service standards to better define current performance. Since Martin County Fire Rescue provides response coverage for the nearly 77% of all of the incidents in the county, their system design was chosen as a starting point. Previous analyses demonstrate that the aggregate travel time performance is at 7 minutes and 54 seconds, or nearly 8 minutes (Table 5 above).

Therefore, the Martin County Fire Rescue system was evaluated utilizing geospatial analyses to test the system validity of an 8-minute travel time to 90% of all incidents. Results demonstrated that the Martin County Fire Rescue system is appropriately resourced to meet an 8-minute travel time performance without any consideration of consolidation. MCFR can meet the 8-minute travel time at nearly 90% of all incidents at 89.25%. Data are presented in tabular form as Table 6, below.

Table 6: Existing MCFR Stations with 8-Minute Travel Time

Rank	Station Number	Station Capture	Total Capture	Percent Capture
1	33	4359	4359	24.80%
2	21	3301	7660	43.58%
3	16	3061	10721	60.99%
4	24	1221	11942	67.94%
5	30	1184	13126	74.67%
6	22	811	13937	79.29%
7	36	530	14467	82.30%
8	18	444	14911	84.83%
9	14	261	15172	86.31%
10	32	234	15406	87.64%
11	23	229	15635	88.95%
12	34	53	15688	89.25%

Utilizing the 8-minute travel time as an obtainable baseline performance objective is validated by geospatial analyses as well as quantitative analyses of historical call volume. Historical performance was evaluated by each jurisdiction and found that MCFR is performing at 8.2 minutes, validating the 8-minute performance standard. The data could not delineate emergency and on emergency responses. Therefore, these data include tiered responses based on the severity of the incident. Finally, results for Jupiter Island are reported for the first arriving Martin County unit and does not include the performance of the Jupiter Island Public Safety Department. Results are presented as Table 7 below.

Table 7: 90th Percentile Turnout and Travel Time of First Arriving Units by Jurisdiction

Jurisdiction	Turnout Time	Travel Time	Response Time	Sample Size
MCFR	2.9	8.2	10.4	15,196
SFR	2.0	6.8	8.3	4,204
Sewall's Point	2.2	10.8	12.2	139
Jupiter Island	2.3	6.8	8.1	116
Total	**2.8**	**7.9**	**10.0**	**19,655**

Finally, in an effort for full transparency, analyses were conducted to determine the impact of a theoretical increase from approximately 7 minutes to 8 minutes in the City of Stuart. Since Jupiter Island provides independent service, performance was not further evaluated because the performance will remain unchanged regardless of the established standard. Similarly, Sewall's Point's performance will be relevant to the closest responding station and is included in the overall system design of 8-minutes to 90% of all incidents.

Geospatial analyses for the City of Stuart Fire Rescue reveal that a shift from 7 minutes to 8 minutes travel time will not have an impact on the suggested resource allocations. In other words,

considering a countywide commensurate level of service, Stuart's adoption of the 8-minute travel time will not change the number of stations required to meet the standard.

For example, the existing station locations introduce considerable redundancy in coverage areas at 6, 7, and 8 minute travel times. In all cases, Station 2 provides the vast majority of the coverage and Station 1 only adds 3%, 1%, and 0.3% in additional coverage, respectively. Therefore, Station 2 can adequately cover greater than 90% of all incidents at the 7-minute or 8 minute standard with only a 3% difference in coverage. In other words, regardless of the adoption of an 8-minute standard, Stuart's actual performance will more closely align to current performance, as nearly 94% of the incidents will continue to be responded to within 7 minutes. Results are provided below in Table 8.

Table 8: Existing Stuart Fire Rescue Stations at 6, 7, and 8 Minute Travel Times to 90% of All Incidents

Rank	Station Number	Station Capture	Total Capture	Percent Capture
6 Minutes				
1	2	3,935	3,935	84.06%
2	1	147	4,082	87.20%
7 Minutes				
1	2	4,381	4,381	93.59%
2	1	64	4,445	94.96%
8 Minutes				
1	2	4,562	4,562	97.46%
2	1	14	4,576	97.76%

The culmination of these analyses has suggested that the 8-minute travel time most closely represents historical performance and current system capabilities and is therefore utilized as the baseline travel time for all system wide planning and the development of a consolidated countywide system.

Finding #12:

The 8-minute travel time most closely represents historical performance and current system capabilities and is therefore utilized as the baseline level of service for all consolidation planning analyses.

OPTIMIZED CONSOLIDATED FIRE AND RESCUE SYSTEM

The *FITCH* team employed a broad and flexible system design to allow for the greatest opportunity for success. For example, the subsequent financial modeling does not assume any reductions in expenditures from the current system design. The underlying concept is that the newly developed board for the "District" should be wholly accountable for the manner in which the District meets or exceeds community expectations. Therefore, the operational and financial models are provided as a broad framework to understand the potential opportunities for enhanced efficiency and long-term sustainability and are not intended to be prescriptive.

Resource Allocation for Geographic Requirements

Geospatial analyses were utilized to design an optimized consolidated fire and rescue system. Results confirm that synergistic efficiencies exist within a theoretical consolidated system.

A marginal utility model was developed to examine the individual and cumulative contribution of each station towards the systems overall performance. When referring to the table below, the station ranked number one provided the greatest percentage of calls that are covered, or capture, within 8 minutes or less from the current location. For example, Station 2 (Stuart) is positioned to capture 43.29% of all calls in the county. The "Station Capture" is an individual station measure for the number of calls captured by that particular station. The "Total Capture" and "Percent Capture" are cumulative measures for the system's incremental improvement by each resource provided at fixed costs.

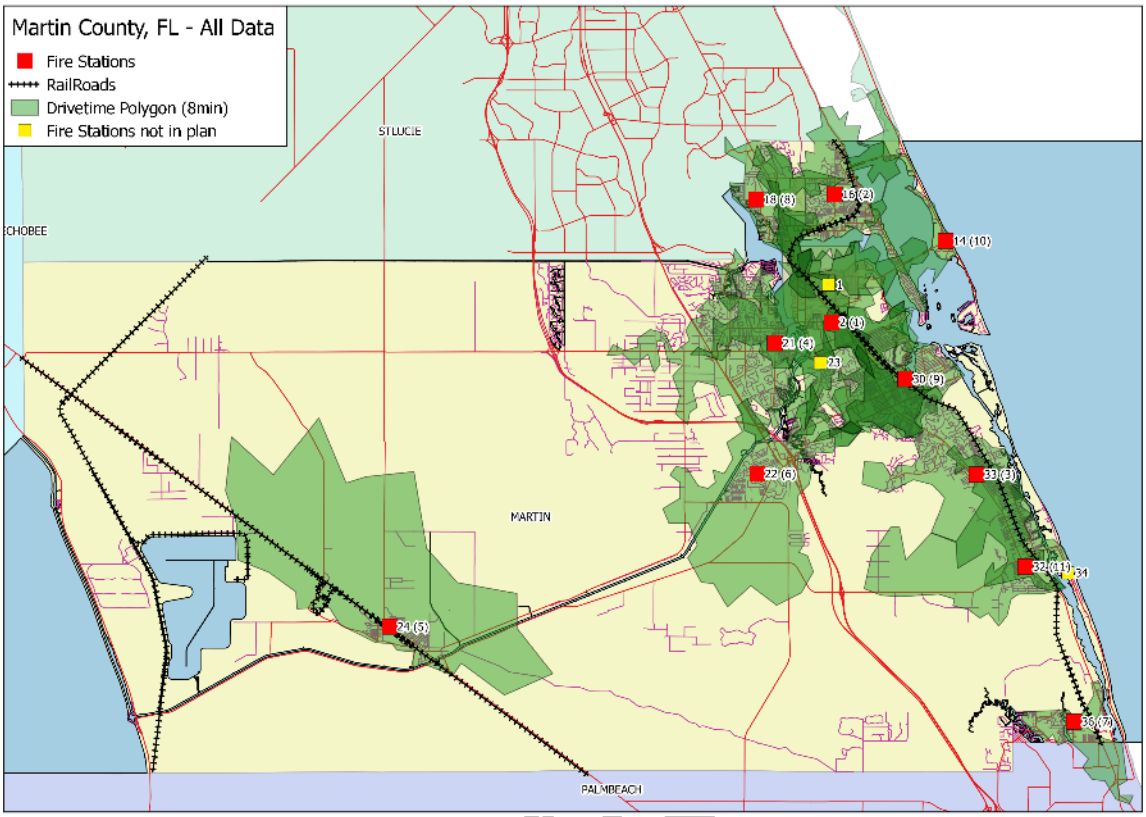
Currently, there are 14 fire stations that actively participate in the service delivery model. Station 11 was not included as it is primarily dedicated to the air transport program. Utilizing the adopted countywide 8-minute travel time performance, results found that a delivery model consisting of 10 stations could cover nearly 90% (89.96%) of all incidents countywide and 11 stations covers 91%. The analyses demonstrate that the 11th station through the 14th station only provides 1.5% in additional coverage over the 10-station model and the 12th station through the 14th station only provides 0.5% improvement over the 11-station configuration. Results are provided as Table 9 below.

Table 9: Existing Stations Countywide 8-Minute Travel Time to 90% of All Requests for Service

Rank	Station Number	Station Capture	Total Capture	Percent Capture
1	2	9,637	9,637	43.29%
2	16	2,722	12,359	55.52%
3	33	2,687	15,046	67.60%
4	21	1,311	16,357	73.48%
5	24	1,221	17,578	78.97%
6	22	746	18,324	82.32%
7	36	530	18,854	84.70%
8	18	433	19,287	86.65%
9	30	399	19,686	88.44%
10	14	338	20,024	89.96%
11	32	234	20,258	91.01%
12	34	53	20,311	91.25%
13	23	43	20354	91.44%
14	1	3	20357	91.46%

Additional analyses were completed to evaluate the capability of maintaining an 8-minute travel time for all urban calls and a 20-minute travel time for rural incidents. The optimized 10-station system design meets both the urban and rural travel time requirements for approximately 90% of all incidents within Martin County. In other words, the system is designed to respond to 90% of all incidents countywide within an 8-minute travel time. Therefore, although the performance measure allows up to 20 minutes travel time in rural areas, this model is designed to respond to 90% of all incidents within an 8-minute travel time regardless of whether it is an urban or rural density. Graphic results of both analyses are presented as Figure 7, below.

Figure 7: Consolidated System Utilizing Existing Stations with 8-Minute Travel Time to 90% of All Requests for Service



The analysis suggests very marginal improvement from the 11th through the 14th stations. However, fiscal and operational realities suggest that Station 34 remain in the system. For example, Station 34 is funded and primarily staffed by the Town of Jupiter Island's Public Safety Department. Additionally, Jupiter Island contracts with Martin County and covers the costs of Medic 34 (single medic SUV) and proportional costs for backup services. Every financial model developed assumed that Jupiter Island would continue to contract with the new District for like services. In other words, while there may not be a strong operational driver for this station, the political will remains and there would be limited realized fiscal benefit.

The *FITCH* team provided a broad framework for moving forward. This conservative approach allows the greatest flexibility in policy decisions and affords the new District Board the greatest latitude to allocate resources for non-operational motivators. Reductions in operational expenditures from two stations (Stations 1 and 23) would provide significant savings without changing the overall systems performance (less than 0.5%). Station 32's inclusion is explored in the demand analysis below.

Finding #13:

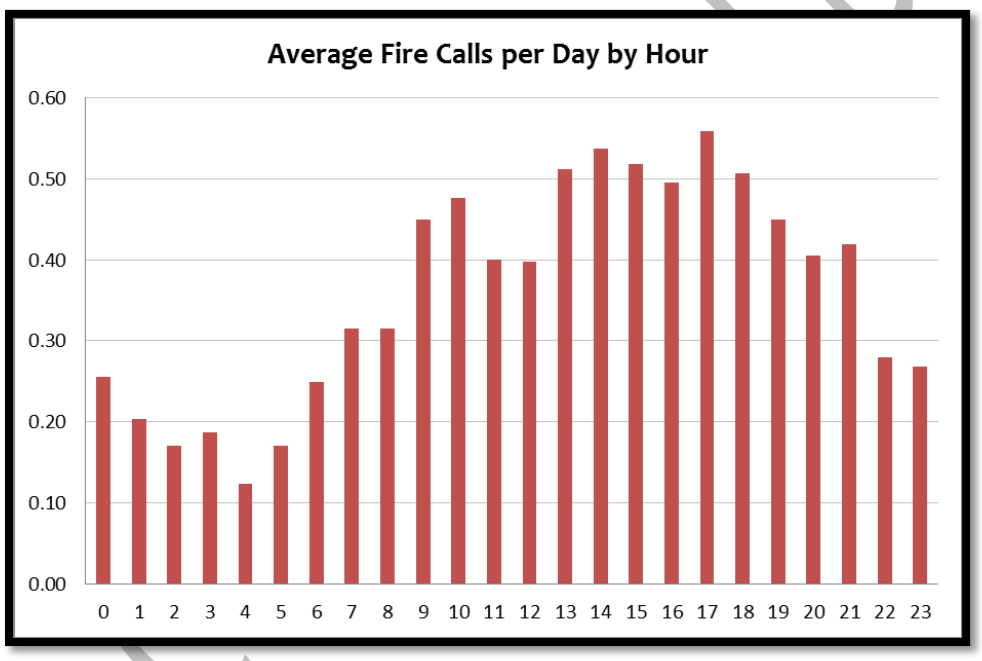
Analysis suggests that at a minimum, a 10 Station Model will provide coverage to 90% of all incidents countywide within an 8-minute travel time.

Resource Allocation for Service Demands

The previous analyses demonstrated that a minimum of 10 stations could achieve the desired geographic coverage to capture approximately 90% (89.96%) of all incidents within an 8-minute travel time. However, the geographic requirements only serve the distribution of the system design. What remains is the necessity to allocate the appropriate concentration of resources in the remaining facilities to handle the demand for services.

Therefore, temporal analyses were completed to determine the total demand for services. First, a temporal distribution was created for fire related incidents. At the peak time, there were no more than an average of 0.6 calls per hour for fire related incidents. In other words, one fire suppression unit could cover the average demand without any geographic limitations. When combining the geographic requirements of 10 Stations and 1 additional resource for demand, the system would optimally function with a total of 11 fire suppression resources. Results are presented as Figure 8 below.

Figure 8: Average Fire Related Calls per Day by Hour of Day in 2014



Therefore, two options were considered on how to best allocate the 11th fire suppression unit. First, because the inclusion of Station 32 would reduce the measured impact of the reduction of the remaining fire stations to 0.5%, and the costs of the 11th fire suppression unit remains regardless of the location, it is recommended that Station 32 remain open. The second option is to close Station 32 and reallocate the 11th fire suppression unit to the area with the greatest call density in or near Stewart. Since the greatest frequency of system demand and performance is associated with the arrival of first two units, it is recommended that the 11th fire suppression apparatus remain at Station 32 increasing the distribution and coverage to 91%.

Second, a temporal distribution was created for EMS demand. Results demonstrate that at the peak of the day, there was an average hourly demand for three incidents per hour. Again, combining the 10 geographic coverage units and three additional units to cover the EMS demand, the system would optimally deploy with 13 EMS units.

Finally temporal analyses were completed regarding the frequency of the demand for patient transport services. Overall, the system transports approximately 80% of all patients responded to. This would require that all 13 EMS units are transport capable. Results are provided as Figures 9 and 10 below.

Figure 9: Average EMS Calls per Day by Hour of Day

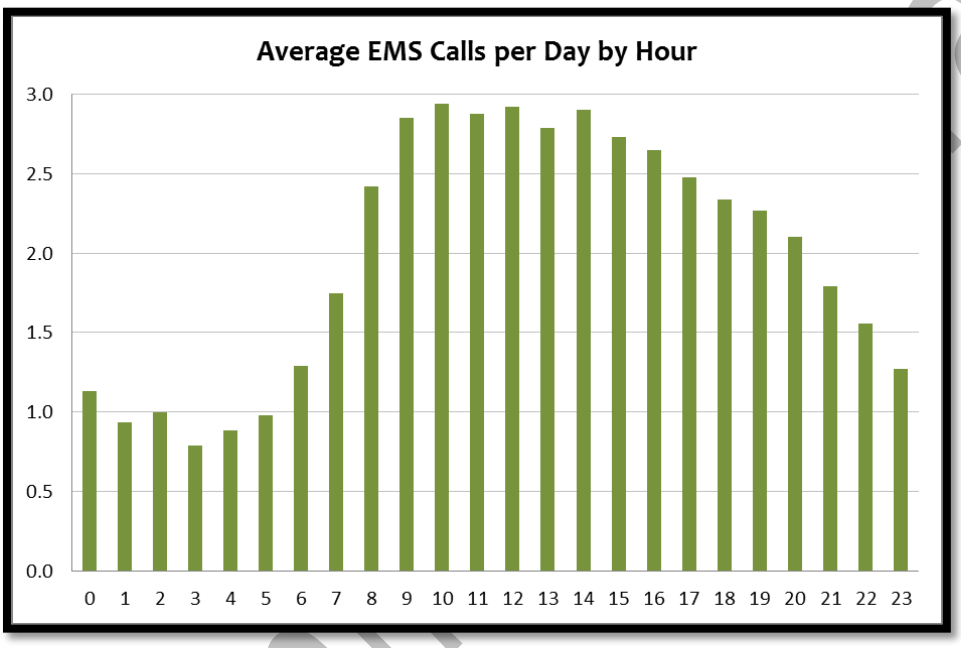
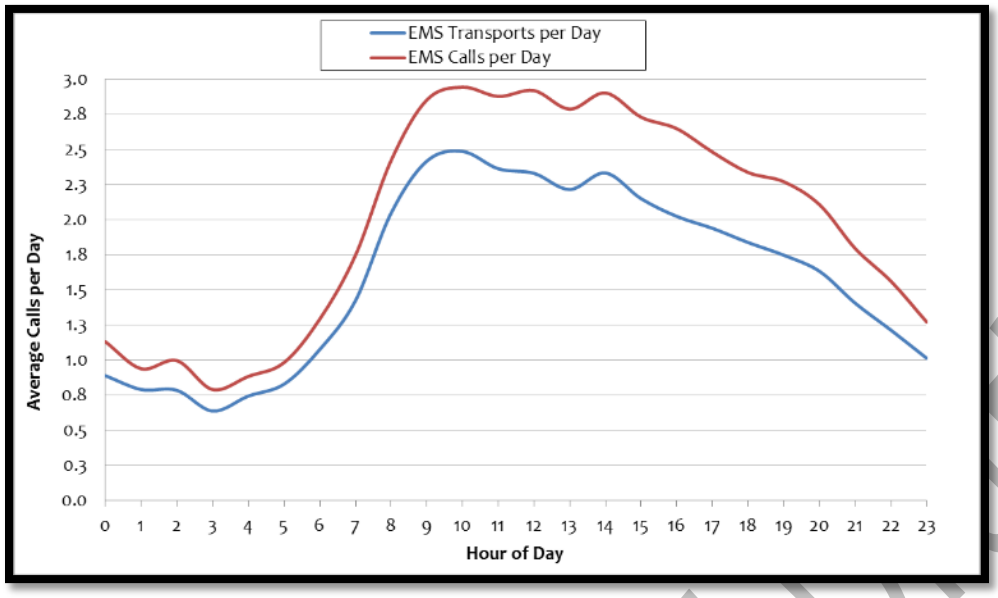


Figure 10: Average BLS/ALS Calls and BLS/ALS Transports per Day by Hour of Day



Optimized System Design

FITCH understands the operational and political realities that accompany efficient system designs. Therefore, the suggested optimized system includes maintaining both Stations 32 and Station 34 for previously stated observations. It is recommended that Station 34 remain unchanged. However, it is suggested that Station 32 could effectively and efficiently cross-staff the Engine and Rescue.

First, the system does not require Station 32 to meet all performance standards. Second, Station 32 has a very high reliability of greater than 90%. In other words, the Station is in a state of readiness and able to respond when a call comes more than 90% of the time. In addition, the probability of concurrent calls occurring is 16% of the time. For example, approximately 84% of the time one of the two units will respond to a call and conclude the call prior to a second call occurring. Therefore, approximately 16% of the time when responding to a call, a second or greater number of calls will occur at the same time. The combined workload for this cross-staffed unit would be approximately 0.15 Unit Hour Utilization (UHU), or 3.6 hours per day if no changes were made to the response polygons. Data demonstrating the station reliability, call concurrency, and UHUs are presented as Figures 11 – 14, respectively.

Figure 11: Percentage Reliability by Station FDZ

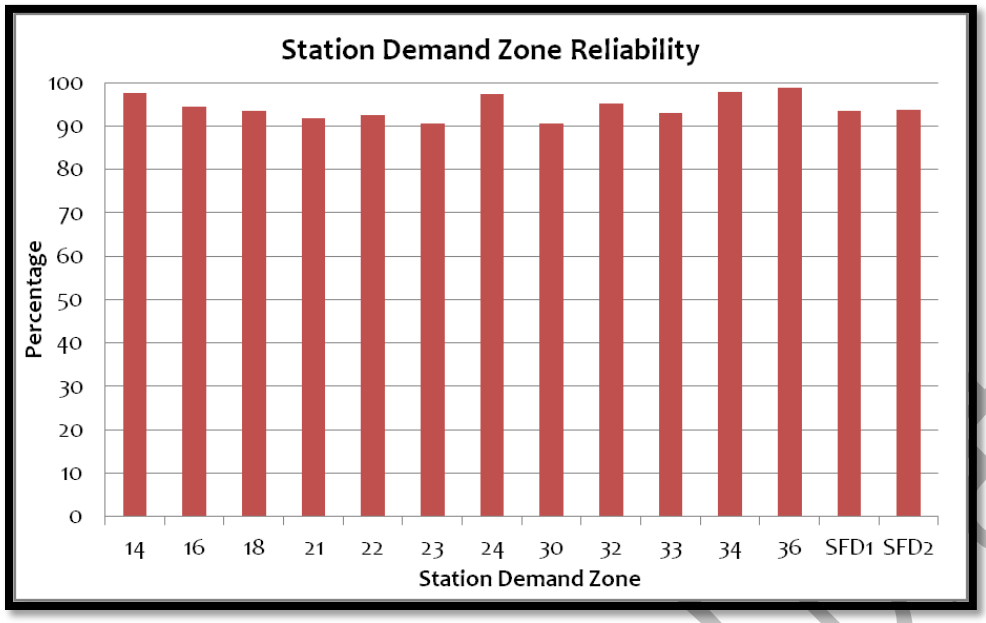


Figure 12: Probability of Overlapped Calls Occur by Station FDZ

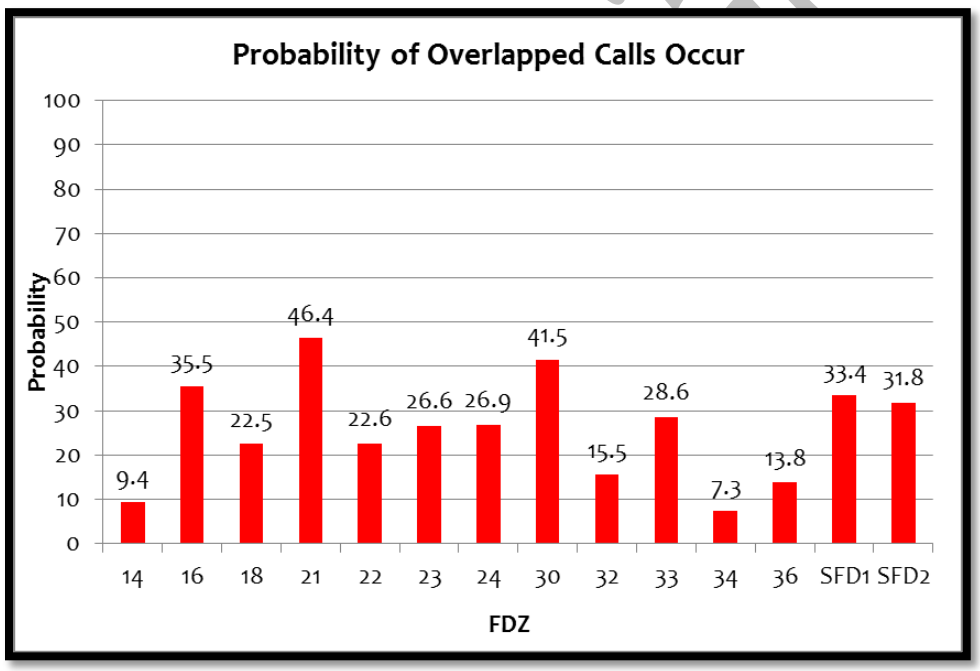


Figure 13: Unit Hour Utilization by MCFR Rescue Unit

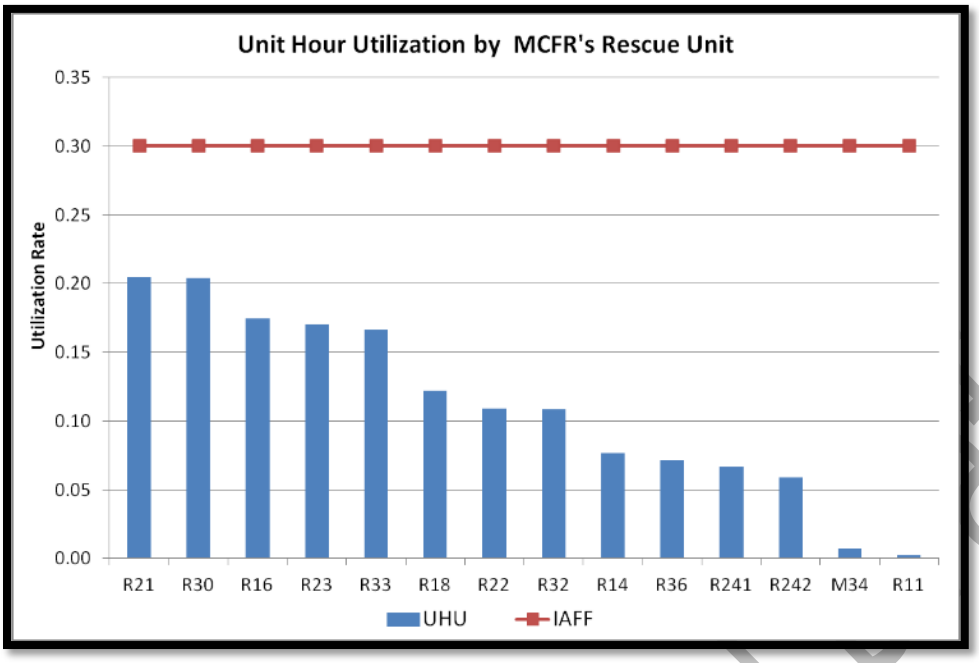
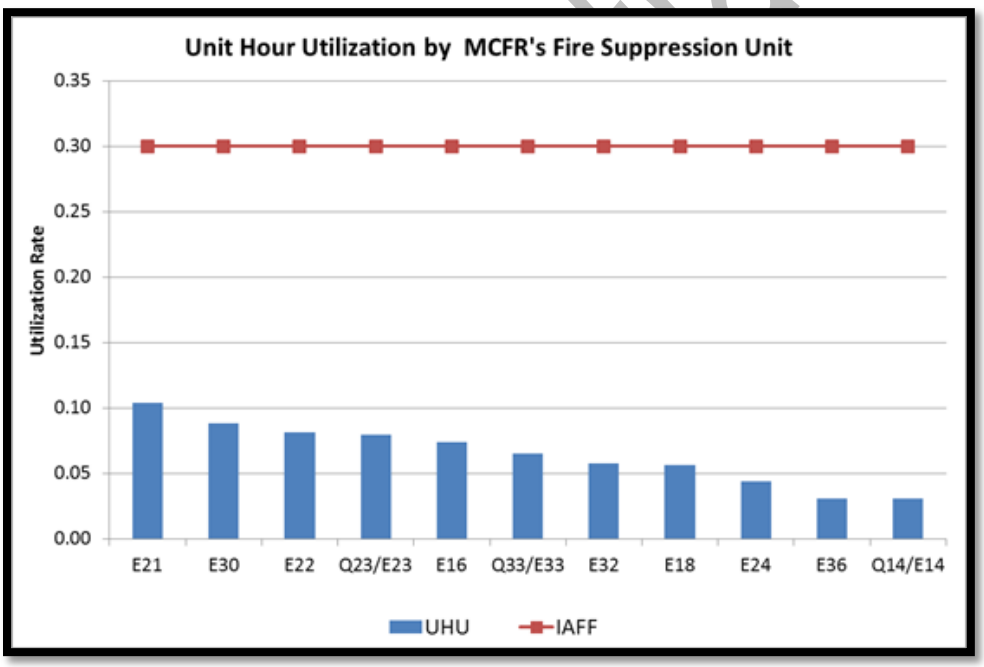


Figure 14: Unit Hour Utilization by MCFR Fire Suppression Unit



Additionally, the geospatial and quantitative analyses have suggested that Stations 1 and 23 would be nearly 100% redundant and thus would not significantly contribute to the overall system's performance. However, due to the demand for EMS services both R1 and R23 are required for the optimized system. Engine 1 and Quint 23 (or equivalent apparatus) could be sunset through attrition.

Alternative system reconfigurations are available that will serve to optimize the deployment strategies. The first alternative would include redeploying Rescues 1 and 23 to Stations 2 and 21, respectively. In addition, Rescue 242's personnel would be redeployed to Station 30 to create a second Rescue unit. Finally, Engine 24 could cross staff a second ALS transport capable rescue (R242). These reconfigurations would absorb the annual workload from Station 23 and Station 1's workload and maintain ALS transport capable depth in Indiantown. Finally, this deployment strategy will appropriately address the high call concurrency that will occur in Stations 2, 21, and 30 (Figure 12).

An evaluation of the impact to fire suppression apparatus (Engines and Quints) reveals that the system would need to absorb approximately 2,000 calls from Station 23 and 1,800 calls from Station 1. At average call duration of less than 25 minutes, the system would need to absorb less than 4.5 hours of additional work per day. If all additional workload were distributed across the three closest stations (E2, E21, and E30), the fire suppression apparatus would each absorb approximately 1.5 hours per day, or approximately 0.05 UHUs. Of course, it is anticipated that these projections would be the upper limit, as the newly designed system's concentration of Rescue units in the area would reduce the demand on the engines. Stuart Fire Rescue's unit hour utilization is presented as Figure 15 below. Figures 13 and 14 presented Martin County's workload as measured by the UHU previously, however, a consolidated all unit UHU is presented as Figure 16 below.

Figure 15: Unit Hour Utilization by SFR Unit

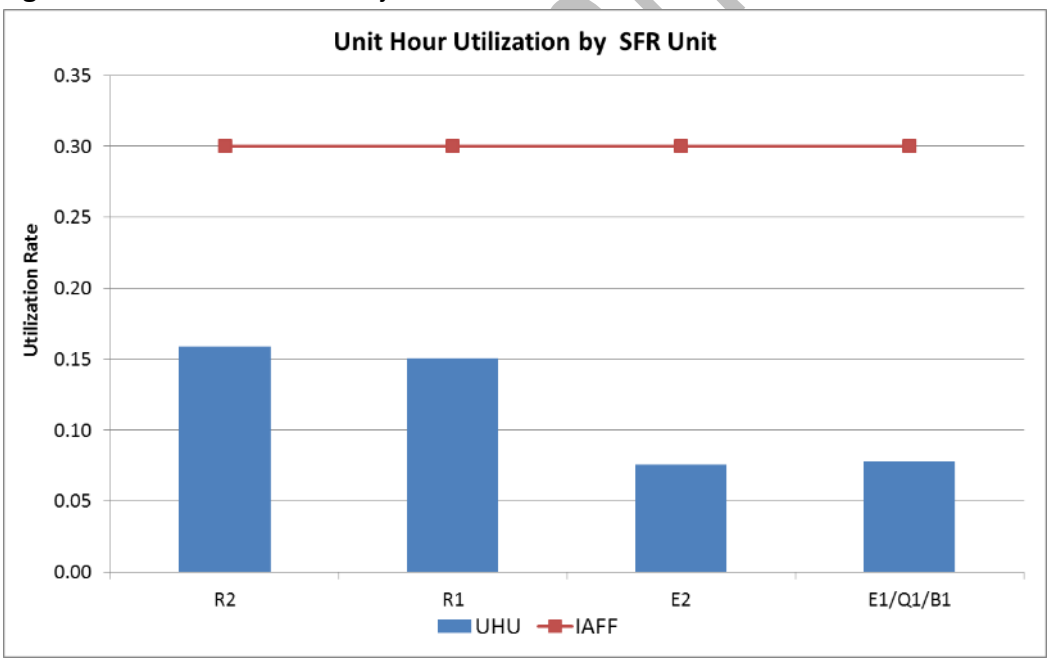
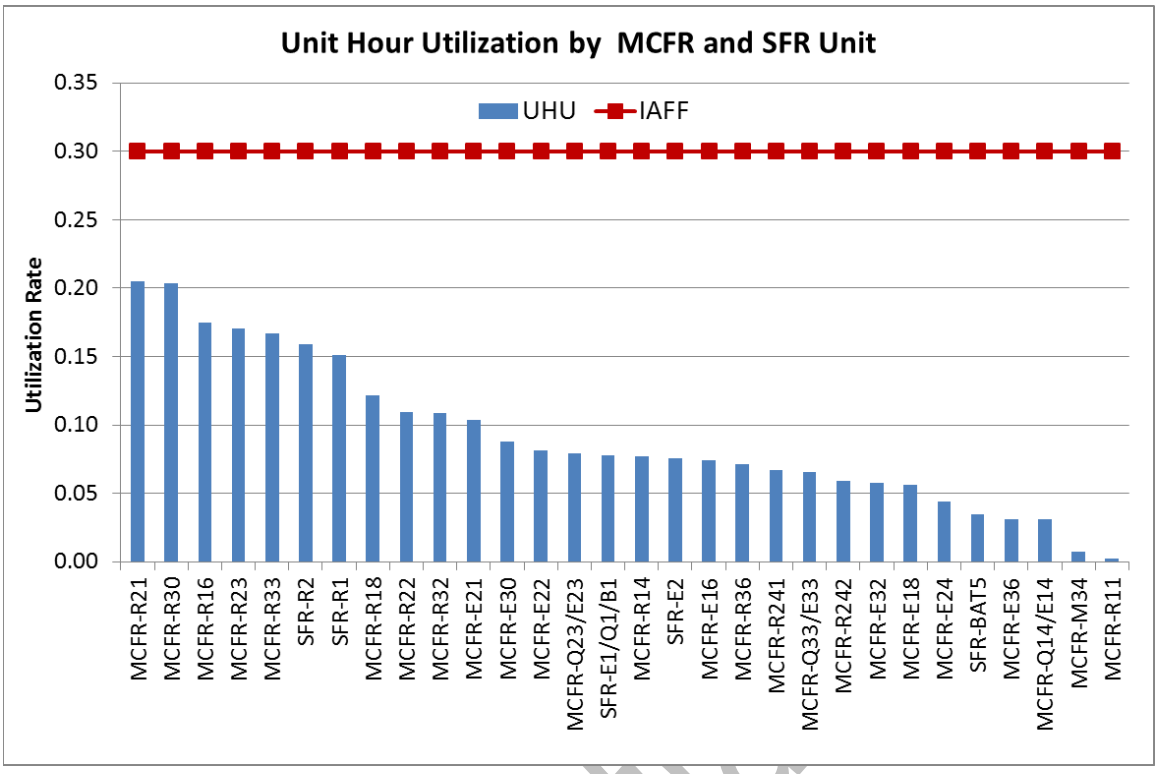


Figure 16: Unit Hour Utilizations for All County Units



The second alternative is to maintain Stations 1 and 23, but only deploy the Rescue units addressing nearly 80% of the community's request for service. This strategy also provides some flexibility to navigate public concerns and perceptions associated with station closures. Adopting this strategy maintains all current stations in service. In addition, maintaining Rescue 1 at Station 1 may be an effective strategy to assist in mitigating the potential impact of All Aboard Florida. A summary of the deployment strategy is presented as Table 10, below.

Analyses of the current facilities and capabilities suggest that Stations 30 and 21 can accommodate both the apparatus and personnel for the additional Rescue units. Station 2 will have to plan for additional capacity in the capital improvement plan when the station is up for replacement or refurbishment. Although, the potential impact of the rail system supports Rescue 1 remaining at Station 1 until such a time that greater clarity is gained on this issue. Therefore, the current capital facilities have the capacity to adapt to the optimized system configuration.

Table 10: Optimized System Configuration 8-Minute Travel to 90% of All Requests for Service

Station Number	Fire Suppression Resource	EMS Resource
2	Engine 2	Rescue 1 and Rescue 2
16	Engine 16	Rescue 16
33	Quint 33 (ALS)	Rescue 33
21	Engine 21 (ALS)	Rescue 21 and Rescue 23
24	Engine 24 (ALS)	Rescue 241 and Rescue 242 (Cross-Staffed)
22	Engine 22 (ALS)	Rescue 22
36	Engine 36	Rescue 36
18	Engine 18	Rescue 18
30	Engine 30 (ALS)	Rescue 301 and Rescue 302 (Personnel from R242)
14	Quint 14	Rescue 14
32	Engine 32	Rescue 32 (Cross-staffed)
34	Engine (Jupiter Island)	Medic 34

To understand the built-in surge capacity in the system, there are 15 Rescue units, excluding Medic 34 on Jupiter Island and an average demand of no more than three (3) Rescues. In other words, when there is an average demand for services or less, 10 full-time staffed Rescues and two (2) cross-staffed Rescues will be available.

Similarly, for the fire suppression forces, there are 11 fire suppression units with an average demand of less than one call per hour for fire related incidents. Therefore, when there is average demand or less, approximately 10 fire suppression apparatus will be available and ready for response. This excess capacity is useful for the multi-unit responses that occur with more significant fire related incidents. In an effort to quantify the necessary surge capacity, an analysis was completed to determine the demand for resources on fire related incidents. Results found that nearly half of the fire related incidents were handled by one unit and over 70% of the incidents were handled by two units. Finally, 91% of all fire related incidents were handled by four units or less. Data are presented as Table 11 below.

Table 11: Resource Commitment for Fire Related Incidents

Number of Units	Number of Fire Calls	Call Percentage	Cumulative Call Percentage
1	1,509	47.7%	47.7%
2	806	25.5%	73.2%
3	485	15.3%	88.6%
4	85	2.7%	91.3%
5	39	1.2%	92.5%
6	42	1.3%	93.8%
7	74	2.3%	96.2%
8	40	1.3%	97.4%
9	34	1.1%	98.5%
10 or more	47	1.5%	100.0%
Total	**3,161**	**100.0%**	**NA**

Finally, analyses were conducted that examined the temporal distribution of total system workload (all calls) by day of the week at both the average demand and 90th percentile. The peak demand for services is no more than four (4) resources per hour and 90% of all community demand was handled at less than eight (8) incidents per hour. Therefore, three figures were developed to graphically illustrate the resources allocated on the optimized system design for fire suppression, EMS, and the aggregated total. In summary, the system will have 13 ALS transport capable Rescue units (15 with R32 and R242 cross staffed), 11 fire engines/quints, and a total of 24 full-time staffed available resources. Under this optimized system, at the busiest times 90% of all calls would be handled with 16 resources still available. Data is presented for fire, EMS, and total in Figures 16 through 18, respectively.

Figure 17: Total System Demand for All Call Types and Allocated Fire Suppression Resources

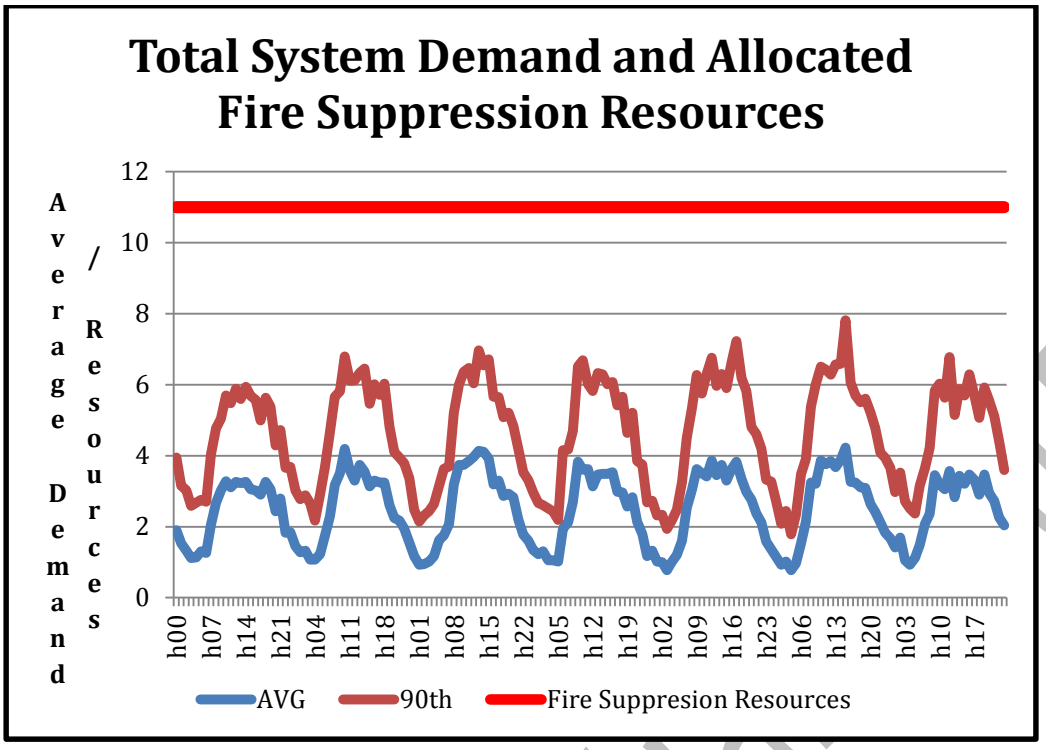


Figure 18: Total System Demand for All Calls and Allocated EMS Transport Resources

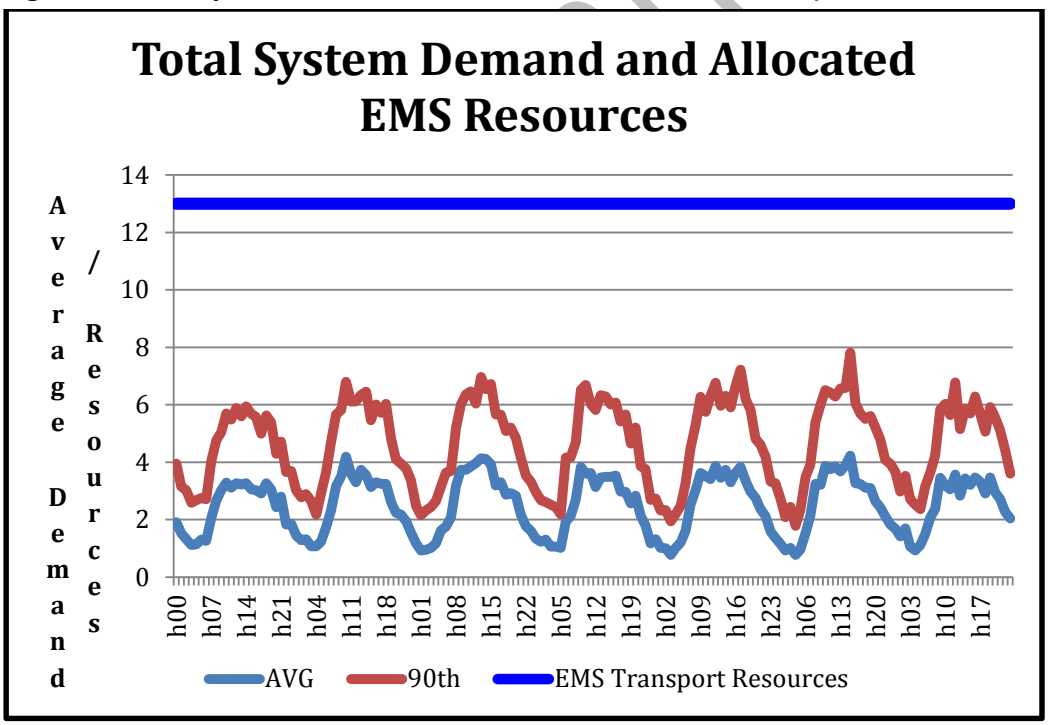
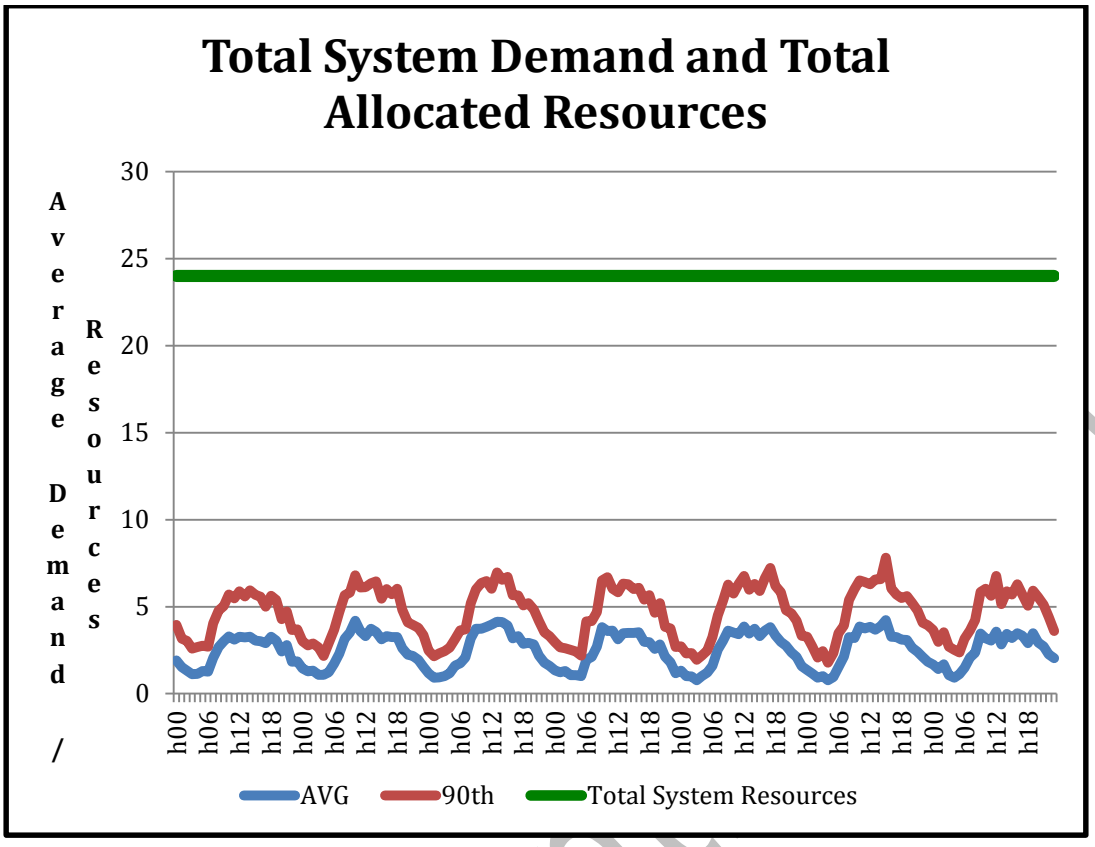


Figure 19: Total System Demand for All Calls and Total Allocated Resources



In total, the system optimization would provide for approximately $2,520,000 in savings while maintaining current system performance.

Finding #14:

Optimization of a consolidated system deployment option would provide for approximately a $2,520,000 annual reduction in expenditures and maintain current obtainable performance.

Optimized Organizational Staffing

An analysis was conducted to determine what the optimal shift staffing would require. This analysis utilized actual leave records for both the City of Stuart and Martin County for all shift personnel. For the purposes of this analysis it was assumed that the theoretical new District would maintain the current average workweek of 48 hours.

The optimized deployment strategy would reduce the daily staffing by the seven (7) positions associated with two engines and a rescue unit. Additionally, this analysis identifies that the optimal staffing for the remaining positions would require 32 less FTE's overall. This staffing strategy maintains the existing minimum unit staffing, leave history, average workweek, and shift schedule currently employed by the Departments. In other words, no operational impacts are associated with

optimized staffing strategy. In total, the optimized staffing strategy would provide for approximately $2,880,000 in reduced expenditures.

Overall, the new District Board would have the policy option either maintaining the status quo of all current staffing and resources or adopting some or all of the optimizations and fiscal efficiencies of up to $5.4 million.

Again, these potential opportunities for enhanced operational and fiscal efficiencies are only options for the new District Board and are not intended to be overly prescriptive. What this knowledge does, is provide the understanding that considerable flexibility is built into the system design and the Board will have full discretion to establish policy.

Finding #15:

Optimization of the staffing strategy will provide for approximately a $2,880,000 reduction in annual expenditures while maintaining recommended deployment strategies and current shift schedules, leave, and scheduled workweeks.

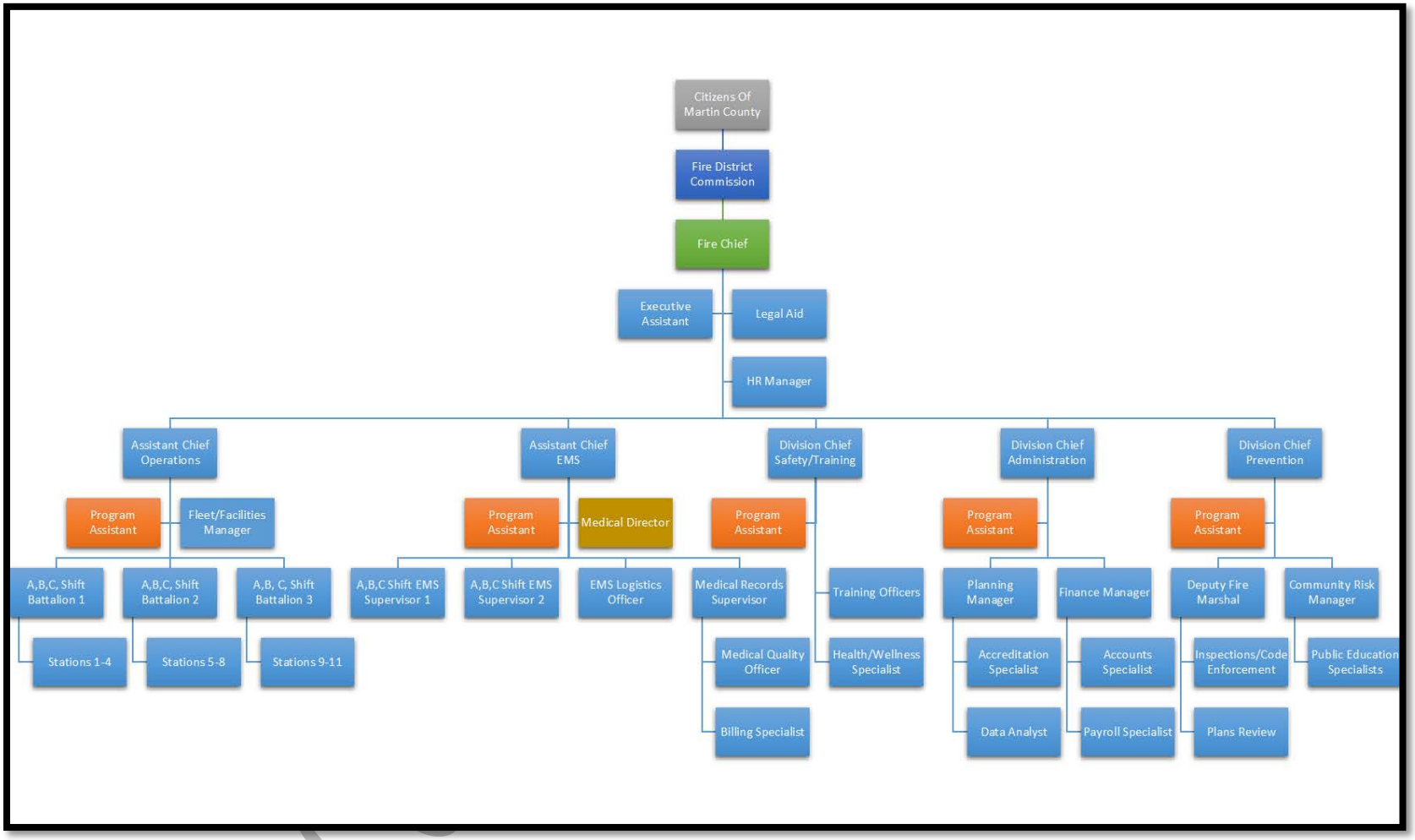
Organizational Structure

Generally, fire-based organizations follow paramilitary structures. The actual structure is largely dependent on local goals, missions, values, and preferences. While many different variations of organizational structures have proven successful, it is important to acknowledge that the personnel in the positions contribute the most to the overall success as opposed to the actual structure.

An example of a functional organizational structure that acknowledges the demands of the future is offered as Figure 19, below. This structure incorporates the assumption of the independent District's Board of Directors and the Department's benefit of focusing on planning and performance management.

This suggested organizational chart, assumes that the District would assume administrative responsibilities that are typically handled by intergovernmental charges within the local governments. For example, the District may have to employ expertise for activities such as human resources, payroll, and legal counsel. Ultimately, the new District could elect to contract for these services with either Martin County or the City of Stuart.

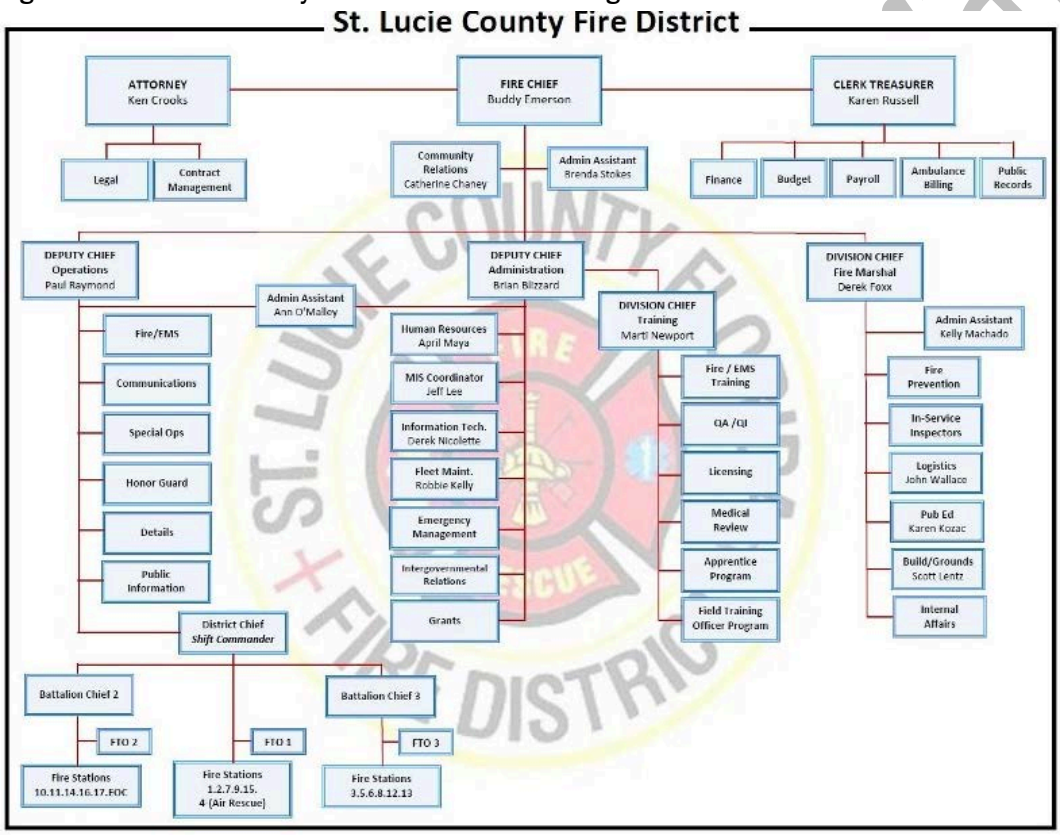
Figure 20: Example Functional Organizational Chart



Some administrative efficiency is anticipated with a consolidation of the City and County's fire rescue departments. The departments are not overly robust administratively, however, there would be some duplication at the fire chief position, program assistants, and at the battalion chief level. In an effort to provide the new District Board sufficient flexibility to decide how they intend to handle new administrative positions such as human resources, payroll, legal counsel, and the potentiality of parity, the potential administrative redundancies were not included in any cost projections. Administrative savings available for reallocation are roughly estimated at $600,000 per year.

Finally, for comparative purposes, St. Lucie County Fire Protection District's organizational chart is provided as Figure 20 below.[9]

Figure 21: St. Lucie County Fire Protection District Organizational Chart



[9] St. Lucie County Fire District Organizational Chart. Retrieved from http://www.slcfd.com/orgchart.htm

DRAFT PERFORMANCE MEASURES FOR OPTIMIZED SYSTEM

The following draft performance measures for travel time are offered to support and maintain the recommended system design.

1. Advanced Life Support 8 minutes 90% of the time in Urban areas
2. Advanced Life Support 20 minutes 90% of the time in Rural areas
3. Basic Life Support 8 minutes 90% of the time in Urban Areas
4. Basic Life Support 20 minutes 90% of the time in Rural Areas
5. Fire Response 8 minutes 90% of the time in Urban areas
6. Fire Response 20 minutes 90% of the time in Rural areas

In addition, it is recommended that performance objectives be adopted for turnout time:[10] [11]

1. BLS and ALS Incidents 60 seconds 90% of the time
2. Fire and Special Operations Incidents 90 seconds 90% of the time

[10] National Fire Protection Association. (2016). 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.* Boston, MA: National Fire Protection Association.

[11] CFAI. (2009). Fire & Emergency Service Self-Assessment Manual, 8th (ed.). Chantilly, Virginia: Author. (p. 71)

FINANCIAL ANALYSES AND ALTERNATIVES

Current State

The various first responder, fire and EMS service agencies in Martin County are funded primarily through property taxes. Budgets are augmented by patient transport fees, fire non-ad valorem (non-property tax) assessments, fire inspection fees, other miscellaneous grants and non-recurring revenues. There are contractual agreements between jurisdictions for the provision of services: the contract amounts are reported as revenues to the respective agency as follows in Table 12, below.

Table 12: Contracted Fire/Rescue Services in Martin County

Agency Providing Service	Jurisdiction Receiving Services	Budgeted Contract Revenue FY15/16
Martin County Fire/Rescue	Town of Jupiter Island	$746,718
Martin County Fire/Rescue	Town of Ocean Breeze	$31,036
Stuart Fire/Rescue	Town of Sewall's Point	$372,750

FY15/16 expenditure budgets for the operations of two primary fire/rescue service agencies, Martin County Fire Rescue and Stuart Fire Rescue, are noted in Table 13 below.

Table 13: FY15/16 Expenditure Budgets for Fire Rescue Services

Fire Rescue Agency	FY15/16 Budgeted Expenditures
Martin County Fire Rescue[12]	$39,835,909
Less Regional Services[13]	-$4,700,419
Stuart Fire Rescue[14]	$5,010,143
Total for Fire Rescue Services	**$40,145,633**

The expenditure total above is the expenditure target to be funded by the proposed independent district.

Assumptions for Alternative Consolidation Structures: Scenario A and Scenario B

Two consolidation structures, Scenario A and Scenario B, are developed with the objective of providing the same or improved service levels, more efficiently and effectively. The two structures and their assumptions are as follows:

1. Scenario A: Consolidate County/Stuart Fire Rescue - Contract with Other Jurisdictions – Implement Fire Fee
    - The new independent district via contract agreements provides fire Rescue services to Jupiter Island, Ocean Breeze and Sewall's Point.

[12] Includes the cost to provide services to the Towns of Jupiter Island and Ocean Breeze.
[13] Regional Services are funded countywide and include Emergency Management, Nuclear Planning, Fire Rescue Communications, Ocean Rescue and Special Operations.
[14] Includes the cost to provide services to the Town of Sewall's Point.

- Contracts for services are valued in the scenario using current budgets.
- Stuart's non-ad valorem fire assessment methodology is extended countywide.

2. Scenario B: Consolidate County/Stuart Fire Rescue – All Jurisdictions Except Jupiter Island
   Assessed Millage – Implement Fire Fee
   - Fire Rescue services to Ocean Breeze and Sewall's Point is provided by the new independent district; Jupiter Island contracts for services from the new entity.
   - All jurisdictions except for Jupiter Island are assessed property taxes based on the new entity's millage rate.
   - Stuart's non-ad valorem fire assessment methodology is extended countywide.

Scenario A and Scenario B – Funding Models

The financial models are an all-inclusive consolidation of Martin County and City of Stuart current fire rescue operations (stations and personnel). The combined FY15/16 expenditure budgets are the target amount to be funded. Non-ad valorem revenues are considered first with the balance to be funded from ad valorem taxes. Uncertain or non-recurring revenues are not considered.

Table 14: Scenarios A and B - Funding Details

Revenues to Fund New Entity	Scenario A	Scenario B
Non-Ad Valorem Revenues	**FY15/16 Budgeted**	**FY15/16 Budgeted**
Patient Transport Fees	$5,150,100	$5,150,100
Fire Inspection /Alarm Fees	$280,000	$280,000
Jupiter Island Contract	$746,718	$746,718
Ocean Breeze Contract	$31,036	$0
Sewall's Point Contract	$372,750	$0
Firefighter Supplement	$121,000	$121,000
Miscellaneous Recurring	$35,000	$35,000
Tier 1 & Tier 2 Fire Assessment Fee Countywide	$11,455,796	$11,584,708
Total Non-Ad Valorem Revenues	**$18,192,400**	**$17,917,526**
New Entity Expenditure Target	**$40,145,633**	**$40,145,633**
Expenditure Target less Non-Ad Valorem Revenues = Ad Valorem Revenue Needed to Fund New Entity[15]	**$21,953,233**	**$22,228,107**
Countywide Tax Roll Less Jupiter Island, Ocean Breeze and Sewall's Point	$15,925,249,121	$16,546,518,632
Millage Needed to Fund Ad Valorem for New Entity	0.00145	0.001414
Millage Stated as:	**1.451 mills**	**1.414 mills**

[15] Per State statute, the ad valorem amount needed represents 95% of the amount to be raised by a millage. The millage rate calculation is based on providing 100% of the needed ad valorem.

Table 15 below compares the cost of the current system, Scenario A, and Scenario B, for a homeowner based on the countywide average value of a single family home, less homestead exemption. Best estimates have been used with the understanding that there are a number of variables in Martin County. In particular, valuations for condominiums are not necessarily comparable with single-family residences, and in the case of the fire fee assessment, there are variations in the number of commercial versus residential parcels by jurisdiction.

Table 15: Comparisons of Cost to Homeowners for Current, Scenarios A and B

Current	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Average Home Less Exemption	$150,510	$150,510			
Current Millage	0.002431	0.001838			
			Contract	*Contract*	*Contract*
Ad Valorem	$365.81	$276.57			
Tier 1	$0	$108.35			
Tier 2	$0	$39.00			
Total	**$365.81**	**$423.92**			
Scenario A	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510			
Scenario A Millage	0.001451	0.001451			
			Contract	*Contract*	*Contract*
Ad Valorem	$218.40	$218.40			
Tier 1	$108.35	$108.35			
Tier 2	$39.00	$39.00			
Total	**$365.75**	**$365.75**			
Scenario B	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510	$437,325		
Scenario B Millage	0.001414	0.001414	0.001414		
				Contract	*N/A*
Ad Valorem	$212.83	$212.83	$618.41		
Tier 1	$108.35	$108.35	$108.35		
Tier 2	$39.00	$39.00	$113.10		
Total	**$360.18**	**$360.18**	**$839.86**		

Sewall's Point currently contracts for fire and EMS services. Based on the current annual contract value, we have estimated the cost of the contract as a percent of the Town's ad valorem revenues. From there an estimated millage was calculated and is applied to the Sewall's Point average single-family residence value for Scenario B.

In both Scenario A and B, Jupiter Island continues for contract for fire and EMS services via agreement. There is, therefore, no change in the cost to Jupiter Island residents under the current agreement and no entry is included in the table for Jupiter Island.

Ocean Breeze is unusual in that there are only four parcels in the Town and no single-family residences. All residences are mobile homes that do not own the property on which they sit and therefore, would not receive a property tax bill.

Table 16 below summarizes the estimated change in costs for the average homeowner between the current system, Scenario A and Scenario B.

Table 16: Summary of Costs to Average Homeowner – Current, Scenarios A and B

Summary	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
Scenario A	**$365.75**	**$365.75**	*Contract*	*Contract*	*Contract*
Scenario B	**$360.18**	**$360.18**	**$839.86**	*Contract*	*N/A*

Finding #16:

Financial analyses support economic benefits to consolidation while preserving all current systems, personnel, and costs.

Fiscal Impact of Realized Efficiencies

The previous fiscal projections assumed that all current state costs from both the City of Stuart and Martin County are carried over to the new District. As such, there were no changes in personnel, stations, deployment, or administrative capacity. However, expenditure reductions of approximately $5,400,000 were identified in an optimized deployment and staffing model.

FITCH's approach is to provide the new District Board the greatest flexibility in policy decisions related to how to best meet community expectations for service. Therefore, in contrast to the previous evaluation of maintaining the status quo on all operations and costs, a conservative value of $4,800,000 was utilized to demonstrate the fiscal impact of realizing identified efficiencies in 25%, or $1,200,000 increments.

The identified efficiencies are the reduction of personnel for two (2) fire suppression apparatus and one (1) rescue unit. In total, at the current staffing strategies of each agency, this would equate to seven (7) positions each day and a total of approximately 32 full time employees. Approximately 50% of the efficiencies and expenditure reductions are associated with the operational optimization and 50% is associated with the optimized shift-staffing schedule.

Scenarios A and B are consolidated and summarized by the adopted level of efficiency for clarity in Tables 17 and 18, respectively. A detailed description of the analyses for each level of incremental efficiency is provided as Appendix A.

Table 17: Summary of Costs to Average Homeowner – Current and Scenario A with Realized Efficiencies in 25% Increments

Scenario A	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
25%	**$353.81**	**$353.81**	*Contract*	*Contract*	*Contract*
50%	**$341.87**	**$341.87**	*Contract*	*Contract*	*Contract*
75%	**$329.94**	**$329.94**	*Contract*	*Contract*	*Contract*
100%	**$318.00**	**$318.00**	*Contract*	*Contract*	*Contract*

Table 18: Summary of Costs to Average Homeowner – Current and Scenario B with Realized Efficiencies in 25% Increments

Scenario B	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
25%	**$348.69**	**$348.69**	**$806.47**	*Contract*	*N/A*
50%	**$337.20**	**$337.20**	**$773.09**	*Contract*	*N/A*
75%	**$325.71**	**$325.71**	**$739.70**	*Contract*	*N/A*
100%	**$314.22**	**$314.22**	**$706.32**	*Contract*	*N/A*

Finding #17:

Realizing identified efficiencies will provide economic benefits at each progressive quartile.

Finding #18:

Adopting Scenario A would avoid a negative economic impact to homeowners in the contracted areas while maintaining positive benefits for the County and City.

RECOMMENDED GOVERNANCE MODEL

Governance

Operational and financial analyses both support the feasibility of consolidation between City and County fire services. In considering that option, governance is the next significant issue policy makers must consider. Discussions with key stakeholders, including elected officials, appointed leaders, and labor representatives focused on this issue of governance, and stakeholders concerns and preferences on how a future independent fire protection district may best be structured was solicited. Stakeholders did not express an interest in an existing government entity assuming responsibility for a consolidated fire rescue service. The issues and concerns expressed represented a diverse set of issues, yet each led predominantly to the same conclusion – the creation of an independent special district for fire protection and emergency medical services was the preferred option.

Governance Structure

Independent fire districts are a common governance model in Florida. Created pursuant to Chapter 189 of Florida Statue and further defined under Chapter 191[16]. Special districts providing either fire protection or emergency medical services (EMS) number 66 within the State[17]. The Florida Legislature typically creates such special purpose districts.

It is widely acknowledged that fire protection and emergency medical services (EMS) is one of the most fundamental and essential services local government provides to its citizens. Along with law enforcement, these basic public safety functions are some of the most visible, and financially demanding, programs at the local level. Providing for the health and safety of its residents also demands a strong managerial and policy-making oversight. For that reason, many communities embrace independent fire districts as an effective model of governance. As a special purpose government, the legislative body is focused on the provision of that single set of services. The impact of competing service demands from other functions such as parks, libraries and transportation are somewhat blunted under this special purpose district model. And while important as these other services are, the utilization of an independent special district ensures a focused policy-making and legislative effort toward the essential public safety service. Concurrent with these structural strengths, policymakers also need to be cognizant of the need for clear performance policies and the requirement for a system to monitor the effectiveness and efficacy of the system. To that end,

[16] Disclaimer – *FITCH* & Associates is not a law firm, and its employees are not acting as your attorney. *FITCH* & Associates does not practice law and does not give legal advice.
The pursuit of an independent fire district requires significant legal guidance and the City and County should ensure legal counsel in the pursuit of this recommendation.
[17] Special District Accountability Program, Official List of Special Districts. Downloaded from https://dca.deo.myflorida.com/fhcd/sdip/OfficialListdeo/ February 29, 2016

significant consideration should be given to the potential composition of the independent fire district's governing body. On this issue, there are several options.

Governing Body

While key stakeholders quickly aligned around an independent fire district as the preferred governance structure, there was less consensus on the specific make-up of the governing body. It is *FITCH'S* understanding that FS189.03 permits a special district to have a governing body comprised of appointees designated by another legislative body – for example independent fire district board members being selected by the City Commission and County Commission; or by the direct election of the independent fire district's governing body by the electorate.

At this juncture, it is unclear the number of local governments within Martin County that may desire to formally participate in a special fire/EMS district. At a minimum, *FITCH* assumed both the County and City of Stuart would participate in the creation of a consolidated fire/EMS service. Opportunities also exist for Sewall's Point and Ocean Breeze to similarly join this effort. The ultimate decision of Jupiter Island is less clear.

Accordingly, with at least two and up to five local governments electing to participate in the creation of an independent special district, a legislative body comprised of at least seven 'fire commissioners' seems an appropriate number to ensure adequate representation. Should the enabling legislative action define the district's legislative body be selected by commissions of the participating general purpose governments, the allocation of 3 seats for County Commission appointees, 2 seats for City of Stuart appointees; and the remaining 2 seats allocated among other governmental bodies as best determined. Should the enabling legislation require a directly elected 'fire board', utilizing geographical districts can ensure appropriate representation. Such geographic districts can be allocated similarly to an appointed process - 3 seats from unincorporated areas; 2 seats from within the municipal boundaries of the City of Stuart; and the remaining 2 seats representing geographic areas of other participating municipalities. In each case, elected fire commissioners would need to reside within their geographic districts.

Revenue Options

Fitch & Associates evaluated the financial feasibility of consolidation from several perspectives, including the use of both ad valorem and non-ad valorem assessments. Both methodologies are allowed in Florida. During establishment of the independent special district, we recommend that the new district's enabling legislative authority retain both of these options for consideration by the fire district's future commission.

During the recent economic recession in 2008, those communities that relied, at least partially, on non-ad valorem fire assessments were better able to continue to provide essential public safety services to their residents. As an example, the increases in service delivery demand continued to rise during the economic downturn. To limit a future independent special fire district in their enabling

legislation would remove opportunities for the governing body to address changing economic conditions in a manner most beneficial to their constituents.

Finally, the fiscal models utilized in this analysis were intended to compare and contrast the potentiality of consolidation. All of the participating agencies are accustomed to ad valorem taxing strategies and the City of Stuart utilizes a non-ad valorem fire assessment. However, this is not intended to limit the new Board's ability to explore alternative funding models that best meet their needs.

CONCLUSIONS

In conclusion, substantive opportunities for operational, administrative, and fiscal efficiencies exist when considering consolidated fire and rescue services within Martin County, FL. Consolidation is a natural next step as the countywide system has multiple areas that are contracted for service and well-developed Interlocal agreements for automatic aid.

Fiscal analyses demonstrated that there is no negative economic value to moving towards consolidation even if all deployment, costs, and structures are carried over unchanged. Operationally, an optimized deployment and staffing strategy could provide up to $5.4 million in reduced expenditures while maintaining current performance. At each level, realizing identified efficiencies has a positive economic impact on the average homeowner for commensurate services.

Input from stakeholders provided a common position that an independent fire district is the most desirable governance model for a consolidated fire and rescue service. Therefore, suggestions were provided for the representativeness and make-up of the theoretical new Board of Directors.

FITCH considers three main pillars for a successful consolidated effort. These pillars include a similar risk profile and operational capability, similar cost structures and economic efficiencies, and a governance model that will be politically tenable. This study found that Martin County successfully met all three pillars and the environment is conducive to elevating the concept of consolidation to implementation.

RECOMMENDATIONS FOR IMPLEMENTATION

As designed, this study provides a broad framework for moving the concept of consolidation forward. While optimized system design and efficiencies were identified, every effort was made to provide detailed information to support policy development, but provide sufficient flexibility for the new Board to determine how to best meet or exceed community expectations for service, establish tolerance for risk, and the willingness and capability to fund services. In other words, this report provided the necessary information while refraining from being overly prescriptive.

The following is a general framework towards adoption and implementation:

- Solicit public input and feedback
- Develop commonality of purpose across governing bodies
- Conduct a fire assessment fee validation study for Martin County
- Codify local intent
- Begin managing Martin County Fire Rescue and Stuart Fire Rescue towards ultimate consolidated models.
- Draft enabling language for board makeup, election process, funding strategies, etc.
- Engage the State Legislature for the creation of an Independent Fire District.

Once the District is created additional steps for implementation must occur. The following list identifies some of the major milestones and is not intended to be all-inclusive:

- Elect Board
- Select Fire Chief
- Establish Administrative Team
- Solidify revenue generation process
- Establish position classifications, job descriptions/duties, minimum qualifications, hiring and promotional practices, work conditions, schedules, compensation structures, etc.
- Negotiate and/or impact bargain where required by law
- Hire workforce
- Update dispatching and CAD processes to reflect new system design (as appropriate)

Attachment A

Analyses of Incremental Efficiency

FITCH
& ASSOCIATES

ATTACHMENT A: ANALYSES OF INCREMENTAL EFFICIENCY

Level 1 Reductions (25%)

Current State

The various first responder, fire and EMS service agencies in Martin County are funded primarily through property taxes. Budgets are augmented by patient transport fees, fire non-ad valorem (non-property tax) assessments, fire inspection fees, other miscellaneous grants and non-recurring revenues. There are contractual agreements between jurisdictions for the provision of services: the contract amounts are reported as revenues to the respective agency as follows in Table 1, below.

Table 1: Contracted Fire/Rescue Services in Martin County

Agency Providing Service	Jurisdiction Receiving Services	Budgeted Contract Revenue FY15/16
Martin County Fire/Rescue	Town of Jupiter Island	$746,718
Martin County Fire/Rescue	Town of Ocean Breeze	$31,036
Stuart Fire/Rescue	Town of Sewall's Point	$372,750

Level 1 Reduction to Expenditures

FY15/16 expenditure budgets for the operations of two primary fire/rescue service agencies, Martin County Fire Rescue and Stuart Fire Rescue, are noted in Table 2 below.

Table 2: FY15/16 Expenditure Budgets for Fire Rescue Services (Level 1 Reductions)

Fire Rescue Agency	FY15/16 Budgeted Expenditures
Martin County Fire Rescue[18]	$39,835,909
Less Regional Services[19]	-$4,700,419
Stuart Fire Rescue[20]	$5,010,143
Total for Fire Rescue Services	**$40,145,633**
Level 1 Reduction	-$1,200,000
Expenditure Target	**$38,945,633**

The expenditure total above is the expenditure target to be funded by the proposed independent district assuming Level 1 expenditure reductions.

[18] Includes the cost to provide services to the Towns of Jupiter Island and Ocean Breeze.
[19] Regional Services are funded countywide and include Emergency Management, Nuclear Planning, Fire Rescue Communications, Ocean Rescue and Special Operations.
[20] Includes the cost to provide services to the Town of Sewall's Point.

Assumptions for Alternative Consolidation Structures: Scenario A and Scenario B

Two consolidation structures, Scenario A and Scenario B, are developed with the objective of providing the same or improved service levels, more efficiently and effectively. The two structures and their assumptions are as follows:

1. Scenario A: Consolidate County/Stuart Fire Rescue - Contract with Other Jurisdictions – Implement Fire Fee
    - Fire Rescue services to Jupiter Island, Ocean Breeze and Sewall's Point are provided by the new independent district via contract agreements.
    - Contracts for services are valued in the scenario using current budgets.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

2. Scenario B: Consolidate County/Stuart Fire Rescue – All Jurisdictions Except Jupiter Island Assessed Millage – Implement Fire Fee
    - Fire Rescue services to Ocean Breeze and Sewall's Point is provided by the new independent district; Jupiter Island contracts for services from the new entity.
    - All jurisdictions except for Jupiter Island are assessed property taxes based on the new entity's millage rate.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

Scenario A and Scenario B – Funding Models

The financial models are an all-inclusive consolidation of Martin County and City of Stuart current fire rescue operations (stations and personnel). The combined FY15/16 expenditure budgets less Level 1 reductions are the target amount to be funded. Non-ad valorem revenues are considered first with the balance to be funded from ad valorem taxes. Uncertain or non-recurring revenues are not considered.

Table 3: Scenarios A and B - Funding Details (Level 1 Reductions)

Revenues to Fund New Entity	Scenario A	Scenario B
Non-Ad Valorem Revenues	**FY15/16 Budgeted**	**FY15/16 Budgeted**
Patient Transport Fees	$5,150,100	$5,150,100
Fire Inspection /Alarm Fees	$280,000	$280,000
Jupiter Island Contract	$746,718	$746,718
Ocean Breeze Contract	$31,036	$0
Sewall's Point Contract	$372,750	$0
Firefighter Supplement	$121,000	$121,000
Miscellaneous Recurring	$35,000	$35,000
Tier 1 & Tier 2 Fire Assessment Fee Countywide	$11,455,796	$11,584,708
Total Non-Ad Valorem Revenues	**$18,192,400**	**$17,917,526**
New Entity Expenditure Target	**$38,945,633**	**$38,945,633**
Expenditure Target less Non-Ad Valorem Revenues = Ad Valorem Revenue Needed to Fund New Entity[21]	**20,753,233**	**21,028,107**
Countywide Tax Roll Adjusted for Scenario	$15,925,249,121	$16,546,518,632
Millage Needed to Fund Ad Valorem for New Entity	.0013718	.0013377
Millage Stated as:	**1.3718**	**1.3377**

Table 4 below compares the cost of the current system, Scenario A, and Scenario B, for a homeowner based on the countywide average value of a single family home, less homestead exemption. Best estimates have been used with the understanding that there are a number of variables in Martin County. In particular, valuations for condominiums are not necessarily comparable with single-family residences, and in the case of the fire fee assessment, there are variations in the number of commercial versus residential parcels by jurisdiction.

[21] Per State statute, the ad valorem amount needed represents 95% of the amount to be raised by a millage. The millage rate calculation is based on providing 100% of the needed ad valorem.

Table 4: Comparisons of Cost to Homeowners for Current, Scenario A and Scenario B (Level 1 Reductions)

Current	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Average Home Less Exemption	$150,510	$150,510			
Current Millage	0.002431	0.001838			
			Contract	*Contract*	*Contract*
Ad Valorem	$365.81	$276.57			
Tier 1	$0	$108.35			
Tier 2	$0	$39.00			
Total	**$365.81**	**$423.92**			
Scenario A	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510			
Scenario A Millage	0.0013718	0.0013718			
			Contract	*Contract*	*Contract*
Ad Valorem	$206.46	$206.46			
Tier 1	$108.35	$108.35			
Tier 2	$39.00	$39.00			
Total	**$353.81**	**$353.81**			
Scenario B	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510	$437,325		
Scenario B Millage	.0013377	.0013377			
				Contract	*N/A*
Ad Valorem	$201.34	$201.34	$585.02		
Tier 1	$108.35	$108.35	$108.35		
Tier 2	$39.00	$39.00	$113.10		
Total	**$348.69**	**$348.69**	**$806.47**		

Sewall's Point currently contracts for fire and EMS services. Based on the current annual contract value, we have estimated the cost of the contract as a percent of the Town's ad valorem revenues. From there an estimated millage was calculated and is applied to the Sewall's Point average single-family residence value for Scenario B.

In both Scenario A and B, Jupiter Island continues for contract for fire and EMS services via agreement. There is, therefore, no change in the cost to Jupiter Island residents under the current agreement and no entry is included in the table for Jupiter Island.

Ocean Breeze is unusual in that there are only four parcels in the Town and no single-family residences. All residences are mobile homes that do not own the property on which they sit and therefore, would not receive a property tax bill.

Table 5 below summarizes the estimated change in costs for the average homeowner between the current system, Scenario A and Scenario B.

Table 5: Summary of Costs to Average Homeowner – Current, Scenario A and Scenario B (Level 1 Reductions)

Summary	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
Scenario A	**$353.81**	**$353.81**	*Contract*	*Contract*	*Contract*
Scenario B	**$348.69**	**$348.69**	**$806.47**	*Contract*	*N/A*

Level 2 Reductions (50%)

Current State

The various first responder, fire and EMS service agencies in Martin County are funded primarily through property taxes. Budgets are augmented by patient transport fees, fire non-ad valorem (non-property tax) assessments, fire inspection fees, other miscellaneous grants and non-recurring revenues. There are contractual agreements between jurisdictions for the provision of services: the contract amounts are reported as revenues to the respective agency as follows in Table 6, below.

Table 6: Contracted Fire/Rescue Services in Martin County

Agency Providing Service	Jurisdiction Receiving Services	Budgeted Contract Revenue FY15/16
Martin County Fire/Rescue	Town of Jupiter Island	$746,718
Martin County Fire/Rescue	Town of Ocean Breeze	$31,036
Stuart Fire/Rescue	Town of Sewall's Point	$372,750

Level 2 Reductions to Expenditures

FY15/16 expenditure budgets for the operations of two primary fire/rescue service agencies, Martin County Fire Rescue and Stuart Fire Rescue, are noted in Table 7 below.

Table 7: FY15/16 Expenditure Budgets for Fire Rescue Services (Level 2 Reductions)

Fire Rescue Agency	FY15/16 Budgeted Expenditures
Martin County Fire Rescue[22]	$39,835,909
Less Regional Services[23]	-$4,700,419
Stuart Fire Rescue[24]	$5,010,143
Total for Fire Rescue Services	**$40,145,633**
Level 2 Reduction	-$2,400,000
Expenditure Target	**$37,745,633**

The expenditure total above is the expenditure target to be funded by the proposed independent district assuming Level 2 expenditure reductions.

Assumptions for Alternative Consolidation Structures: Scenario A and Scenario B

Two consolidation structures, Scenario A and Scenario B, are developed with the objective of providing the same or improved service levels, more efficiently and effectively. The two structures and their assumptions are as follows:

3. Scenario A: Consolidate County/Stuart Fire Rescue - Contract with Other Jurisdictions – Implement Fire Fee
    - Fire Rescue services to Jupiter Island, Ocean Breeze and Sewall's Point are provided by the new independent district via contract agreements.
    - Contracts for services are valued in the scenario using current budgets.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

4. Scenario B: Consolidate County/Stuart Fire Rescue – All Jurisdictions Except Jupiter Island Assessed Millage – Implement Fire Fee
    - Fire Rescue services to Ocean Breeze and Sewall's Point is provided by the new independent district; Jupiter Island contracts for services from the new entity.
    - All jurisdictions except for Jupiter Island are assessed property taxes based on the new entity's millage rate.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

Scenario A and Scenario B – Funding Models

The financial models are an all-inclusive consolidation of Martin County and City of Stuart current fire rescue operations (stations and personnel). The combined FY15/16 expenditure budgets less Level 2 reductions are the target amount to be funded. Non-ad valorem revenues are considered first with

[22] Includes the cost to provide services to the Towns of Jupiter Island and Ocean Breeze.
[23] Regional Services are funded countywide and include Emergency Management, Nuclear Planning, Fire Rescue Communications, Ocean Rescue and Special Operations.
[24] Includes the cost to provide services to the Town of Sewall's Point.

the balance to be funded from ad valorem taxes. Uncertain or non-recurring revenues are not considered.

Table 8: Scenarios A and B - Funding Details (Level 2 Reductions)

Revenues to Fund New Entity	Scenario A	Scenario B
Non-Ad Valorem Revenues	**FY15/16 Budgeted**	**FY15/16 Budgeted**
Patient Transport Fees	$5,150,100	$5,150,100
Fire Inspection /Alarm Fees	$280,000	$280,000
Jupiter Island Contract	$746,718	$746,718
Ocean Breeze Contract	$31,036	$0
Sewall's Point Contract	$372,750	$0
Firefighter Supplement	$121,000	$121,000
Miscellaneous Recurring	$35,000	$35,000
Tier 1 & Tier 2 Fire Assessment Fee Countywide	$11,455,796	$11,584,708
Total Non-Ad Valorem Revenues	**$18,192,400**	**$17,917,526**
New Entity Expenditure Target	**$37,745,633**	**$37,745,633**
Expenditure Target less Non-Ad Valorem Revenues = Ad Valorem Revenue Needed to Fund New Entity[25]	**$19,553,233**	**$19,828,107**
Countywide Tax Roll Adjusted for Scenario	$15,925,249,121	$16,546,518,632
Millage Needed to Fund Ad Valorem for New Entity	0.0012924	0.0012614
Millage Stated as:	**1.2924**	**1.12614**

Table 9 below compares the cost of the current system, Scenario A, and Scenario B, for a homeowner based on the countywide average value of a single family home, less homestead exemption. Best estimates have been used with the understanding that there are a number of variables in Martin County. In particular, valuations for condominiums are not necessarily comparable with single-family residences, and in the case of the fire fee assessment, there are variations in the number of commercial versus residential parcels by jurisdiction.

[25] Per State statute, the ad valorem amount needed represents 95% of the amount to be raised by a millage. The millage rate calculation is based on providing 100% of the needed ad valorem.

Table 9: Comparisons of Cost to Homeowners for Current, Scenario A and Scenario B (Level 2 Reductions)

Current	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Average Home Less Exemption	$150,510	$150,510			
Current Millage	0.002431	0.001838			
			Contract	*Contract*	*Contract*
Ad Valorem	$365.81	$276.57			
Tier 1	$0	$108.35			
Tier 2	$0	$39.00			
Total	**$365.81**	**$423.92**			
Scenario A	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510			
Scenario A Millage	0.0012924	0.0012924			
			Contract	*Contract*	*Contract*
Ad Valorem	$194.52	$194.52			
Tier 1	$108.35	$108.35			
Tier 2	$39.00	$39.00			
Total	**$341.87**	**$341.87**			
Scenario B	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510	$437,325		
Scenario B Millage	0.0012614	0.0012614	0.0012614		
				Contract	*N/A*
Ad Valorem	$189.85	$189.85	$551.64		
Tier 1	$108.35	$108.35	$108.35		
Tier 2	$39.00	$39.00	$113.10		
Total	**$337.20**	**$337.20**	**$773.09**		

Sewall's Point currently contracts for fire and EMS services. Based on the current annual contract value, we have estimated the cost of the contract as a percent of the Town's ad valorem revenues. From there an estimated millage was calculated and is applied to the Sewall's Point average single-family residence value for Scenario B.

In both Scenario A and B, Jupiter Island continues for contract for fire and EMS services via agreement. There is, therefore, no change in the cost to Jupiter Island residents under the current agreement and no entry is included in the table for Jupiter Island.

Ocean Breeze is unusual in that there are only four parcels in the Town and no single-family residences. All residences are mobile homes that do not own the property on which they sit and therefore, would not receive a property tax bill.

Table 10 below summarizes the estimated change in costs for the average homeowner between the current system, Scenario A and Scenario B.

Table 10: Summary of Costs to Average Homeowner – Current, Scenario A and Scenario B (Level 2 Reductions)

Summary	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
Scenario A	**$341.87**	**$341.87**	*Contract*	*Contract*	*Contract*
Scenario B	**$337.20**	**$337.20**	**$773.69**	*Contract*	*N/A*

Level 3 Reductions (75%)

Current State

The various first responder, fire and EMS service agencies in Martin County are funded primarily through property taxes. Budgets are augmented by patient transport fees, fire non-ad valorem (non-property tax) assessments, fire inspection fees, other miscellaneous grants and non-recurring revenues. There are contractual agreements between jurisdictions for the provision of services: the contract amounts are reported as revenues to the respective agency as follows in Table 11, below.

Table 11: Contracted Fire/Rescue Services in Martin County

Agency Providing Service	Jurisdiction Receiving Services	Budgeted Contract Revenue FY15/16
Martin County Fire/Rescue	Town of Jupiter Island	$746,718
Martin County Fire/Rescue	Town of Ocean Breeze	$31,036
Stuart Fire/Rescue	Town of Sewall's Point	$372,750

Level 3 Reductions to Expenditures

FY15/16 expenditure budgets for the operations of two primary fire/rescue service agencies, Martin County Fire Rescue and Stuart Fire Rescue, are noted in Table 12 below.

Table 12: FY15/16 Expenditure Budgets for Fire Rescue Services (Level 3 Reductions)

Fire Rescue Agency	FY15/16 Budgeted Expenditures
Martin County Fire Rescue[26]	$39,835,909
Less Regional Services[27]	-$4,700,419
Stuart Fire Rescue[28]	$5,010,143
Total for Fire Rescue Services	**$40,145,633**
Level 3 Reduction	-$3,600,000
Expenditure Target	**$36,545,633**

The expenditure total above is the expenditure target to be funded by the proposed independent district assuming Level 3 expenditure reductions.

Assumptions for Alternative Consolidation Structures: Scenario A and Scenario B

Two consolidation structures, Scenario A and Scenario B, are developed with the objective of providing the same or improved service levels, more efficiently and effectively. The two structures and their assumptions are as follows:

5. Scenario A: Consolidate County/Stuart Fire Rescue - Contract with Other Jurisdictions – Implement Fire Fee
    - Fire Rescue services to Jupiter Island, Ocean Breeze and Sewall's Point are provided by the new independent district via contract agreements.
    - Contracts for services are valued in the scenario using current budgets.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

6. Scenario B: Consolidate County/Stuart Fire Rescue – All Jurisdictions Except Jupiter Island Assessed Millage – Implement Fire Fee
    - Fire Rescue services to Ocean Breeze and Sewall's Point is provided by the new independent district; Jupiter Island contracts for services from the new entity.
    - All jurisdictions except for Jupiter Island are assessed property taxes based on the new entity's millage rate.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

Scenario A and Scenario B – Funding Models

The financial models are an all-inclusive consolidation of Martin County and City of Stuart current fire rescue operations (stations and personnel). The combined FY15/16 expenditure budgets less reductions are the target amount to be funded. Non-ad valorem revenues are considered first with

[26] Includes the cost to provide services to the Towns of Jupiter Island and Ocean Breeze.
[27] Regional Services are funded countywide and include Emergency Management, Nuclear Planning, Fire Rescue Communications, Ocean Rescue and Special Operations.
[28] Includes the cost to provide services to the Town of Sewall's Point.

the balance to be funded from ad valorem taxes. Uncertain or non-recurring revenues are not considered.

Table 13: Scenarios A and B - Funding Details (Level 3 Reductions)

Revenues to Fund New Entity	Scenario A	Scenario B
Non-Ad Valorem Revenues	**FY15/16 Budgeted**	**FY15/16 Budgeted**
Patient Transport Fees	$5,150,100	$5,150,100
Fire Inspection /Alarm Fees	$280,000	$280,000
Jupiter Island Contract	$746,718	$746,718
Ocean Breeze Contract	$31,036	$0
Sewall's Point Contract	$372,750	$0
Firefighter Supplement	$121,000	$121,000
Miscellaneous Recurring	$35,000	$35,000
Tier 1 & Tier 2 Fire Assessment Fee Countywide	$11,455,796	$11,584,708
Total Non-Ad Valorem Revenues	**$18,192,400**	**$17,917,526**
New Entity Expenditure Target	**$36,545,633**	**$36,545,633**
Expenditure Target less Non-Ad Valorem Revenues = Ad Valorem Revenue Needed to Fund New Entity[29]	**$18,353,2133**	**$18,628,107**
Countywide Tax Roll Adjusted for Scenario	$15,925,249,121	$16,546,518,632
Millage Needed to Fund Ad Valorem for New Entity	0.0012131	0.0011851
Millage Stated as:	**1.2131**	**1.1851**

Table 14 below compares the cost of the current system, Scenario A, and Scenario B, for a homeowner based on the countywide average value of a single family home, less homestead exemption. Best estimates have been used with the understanding that there are a number of variables in Martin County. In particular, valuations for condominiums are not necessarily comparable with single-family residences, and in the case of the fire fee assessment, there are variations in the number of commercial versus residential parcels by jurisdiction.

[29] Per State statute, the ad valorem amount needed represents 95% of the amount to be raised by a millage. The millage rate calculation is based on providing 100% of the needed ad valorem.

Table 14: Comparisons of Cost to Homeowners for Current, Scenario A and Scenario B (Level 3 Reductions)

Current	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Average Home Less Exemption	$150,510	$150,510			
Current Millage	0.002431	0.001838			
			Contract	*Contract*	*Contract*
Ad Valorem	$365.81	$276.57			
Tier 1	$0	$108.35			
Tier 2	$0	$39.00			
Total	**$365.81**	**$423.92**			
Scenario A	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510			
Scenario A Millage	0.0012131	0.0012131			
			Contract	*Contract*	*Contract*
Ad Valorem	$182.59	$182.59			
Tier 1	$108.35	$108.35			
Tier 2	$39.00	$39.00			
Total	**$329.94**	**$329.94**			
Scenario B	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510	$437,325		
Scenario B Millage	0.0011851	0.0011851	0.0011851		
				Contract	*N/A*
Ad Valorem	$178.36	$178.36	$518.25		
Tier 1	$108.35	$108.35	$108.35		
Tier 2	$39.00	$39.00	$113.10		
Total	**$325.71**	**$325.71**	**$739.70**		

Sewall's Point currently contracts for fire and EMS services. Based on the current annual contract value, we have estimated the cost of the contract as a percent of the Town's ad valorem revenues. From there an estimated millage was calculated and is applied to the Sewall's Point average single-family residence value for Scenario B.

In both Scenario A and B, Jupiter Island continues for contract for fire and EMS services via agreement. There is, therefore, no change in the cost to Jupiter Island residents under the current agreement and no entry is included in the table for Jupiter Island.

Ocean Breeze is unusual in that there are only four parcels in the Town and no single-family residences. All residences are mobile homes that do not own the property on which they sit and therefore, would not receive a property tax bill.

Table 15 below summarizes the estimated change in costs for the average homeowner between the current system, Scenario A and Scenario B.

Table 15: Summary of Costs to Average Homeowner – Current, Scenario A and Scenario B (Level 3 Reductions)

Summary	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
Scenario A	**$329.94**	**$329.94**	*Contract*	*Contract*	*Contract*
Scenario B	**$325.71**	**$325.71`**	**$739.70**	*Contract*	*N/A*

Level 4 Reductions (100%)

Current State

The various first responder, fire and EMS service agencies in Martin County are funded primarily through property taxes. Budgets are augmented by patient transport fees, fire non-ad valorem (non-property tax) assessments, fire inspection fees, other miscellaneous grants and non-recurring revenues. There are contractual agreements between jurisdictions for the provision of services: the contract amounts are reported as revenues to the respective agency as follows in Table 16, below.

Table 16: Contracted Fire/Rescue Services in Martin County (Level 4 Reductions)

Agency Providing Service	Jurisdiction Receiving Services	Budgeted Contract Revenue FY15/16
Martin County Fire/Rescue	Town of Jupiter Island	$746,718
Martin County Fire/Rescue	Town of Ocean Breeze	$31,036
Stuart Fire/Rescue	Town of Sewall's Point	$372,750

Level 4 Reductions to Expenditures

FY15/16 expenditure budgets for the operations of two primary fire/rescue service agencies, Martin County Fire Rescue and Stuart Fire Rescue, are noted in Table 17 below.

Table 17: FY15/16 Expenditure Budgets for Fire Rescue Services (Level 4 Reductions)

Fire Rescue Agency	FY15/16 Budgeted Expenditures
Martin County Fire Rescue[30]	$39,835,909
Less Regional Services[31]	-$4,700,419
Stuart Fire Rescue[32]	$5,010,143
Total for Fire Rescue Services	**$40,145,633**
Level 4 Reduction	-$4,800,000
Expenditure Target	**$35,645,633**

The expenditure total above is the expenditure target to be funded by the proposed independent district assuming Level 4 expenditure reductions.

[30] Includes the cost to provide services to the Towns of Jupiter Island and Ocean Breeze.
[31] Regional Services are funded countywide and include Emergency Management, Nuclear Planning, Fire Rescue Communications, Ocean Rescue and Special Operations.
[32] Includes the cost to provide services to the Town of Sewall's Point.

Assumptions for Alternative Consolidation Structures: Scenario A and Scenario B

Two consolidation structures, Scenario A and Scenario B, are developed with the objective of providing the same or improved service levels, more efficiently and effectively. The two structures and their assumptions are as follows:

7. Scenario A: Consolidate County/Stuart Fire Rescue - Contract with Other Jurisdictions – Implement Fire Fee
    - Fire Rescue services to Jupiter Island, Ocean Breeze and Sewall's Point are provided by the new independent district via contract agreements.
    - Contracts for services are valued in the scenario using current budgets.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

8. Scenario B: Consolidate County/Stuart Fire Rescue – All Jurisdictions Except Jupiter Island Assessed Millage – Implement Fire Fee
    - Fire Rescue services to Ocean Breeze and Sewall's Point is provided by the new independent district; Jupiter Island contracts for services from the new entity.
    - All jurisdictions except for Jupiter Island are assessed property taxes based on the new entity's millage rate.
    - Stuart's non-ad valorem fire assessment methodology is extended countywide.

Scenario A and Scenario B – Funding Models

The financial models are an all-inclusive consolidation of Martin County and City of Stuart current fire rescue operations (stations and personnel). The combined FY15/16 expenditure budgets less Level 4 reductions are the target amount to be funded. Non-ad valorem revenues are considered first with the balance to be funded from ad valorem taxes. Uncertain or non-recurring revenues are not considered.

Table 18: Scenarios A and B - Funding Details (Level 4 Reductions)

Revenues to Fund New Entity	Scenario A	Scenario B
Non-Ad Valorem Revenues	**FY15/16 Budgeted**	**FY15/16 Budgeted**
Patient Transport Fees	$5,150,100	$5,150,100
Fire Inspection /Alarm Fees	$280,000	$280,000
Jupiter Island Contract	$746,718	$746,718
Ocean Breeze Contract	$31,036	$0
Sewall's Point Contract	$372,750	$0
Firefighter Supplement	$121,000	$121,000
Miscellaneous Recurring	$35,000	$35,000
Tier 1 & Tier 2 Fire Assessment Fee Countywide	$11,455,796	$11,584,708
Total Non-Ad Valorem Revenues	**$18,192,400**	**$17,917,526**
New Entity Expenditure Target	**$35,345,633**	**$35,345,633**
Expenditure Target less Non-Ad Valorem Revenues = Ad Valorem Revenue Needed to Fund New Entity[33]	**$17,153,233**	**$17,428,107**
Countywide Tax Roll Adjusted for Scenario	$15,925,249,121	$16,546,518,632
Millage Needed to Fund Ad Valorem for New Entity	0.0011338	0.0011087
Millage Stated as:	**1.1338**	**1.1087**

Table 19 below compares the cost of the current system, Scenario A, and Scenario B, for a homeowner based on the countywide average value of a single family home, less homestead exemption. Best estimates have been used with the understanding that there are a number of variables in Martin County. In particular, valuations for condominiums are not necessarily comparable with single-family residences, and in the case of the fire fee assessment, there are variations in the number of commercial versus residential parcels by jurisdiction.

[33] Per State statute, the ad valorem amount needed represents 95% of the amount to be raised by a millage. The millage rate calculation is based on providing 100% of the needed ad valorem.

Table 19: Comparisons of Cost to Homeowners for Current, Scenario A and Scenario B (Level 4 Reductions)

Current	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Average Home Less Exemption	$150,510	$150,510			
Current Millage	0.002431	0.001838			
			Contract	*Contract*	*Contract*
Ad Valorem	$365.81	$276.57			
Tier 1	$0	$108.35			
Tier 2	$0	$39.00			
Total	**$365.81**	**$423.92**			
Scenario A	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510			
Scenario A Millage	0.0011338	0.0011338			
			Contract	*Contract*	*Contract*
Ad Valorem	$170.65	$170.65			
Tier 1	$108.35	$108.35			
Tier 2	$39.00	$39.00			
Total	**$318.00**	**$318.00**			
Scenario B	**County**	**Stuart**	**Sewall's Point**	**Jupiter Island**	**Ocean Breeze**
Average Home Less Exemption	$150,510	$150,510	$437,325		
Scenario B Millage	0.0011087	0.0011087	0.0011087		
				Contract	*N/A*
Ad Valorem	$166.87	$166.87	$484.87		
Tier 1	$108.35	$108.35	$108.35		
Tier 2	$39.00	$39.00	$113.10		
Total	**$314.22**	**$314.22**	**$706.32**		

Sewall's Point currently contracts for fire and EMS services. Based on the current annual contract value, we have estimated the cost of the contract as a percent of the Town's ad valorem revenues. From there an estimated millage was calculated and is applied to the Sewall's Point average single-family residence value for Scenario B.

In both Scenario A and B, Jupiter Island continues for contract for fire and EMS services via agreement. There is, therefore, no change in the cost to Jupiter Island residents under the current agreement and no entry is included in the table for Jupiter Island.

Ocean Breeze is unusual in that there are only four parcels in the Town and no single-family residences. All residences are mobile homes that do not own the property on which they sit and therefore, would not receive a property tax bill.

Table 20 below summarizes the estimated change in costs for the average homeowner between the current system, Scenario A and Scenario B.

Table 20: Summary of Costs to Average Homeowner – Current, Scenario A and Scenario B (Level 4 Reductions)

Summary	County	Stuart	Sewall's Point	Jupiter Island	Ocean Breeze
Current	**$365.81**	**$423.92**	*Contract*	*Contract*	*Contract*
Scenario A	**$318.00**	**$318.00**	*Contract*	*Contract*	*Contract*
Scenario B	**$314.22**	**$314.22**	**$706.32**	*Contract*	*N/A*

Additional Requested Analyses

Average Costs per Incident and Response

FITCH was requested to provide analyses regarding the average costs per incident and/or response. The numbers of incidents are the number of unique calls requested by provider. The number of responses refers to the total number of apparatus responses provided by each provider. The following tables present the average costs for each provider by incidents and responses.

However, there are significant limitations in this type of analysis and the reader is cautioned not to make policy decisions or undue assumptions based on this information. For example, larger organizations such as exist with MCFR have additional administrative and overhead costs due to the size and complexity of the operation that serve to increase costs. In addition, MCFR has responsibilities to provide services in non-urban areas that shift costs towards readiness rather than actual demand due to lower call volumes. In contrast, Stuart's service area has the highest concentration of calls in a small urban geographic area. The net effect is that the frequency of incidents drives costs down when viewed at per incident. Finally, when considering the number of responses, some variability exists, as the two agencies do not respond in an identical manner. Therefore, this is a rough estimate and not an apples to apples comparison and is not intended to drive decision-making.

What is transferrable from this analysis is the understanding that there is a greater return on investment, or a more efficient manner to deliver services, in urban environments as less costs are sunk in readiness and more costs are allocated to actual service delivery.

Results are provided as Tables 21 and 22 below.

Table 21: Summary of Average Costs per Incident by Provider

Summary	County	Stuart
Net Expenditures	$30,700,330	$2,849,286
Number of Incidents	18,016	4,996
Average Cost per Incident	$1,704.06	$570.31

Table 22: Summary of Average Costs per Response by Provider

Summary	County	Stuart
Net Expenditures	$30,700,330	$2,849,286
Number of Incidents	37,446	8,957
Average Cost per Incident	$819.86	$318.11

Proportion of Revenue Contribution by Jurisdiction

FITCH was requested to describe the proportional revenue contribution by each jurisdiction across the two alternative scenarios. Scenario A assumes that Martin County and Stuart contribute to the District with a combination of ad valorem and non-ad valorem revenues and the District would continue to contract with Sewall's Point, Jupiter Island, and Ocean Breeze. Scenario B assumes that Martin County, Stuart, Sewall's Point, and Ocean Breeze contribute to the District with a combination of ad valorem and non-ad valorem revenues and the District would continue to contract for services with Jupiter Island.

An analysis of the proportion of revenue contributed by each jurisdiction demonstrates that the unincorporated county areas and the City of Stuart would contribute the majority of the revenues. In each scenario, the combination of the Stuart and Martin County revenues accounts for approximately 96% and 97% in Scenario B and A, respectively. Since Jupiter Island was assumed to maintain the contractual relationship in either scenario their relative contribution remains unchanged. The Town of Sewall's Point varies from 0.9% to 2.4% of the overall revenue contributions between Scenario A and B. Currently, Ocean Breeze does not have a significant overall shift in contributed revenue under either scenario. However, future development planned in Ocean Breeze should be a consideration for the future in either the appropriate contracted value or the ability to contribute through traditional taxing structures.

The diversified funding strategies have a positive benefit for areas with higher assessed values. For example, in Sewall's Point as the proportion of contributed revenue is shifted towards ad valorem taxes, the relative contribution will increase due to assessed values. The utilization of a non-ad valorem fire assessment fee serves to distribute costs more evenly across the jurisdictions. Results are presented in Table XX below.

Table 19: Proportion of Overall Revenue Contribution by Jurisdiction and Alternative Scenario

Jurisdiction	Scenario A	Scenario B
Unincorporated County	86.0%	84.7%
City of Stuart	11.2%	11.1%
Town of Jupiter Island	1.8%	1.8%
Town of Sewell's Point	0.9%	2.4%
Town of Ocean Breeze	0.1%	0.0%
Total	100.00%	100.00%

Seasonable Impact on Workload at Hutchinson Island

FITCH was requested to describe the seasonable impact on workload at Station 14 on Hutchinson Island. Analyses suggest that only minor variability exists between month of year and day of week. The overall distribution of calls throughout the day follows a similar pattern. This analysis examined requests for service within Station 14's first due assigned area. Results are presented as Figures 22, 23, and 24, below.

Figure 22: Average Calls per Day by Month of Year

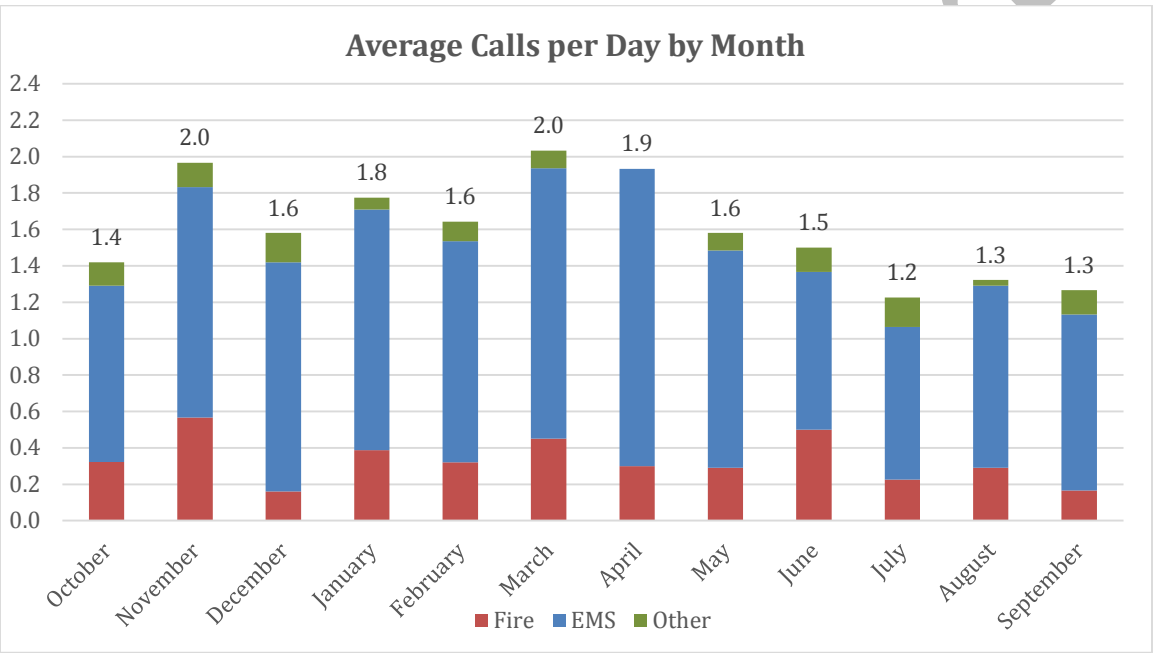


Figure 23: Average Calls per Day by Weekday

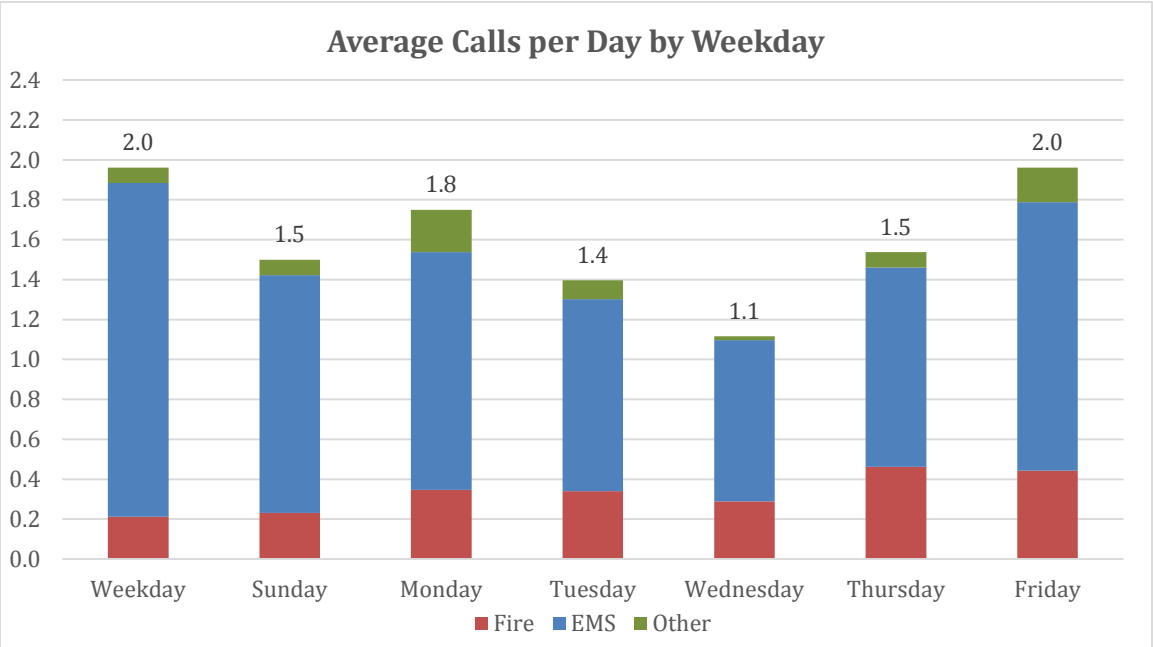
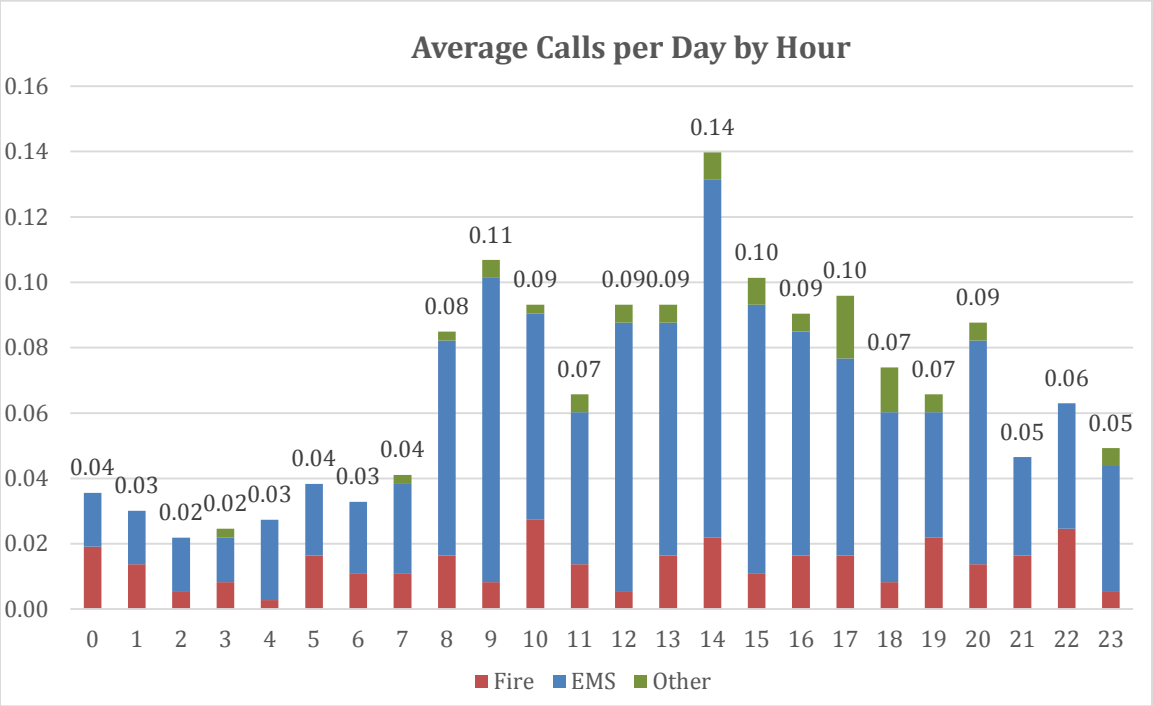


Figure 24: Average Calls per Day by Hour of Day



Potential Exposure for All-Aboard Florida for Station 1

FITCH was requested to describe the demand for services for Station 1 as it is located on the East side of the railroad tracks. Overall, there is not considerable variability in demand for services by month of year or day of week. The distribution by time of day follows the same general pattern as the

system as a whole. In total, 2,415 calls were answered in Station 1's territory in 2014, or approximately 6 to 8 incidents per day. Therefore, it is appropriate to maintain deploying Rescue 1 from Station 1 until either Station 2 has been updated to accommodate the additional apparatus and personnel or there is greater clarity on the impact of All Aboard Florida. Data are presented as Figures 25 – 27.

Figure 25: Average Calls per Day by Month of Year

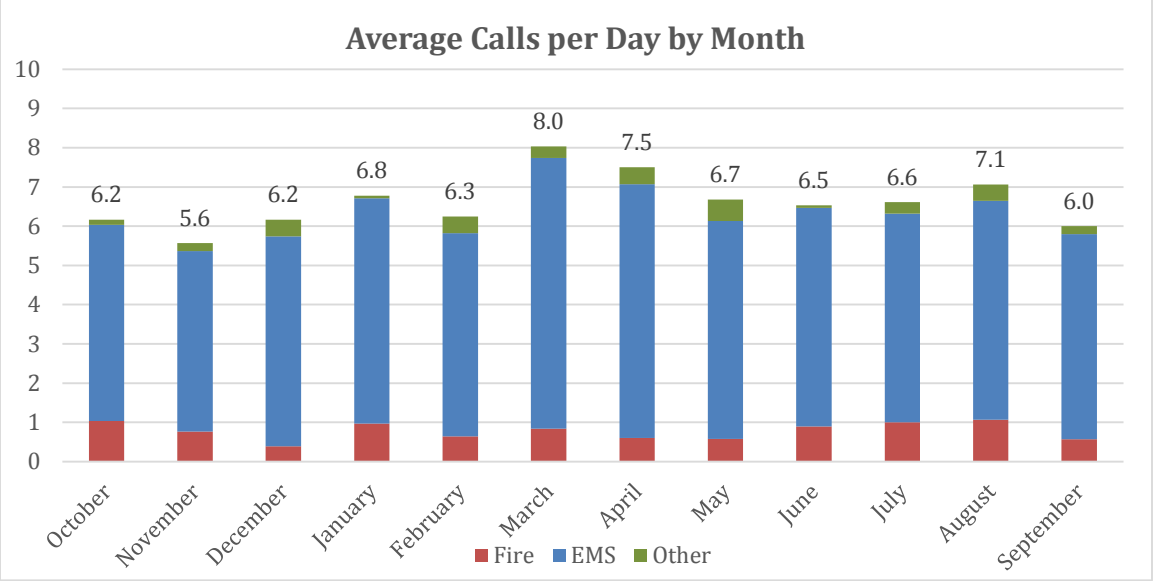


Figure 26: Average Calls per Day of Week

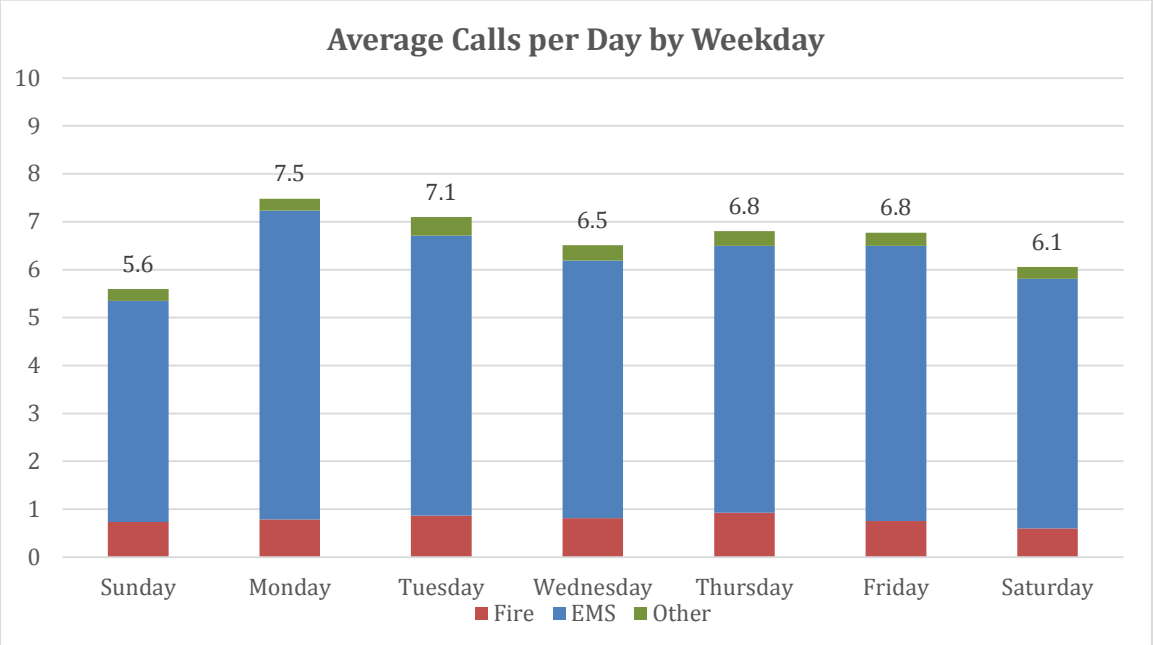
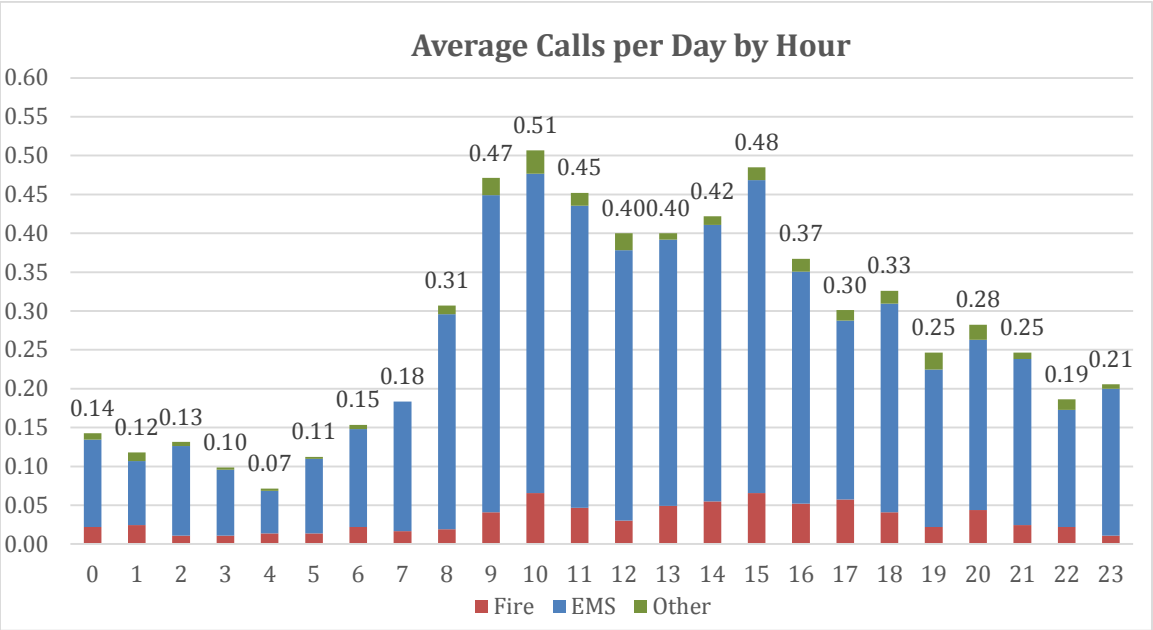


Figure 27: Average Calls per Hour of Day



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