Montgomery County Fire and Rescue Service Performance Review

Richard Bowers, Fire Chief

June 12, 2009

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CountyStat Principles

- **Require Data-Driven Performance**

- **Promote Strategic Governance**

- **Increase Government Transparency**

- **Foster a Culture of Accountability**

Agenda

- **Welcome and Introductions**

- **Performance Update**

- **Accompanying Special Topics:**
  - Use of Geospatial Analysis to Impact Response Times
  - Promoting Fire Prevention Outreach Efforts

- **Wrap-up and Follow-up Items**

Meeting Goal

- **Determine the impact of Fire and Rescue Service programs and activities on headline measures and establish new performance expectations and goals**

- **Review ongoing departmental data collection efforts and discuss future projects that will further incorporate data into the decision making process**

Headline Measures

Percent of Residential Structure Fires Confined to the Room of Origin

Response Time to Critical Calls
- Percentage of Advanced Life Support (ALS) Incidents with First Arriving ALS Unit within 8 Minutes
- Percentage of Structure Fires with First Arriving Engine within 6 Minutes

Number of Residential Fire Deaths and Injuries
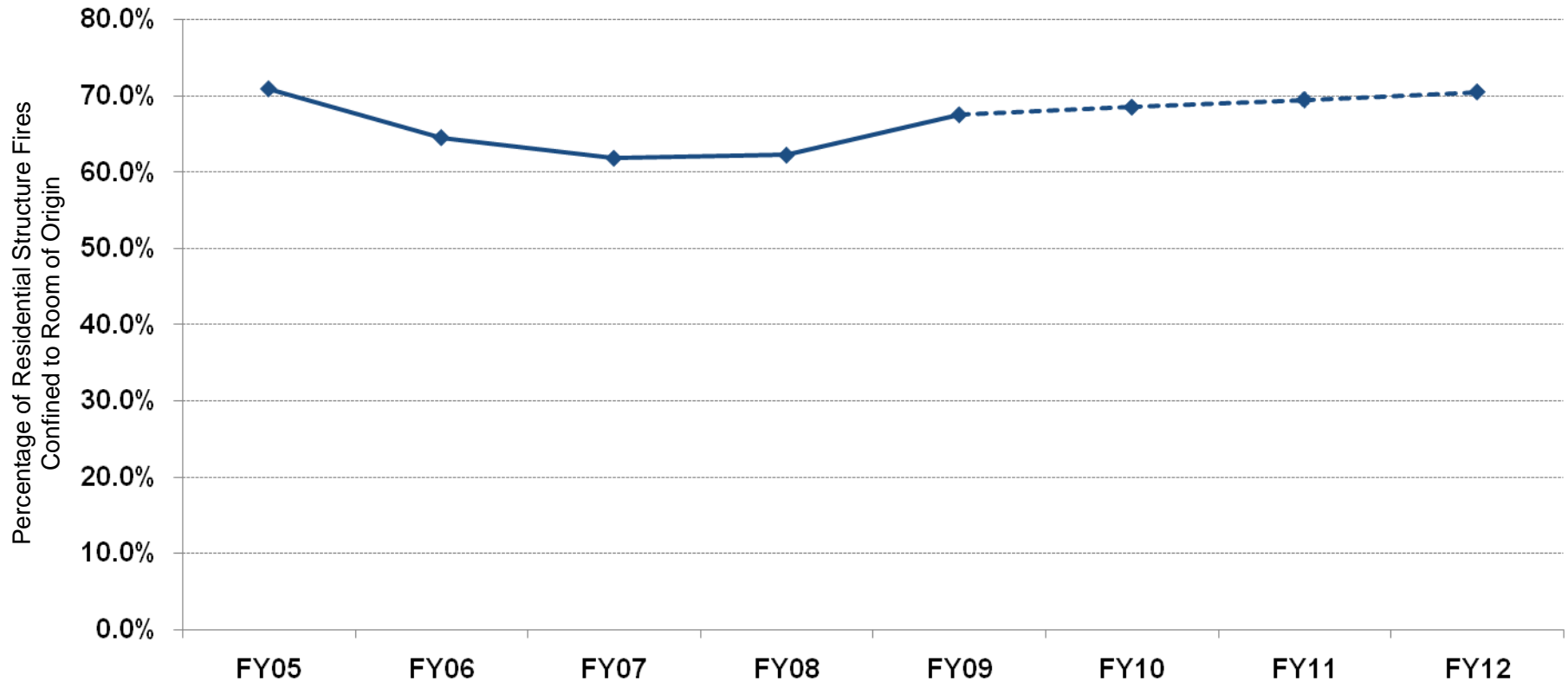
MCFRS Overtime Efficiency Correlation Rate

Percentage of Accreditation Related Strategic Recommendations Addressed

Emergency Medical Services Performance - Heart Attack Care

Fire and Injury Prevention Through Community Outreach

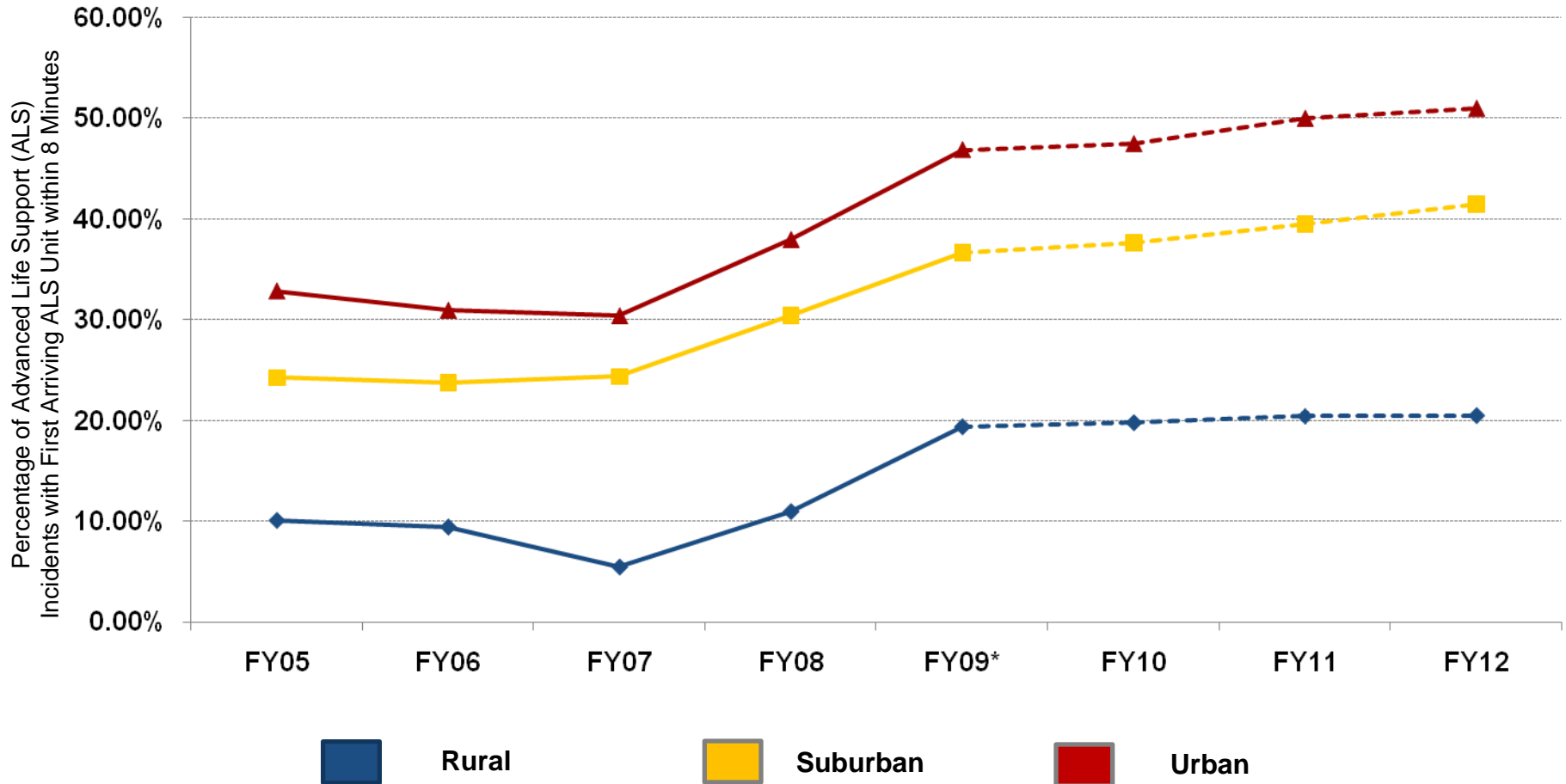# Headline Measure #1: Percent of Residential Structure Fires Confined to the Room of Origin

FY05	FY06	FY07	FY08	FY09*	FY10	FY11	FY12
70.9%	64.5%	61.8%	62%	67.5%	68.5%	69.5%	70.5%

*FY09 Current as of 5/31/09

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Headline Measure #2: Response Time to Critical Calls:
Percentage of Advanced Life Support (ALS) Incidents with First Arriving ALS Unit within 8 Minutes

*FY09 Current as of 5/31/09
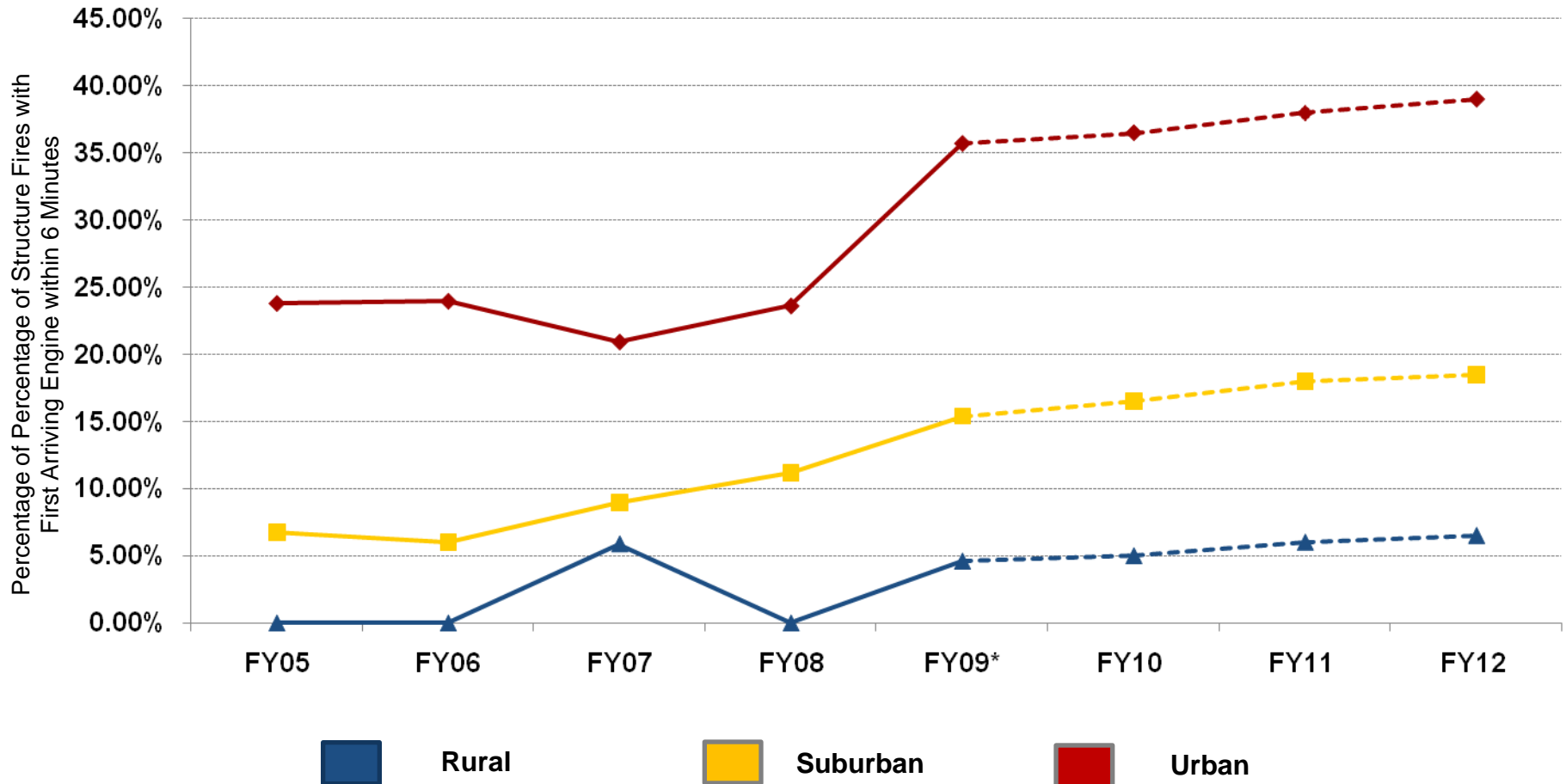
Headline Measure #2: Response Time to Critical Calls:
Percentage of Advanced Life Support (ALS) Incidents with First Arriving ALS Unit within 8 Minutes

	FY05	FY06	FY07	FY08	FY09*	FY10	FY11	FY12
Urban	32.91%	31.01%	30.46%	38.00%	46.90%	47.50%	50.00%	51.00%
Suburban	24.33%	23.81%	24.45%	30.50%	36.70%	37.70%	39.50%	41.50%
Rural	10.13%	9.47%	5.52%	11.00%	19.40%	19.80%	20.50%	20.50%

*FY09 Current as of 5/31/09

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Headline Measure #2: Response Time to Critical Calls:
Percentage of Structure Fires with First Arriving Engine within 6 Minutes

*FY09 Current as of 5/31/09

Headline Measure #2: Response Time to Critical Calls:
Percentage of Structure Fires with First Arriving Engine within 6 Minutes

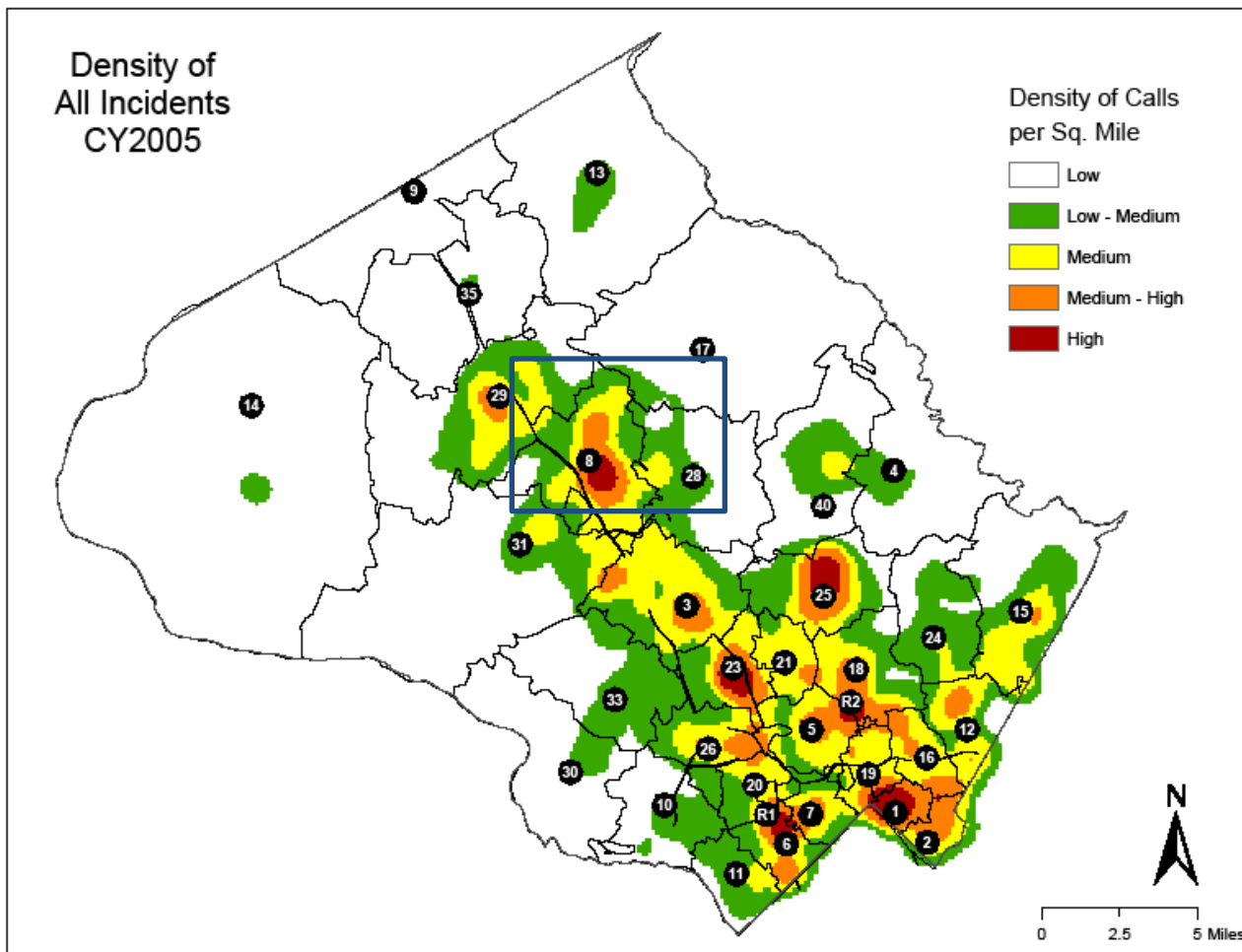|	FY05	FY06	FY07	FY08	FY09*	FY10	FY11	FY12
Urban	23.79%	23.95%	20.92%	23.60%	35.70%	36.50%	38.00%	39.00%
Suburban	6.76%	6.00%	8.99%	11.20%	15.40%	16.50%	18.00%	18.50%
Rural	0.00%	0.00%	5.88%	0.00%	4.60%	5.00%	6.00%	6.50%

*FY09 Current as of 5/31/09

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MCFRS Use of Geospatial Analysis To Impact Response Time to Critical Calls Impact Headline Measure

- Geospatial data analysis is a central component of the strategic planning process for MCFRS.

- The use of geo-coded incident data, response times, and service coverage allows MCFRS to align current and future resources in areas with the greatest need in a manner that will achieve the greatest impact.

- The following information is a component of the Phase 4 Study is an on-going study that will soon lead to a report with recommendations for additional stations and resources to serve the Northeast County.

MCFRS should be able to use geospatial analysis to determine if ongoing facility modernization and construction has an impact on the density of incidents over time and the ability to respond within timeframe goals.

MCFRS Map of Incident Calls in CY05

Density of
All Incidents
CY2005

Density of Calls
per Sq. Mile

- [ ] Low
- [ ] Low - Medium
- [ ] Medium
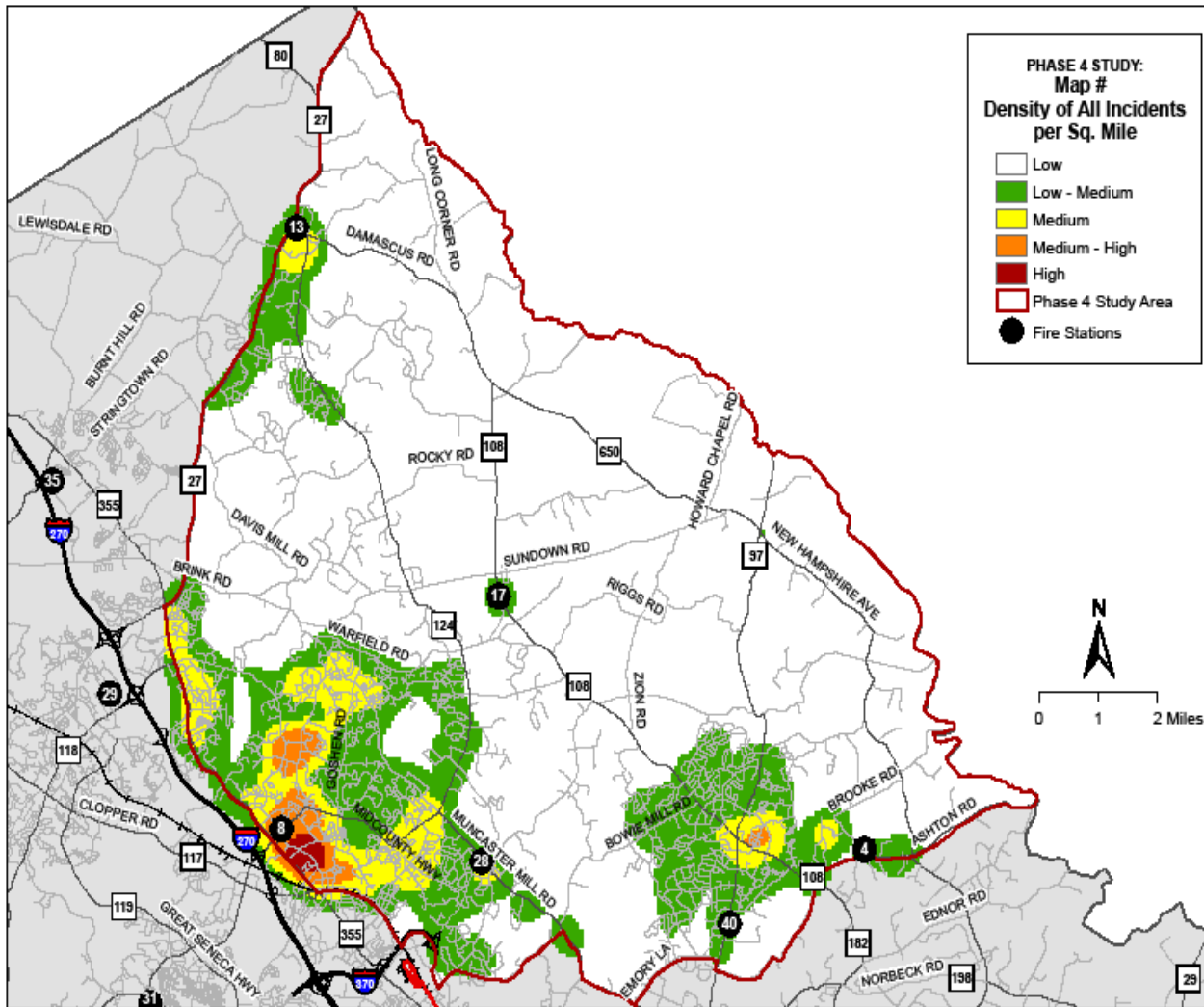- [ ] Medium - High
- [ ] High

C:\GIS_Projects\Base_data\CY05\all_incidents\allincidents.mxd   5/2006

Geospatial analysis demonstrates an area of high concentrations of fire, rescue, and EMS incidents around Stations 8 and 28 in the Northeast part of the County.

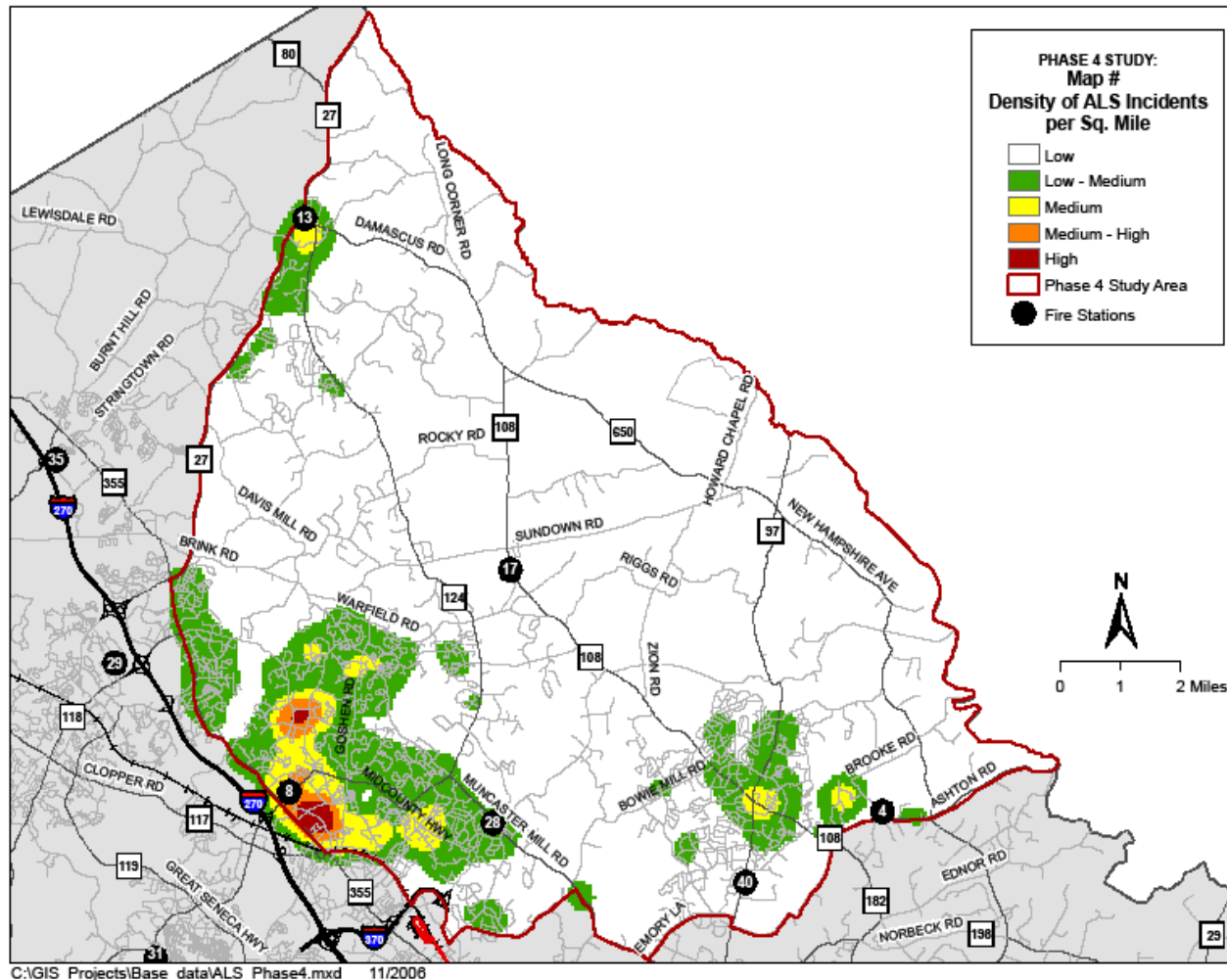# MCFRS Map of Incident Density within Northeast County

Geospatial analysis demonstrates highest concentrations of fire, rescue, and EMS incidents in Phase 4 Area occur in Gaithersburg, Montgomery Village, Olney, eastern Germantown (future FS34's area), and Damascus.

Large senior housing and healthcare complexes are large drivers of incidents in the Northeast County region.
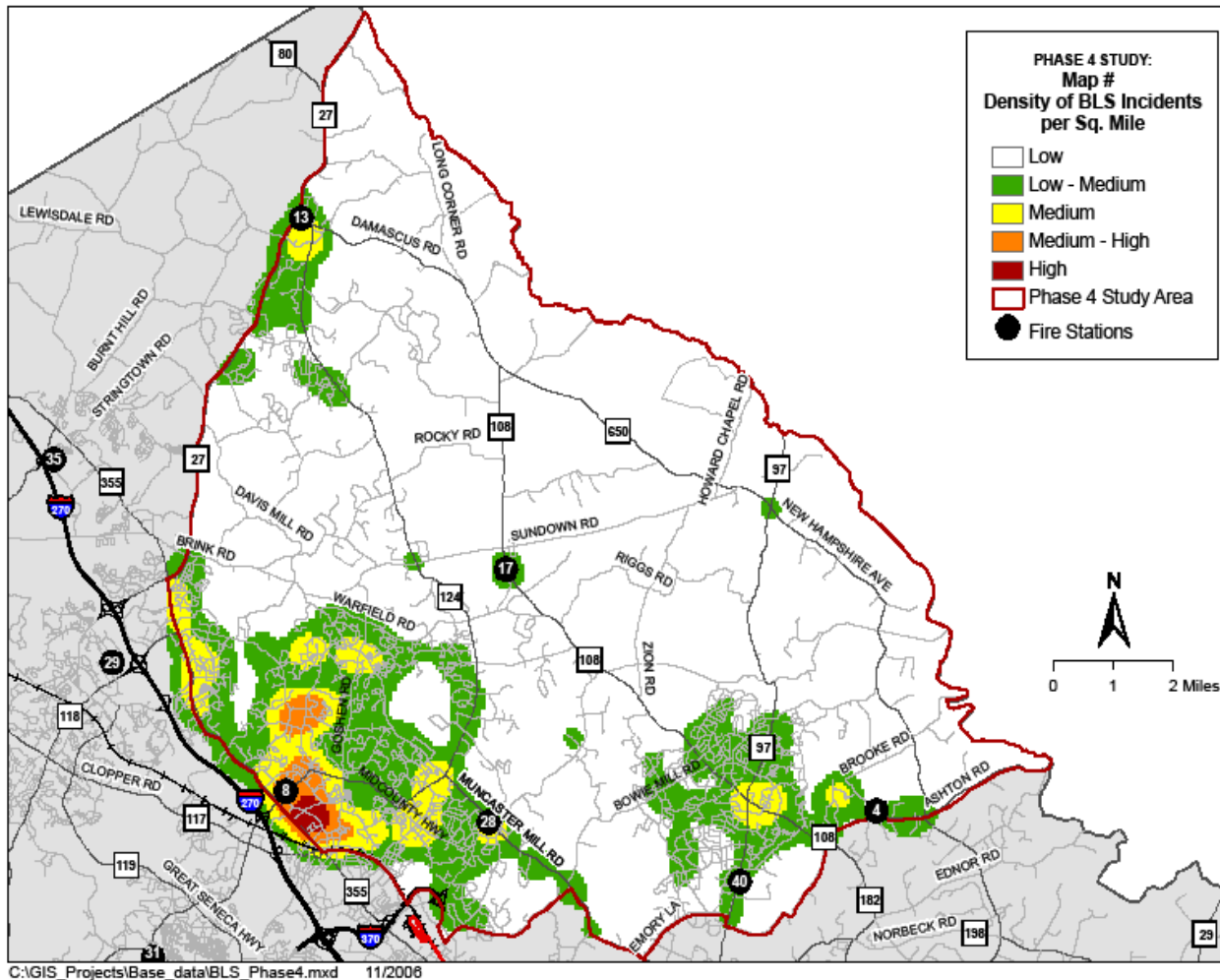
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MCFRS Map of ALS Incident Density within Northeast County

Geospatial analysis demonstrates an area of high concentrations of ALS incidents around Stations 8 and 28 in the Northeast part of the County.
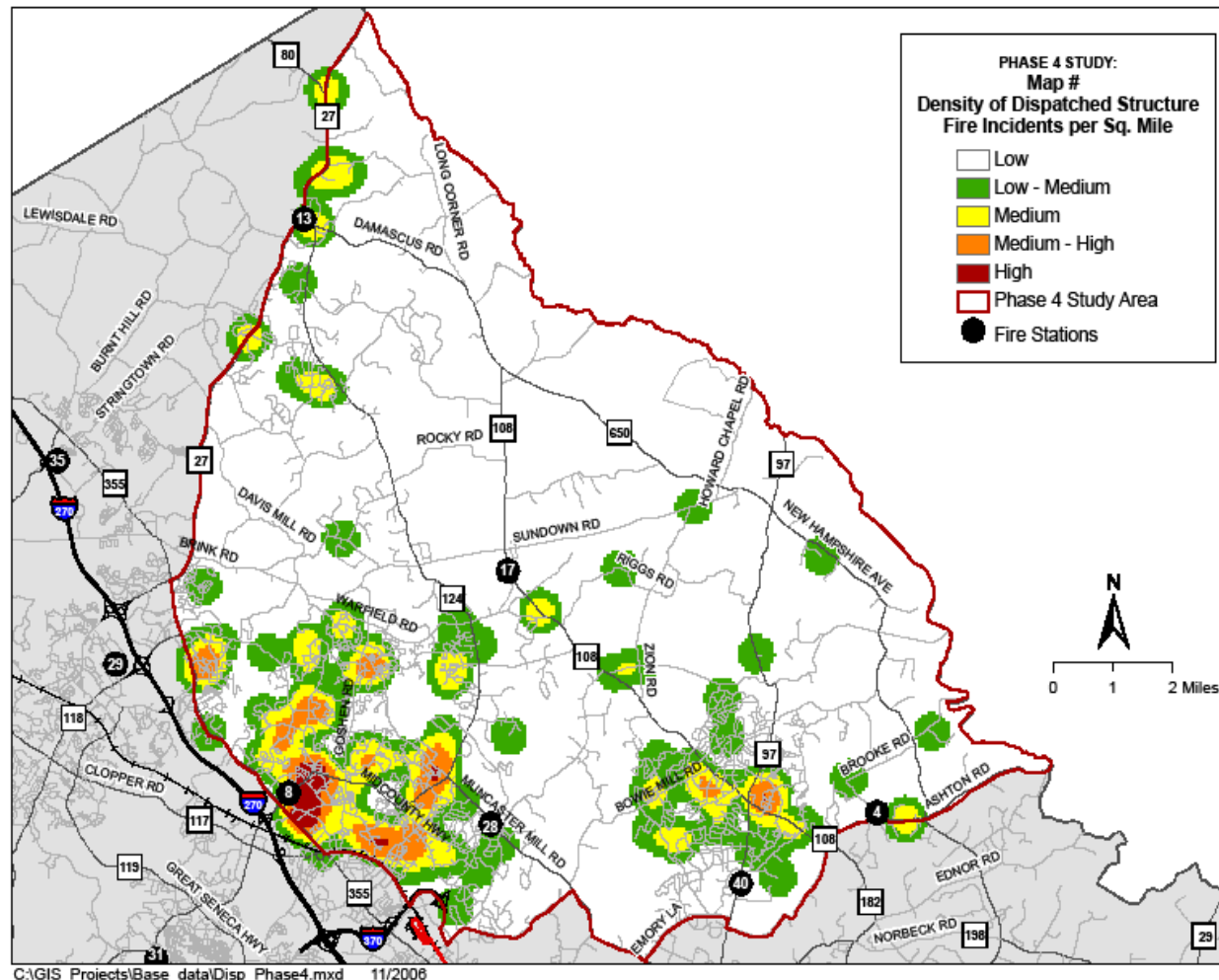
MCFRS Map of BLS Incident Density within Northeast County

Geospatial analysis demonstrates an area of high concentrations of BLS incidents around Stations 8, 13, 28, and 40 in the Northeast part of the County.
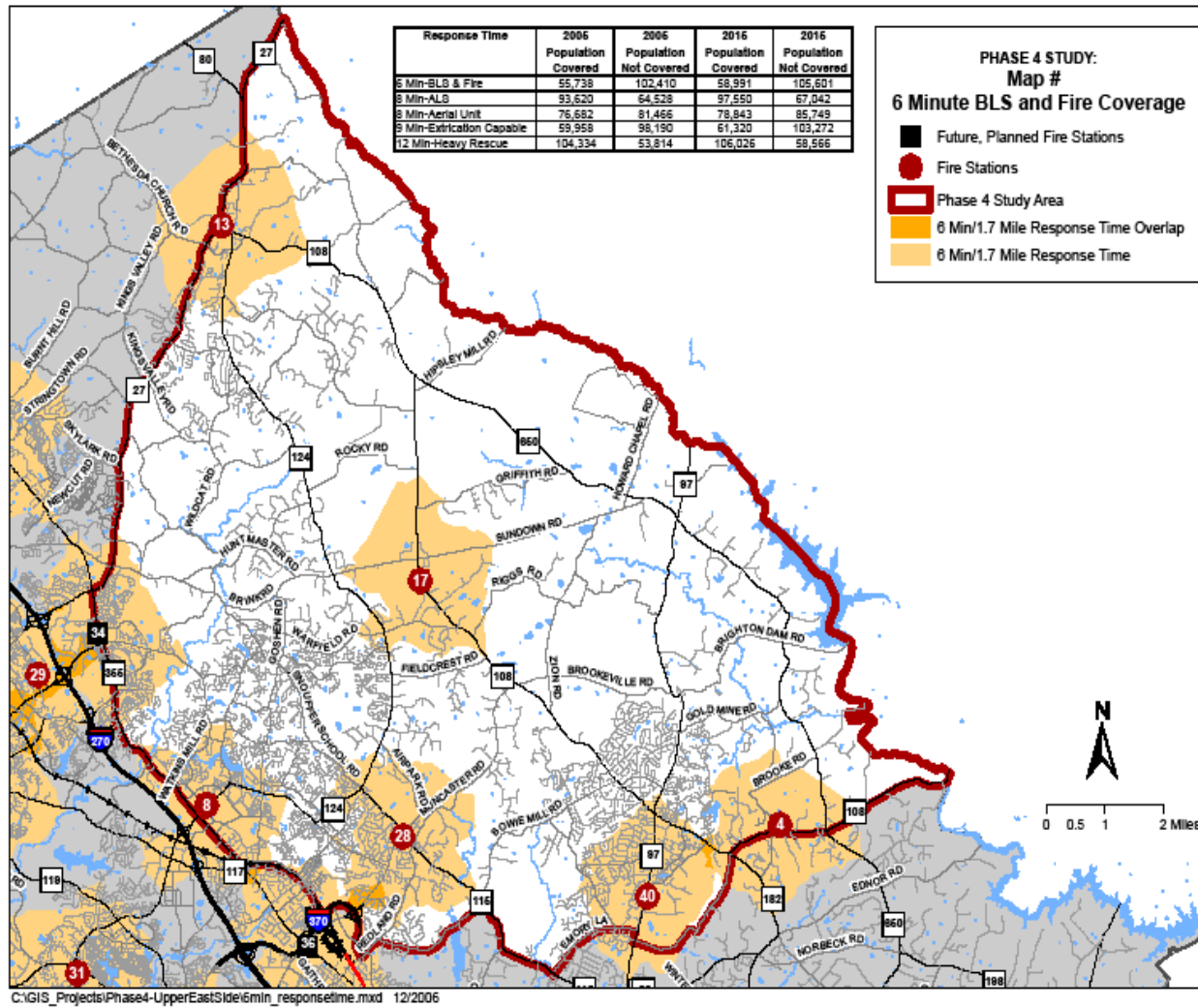
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MCFRS Map of Dispatched Structure Fire Incident Density within Northeast County

Geospatial analysis demonstrates an area of high concentrations of structure fire incidents around Stations 8, 13, 28, and 40 in the Northeast part of the County.
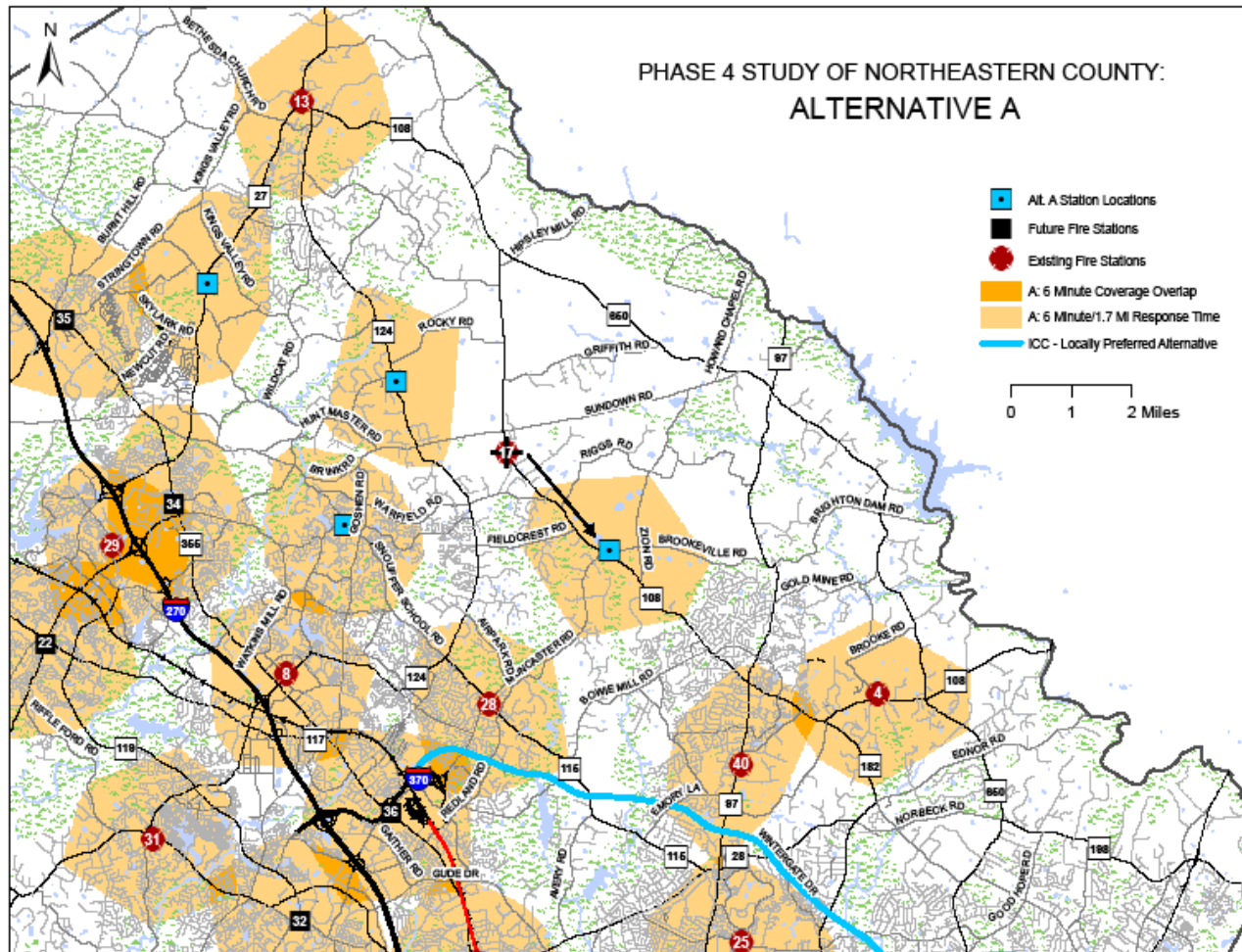
MCFRS Map of Map of 6-minute Engine and 1st-Responder Response to Fire and BLS Incidents

Response Time	2005 Population Covered	2006 Population Not Covered	2016 Population Covered	2016 Population Not Covered
6 Min-BLS & Fire	55,738	102,410	58,991	105,601
8 Min-ALS	93,620	64,528	97,550	67,042
8 Min-Aerial Unit	76,682	81,466	78,843	85,749
8 Min-Extrication Capable	59,958	98,190	61,320	103,272
12 Min-Heavy Rescue	104,334	53,814	106,026	58,566

PHASE 4 STUDY:
Map #
6 Minute BLS and Fire Coverage

- ■ Future, Planned Fire Stations
- ● Fire Stations
- ▭ Phase 4 Study Area
- 6 Min/1.7 Mile Response Time Overlap
- 6 Min/1.7 Mile Response Time

Geospatial analysis demonstrates significant gaps in 6-minute coverage within the Northeast County, including areas having urban and suburban density. Gaps are seen in portions of Montgomery Village, northern Olney, and southern Damascus, plus many rural areas.

C:\GIS_Projects\Phase4-UpperEastSide\6min_responsetime.mxd 12/2006

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Map of Map of Alternative "A" for Future Station Distribution in Northeast County

PHASE 4 STUDY OF NORTHEASTERN COUNTY:
ALTERNATIVE A

Legend:
- Alt. A Station Locations
- Future Fire Stations
- Existing Fire Stations
- A: 6 Minute Coverage Overlap
- A: 6 Minute/1.7 Mi Response Time
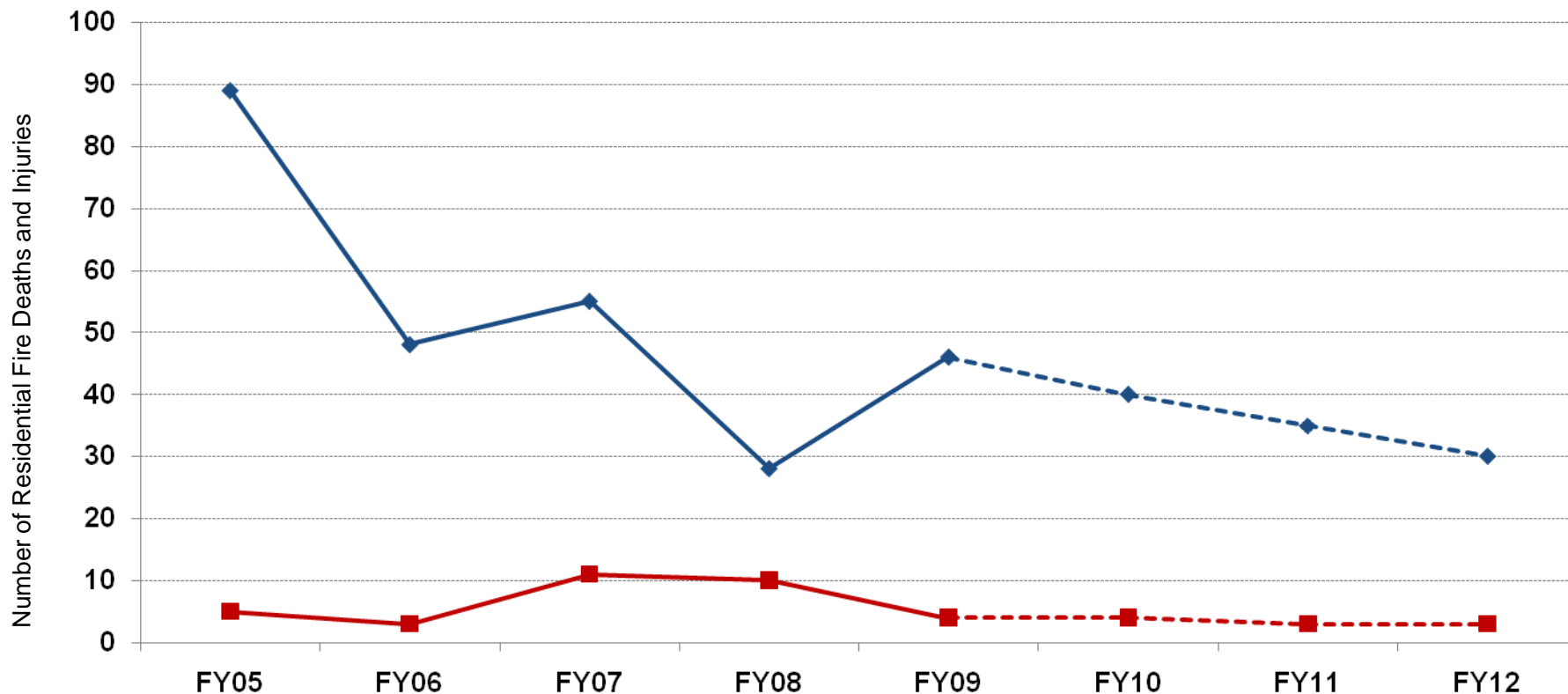- ICC - Locally Preferred Alternative

0   1   2 Miles

C:\GIS_Projects\Phase4-UpperEastSide\UpperEastSide_AlternativeA_ICC.mxd   10/2005

Geospatial analysis demonstrates that several significant gaps in 6-minute coverage within the Northeast County can be addressed effectively by adding three new stations and relocating an existing station (the relocation balances the station distribution in the study area).

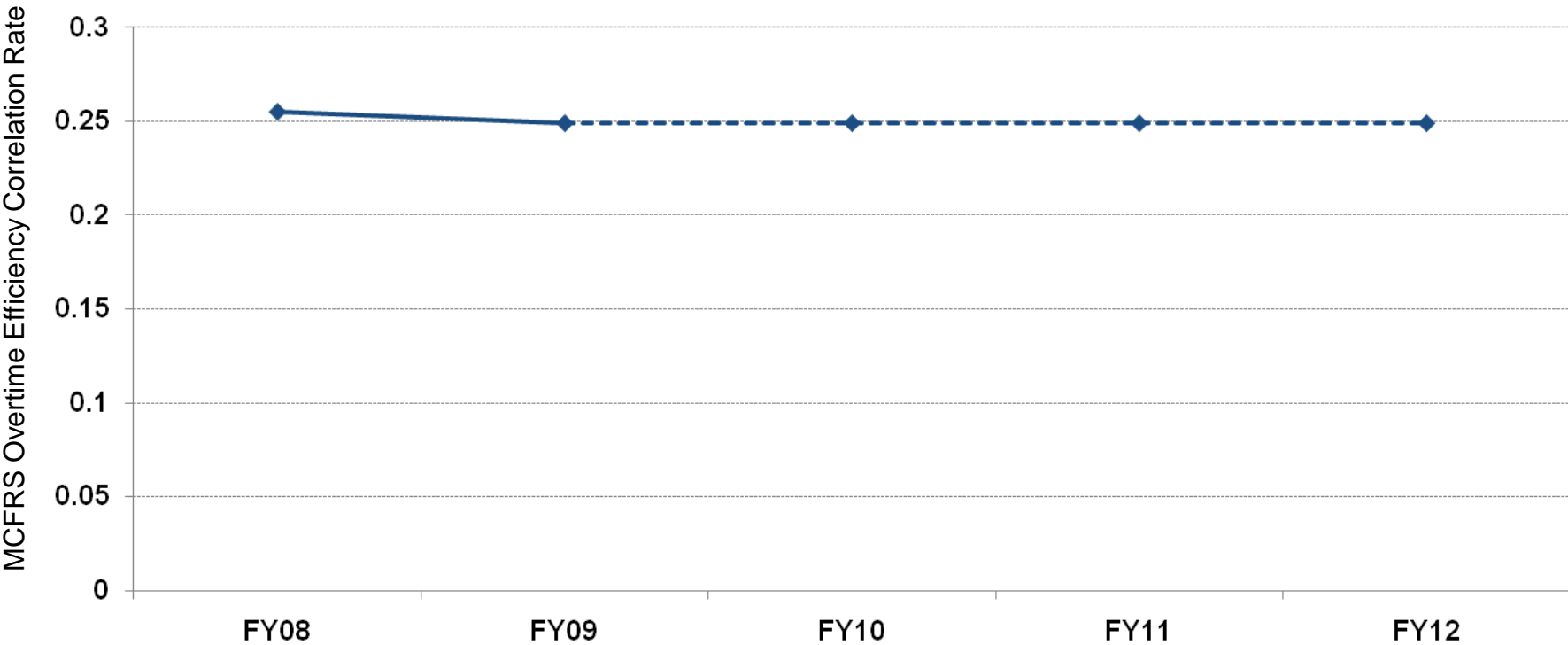# Headline Measure #3: Number of Residential Fire Deaths and Injuries

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12
Injuries	89	48	55	28	46	40	35	30
Deaths	5	3	11	10	4	4	3	3

*FY09 Current as of 5/31/09

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Headline Measure #4: MCFRS Overtime Efficiency Correlation Rate

FY08	FY09*	FY10	FY11	FY12
0.255	0.249	0.249	0.249	0.249

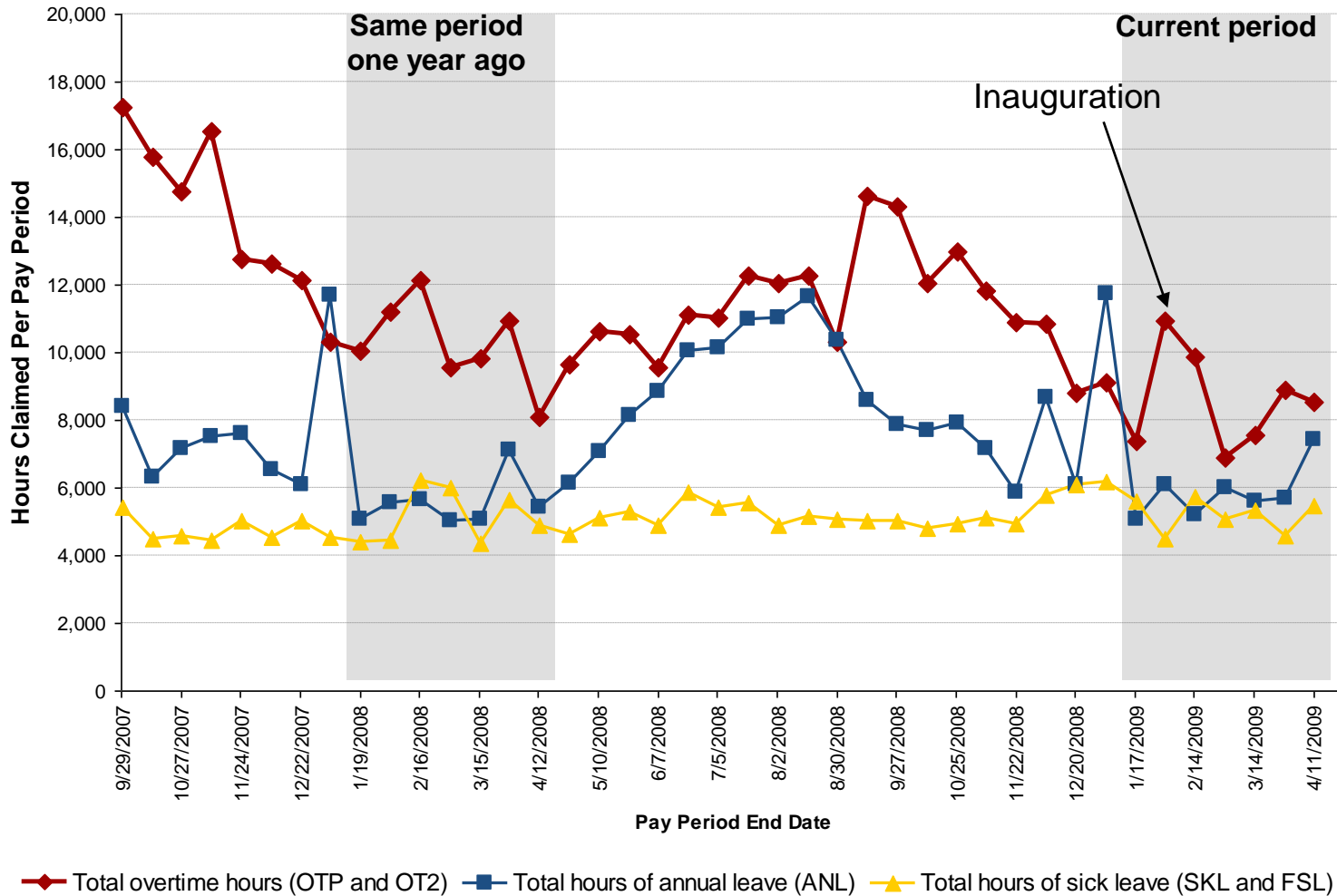*FY09 Current as of 5/31/09

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MCFRS Overtime Meeting Review: Quarter-by-Quarter Summary of Overtime Use

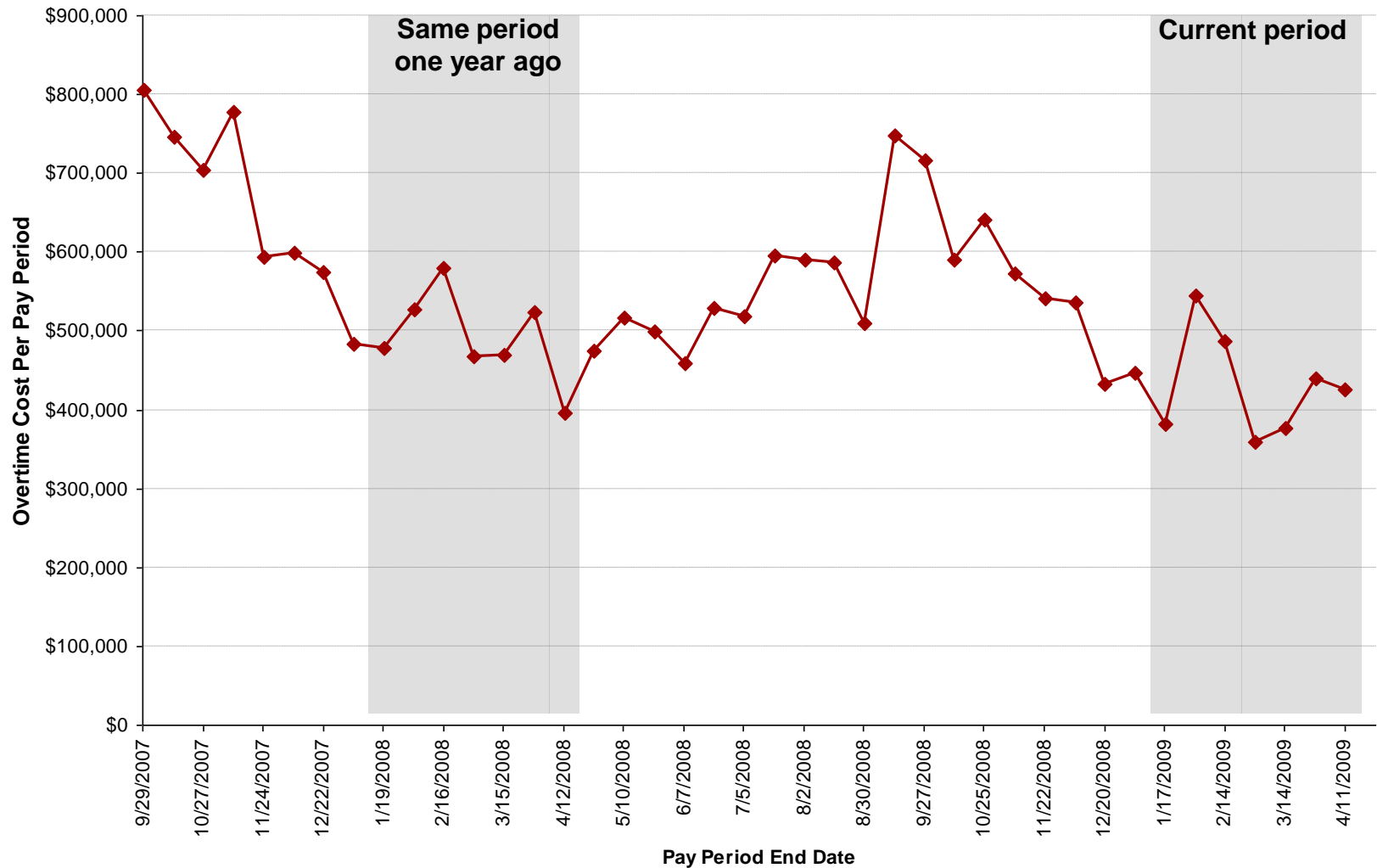| Fiscal Quarter	FY07-Q4 to FY08-Q3		FY08-Q4 to FY09-Q3		% Change	
	Hours	$	Hours	$	Hours	$
Quarter 4 4/1 to 6/30	104,582	$4,674,105	65,481	$3,149,642	-37.4%	-32.6%
Quarter 1 7/1 to 9/30	108,559	$5,042,699	82,327	$4,059,819	-24.2%	-19.5%
Quarter 2 10/1 to 12/31	90,033	$4,252,638	71,980	$3,538,729	-20.1%	-16.8%
Quarter 3 1/1 to 3/31	68,531	$3,273,477	55,355	$2,777,947	-19.2%	-15.1%
Total	371,705	$17,242,919	275,142	$13,526,137	-26.0%	-21.6%

Pay periods that cross quarters have been prorated between the two quarters.
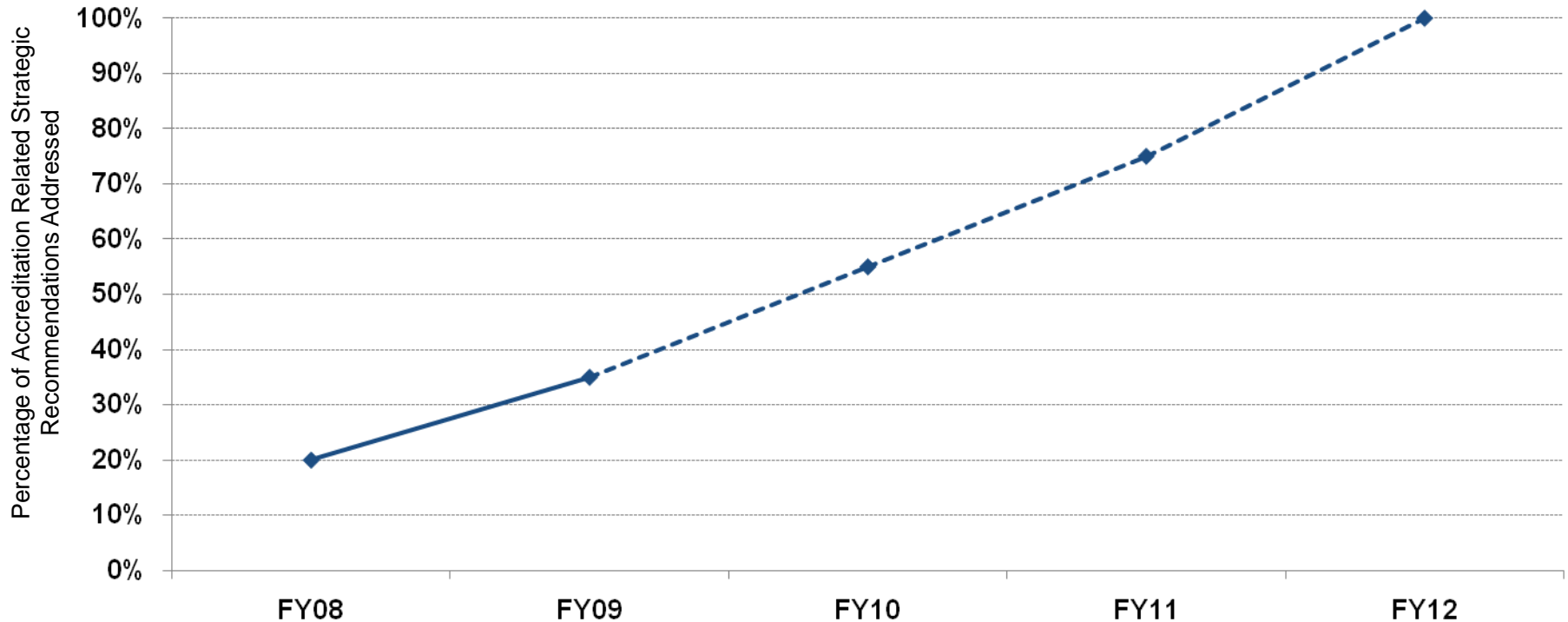
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MCFRS Overtime Meeting Review:
Total Overtime, Annual Leave, and Sick Leave Hours

MCFRS Overtime Meeting Review:
Total Overtime Cost

Headline Measure #5: Percentage of Accreditation Related Strategic Recommendations Addressed

FY08	FY09*	FY10	FY11	FY12
20%	35%	55%	75%	100%

*FY09 Current as of 5/31/09

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Headline Measure #6 Under Construction: Emergency Medical Services Performance - Heart Attack Care

- **Headline Measure Under Construction**
  - Percentage of "STEMI" patients (those having a myocardial infarction) who are in the cardiac catheterization lab receiving balloon catheterization within 90 minutes for 90% of the STEMI incidents
  - This involves joint patient care between MCFRS and the 5 hospitals in Montgomery County that have a cardiac catheterization lab (i.e., Suburban, Holy Cross, Shady Grove, Washington Adventist, and Montgomery General)

- **MCFRS Cardiac Care Progress**
  - 301 MCFRS Paramedics trained in basic 12 lead ECG interpretation
  - 160 MCFRS Paramedics training in intermediate 12 lead ECG interpretation
  - MCFRS recognized as the Maryland Best Practice Education Model for 12 lead ECG instruction
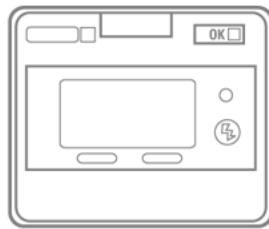
- **CY08 Incident Data**
  - # Critical care transports: 19,800
  - # STEMI interventions: 300
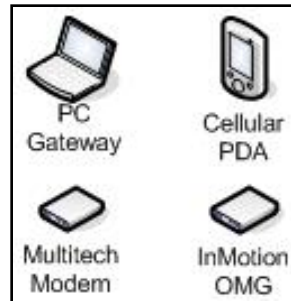
- **Next Steps**
  - Implementation of Electronic Patient Care Reporting (ePCR) summer 2009
  - Enhancement of 12 lead ECG collection via Physio-Control LIFENET12 lead ECG data management system
  - Continue education of MCFRS paramedics in 12 lead ECG assessment and interpretation

Headline Measure #6 Under Construction: Emergency Medical Services Performance - Heart Attack Care

Physio-Control Monitors

PC Gateway
Cellular PDA
Multitech Modem
InMotion OMG

Customer purchased via standard existing contracts.

1x, EDGE, CDMA, EVDO, UMTS, 802.XX, MESH

Access Point Applications Download from web installed on existing PCs at EMS, hospitals or PCI centers.

Avg. Transfer and Processing Time = <40 sec

Internet

XML Third-party systems like: GE MUSE or Siemens

LIFENET Client Applications and/or Receiving Station
Alerting, Printing, Emailing, Texting, Storage, Export

Internet

LIFENET Cardiac Care System Servers

Owned by Physio-Control & operated by Physio-Control at server farm.

Headline Measure #7 Under Construction: Fire and Injury Prevention Through Community Outreach

- In 2008 and again in 2009 MCFRS conducted two different surveys over the internet to obtain feed back from our residents.

- MCFRS sent out two initial surveys different community Yahoo Groups and through the Regional Service Center lists to recipients that were not randomly selected.

- In the 2009 survey MCFRS used an intern to the Management Leadership program to reach out to diverse groups of people and encountered much resistance with many residents refusing to complete the survey.

2009 Survey: 292 Respondents:

233 (80%) are aware that MCFRS provides public education and awareness on fire and injury prevention
205 (71% are aware that MCFRS evaluates individual homes for proper placement of smoke alarms
215 (74%) had some contact with MCFRS in the last 1 to 5 years

2008 Survey: 419 Respondents:
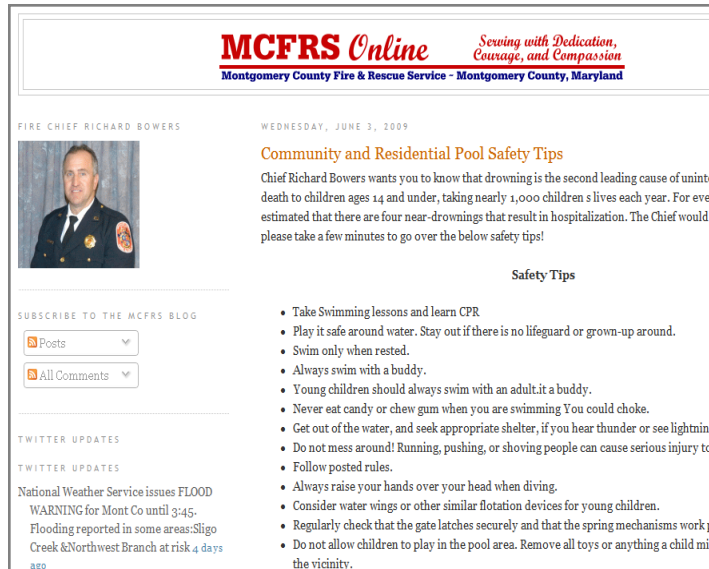
341 (81%) of the respondents said no when asked if the practiced a home fire drill
110 (26%) of the respondents answered yes to the question of whether there was anyone living in the home over 65 years old
74 (18%) of the respondents answered yes to the questions of whether there was anyone 5 years or younger living in the house

MCFRS is still determining the best way in which to craft a survey that meets the standards of being a random sample, accessible to all county residents, and provide an ongoing method for measuring community outreach efforts.

MCFRS Web-Based Outreach

MCFRS Blog

- Up-to-date seasonal safety information
- Product fire hazards
- MCFRS events and information

MCFRS Blog Talk Radio

- Fire Side Chats
- Information on Ambulance Reimbursement Fee

MCFRS has created a blog that has had 3,263 visitors since October of 2008, which provides seasonal safety tips, product recalls, information about MCFRS operations, radio shows, Twitter, YouTube, Facebook, Twitter, and Yahoo User Groups.

Overview of MCFRS Outreach Data Collection

MCFRS will track all outreach efforts on an ongoing basis for the creation of fire prevention performance sub-measures that track outreach interactions

Home Visit Outreach

Home Visits	22,633
Smoke Alarms Installed	716
Batteries Installed	865

Electronic Newsletter Outreach

Senior Safety Times	994
MCFRS General	1,689

Web-Based Outreach

Internet Outreach Medium	Members	Messages Per Day	Viewed
Café Montgomery YG	1211	24	
East Silver Spring YG	206	3	
Clarksburg Civic Association YG	116	1	
Quince Orchard Estates YG	71	1	
Forest Grove YG	71	1	
Kensington Estates Civic Association YG	183	1	
MC Needs YG	1755	10	
Olney Brookeville Exchange YG	707	20	
Parkwood Residents YG	575	10	
MCFRS Twitter	274		
MCFRS Blogspot			3,263
MCFRS Facebook	1,019		
MCFRS Pub Ed You Tube			2,258
MCFRS Blog Talk Radio (listeners)			3,966

*Data from October 2008 to 5/31/09

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Tracking Our Progress

- **Meeting Goals:**
  - Determine the impact of MCFRS programs and activities on headline measures and establish new performance expectations and goals

  - Review ongoing departmental data collection efforts and discuss future projects that will further incorporate data into the decision making process

- **How will we measure success**
  - Updated performance plan is finalized and published to the web

  - Ongoing monitoring of performance through Montgomery County Performance Dashboard

Wrap-Up

- **Follow-Up Items**

- **Performance Plan Updating**

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