STAFFING & DEPLOYMENT UPDATE

December 6, 2016

FIRE DEPARTMENT 101
STAFFING AND DEPLOYMENT

- Your fire department provides the following emergency response services:
  - Fire Suppression
  - EMS Response (life threatening only)
  - Vehicle Rescue
  - Hazardous Materials Mitigation
  - Water Rescue
  - Structural Collapse Rescue
  - Trench Rescue
  - Confined Space Rescue
  - Bomb Squad

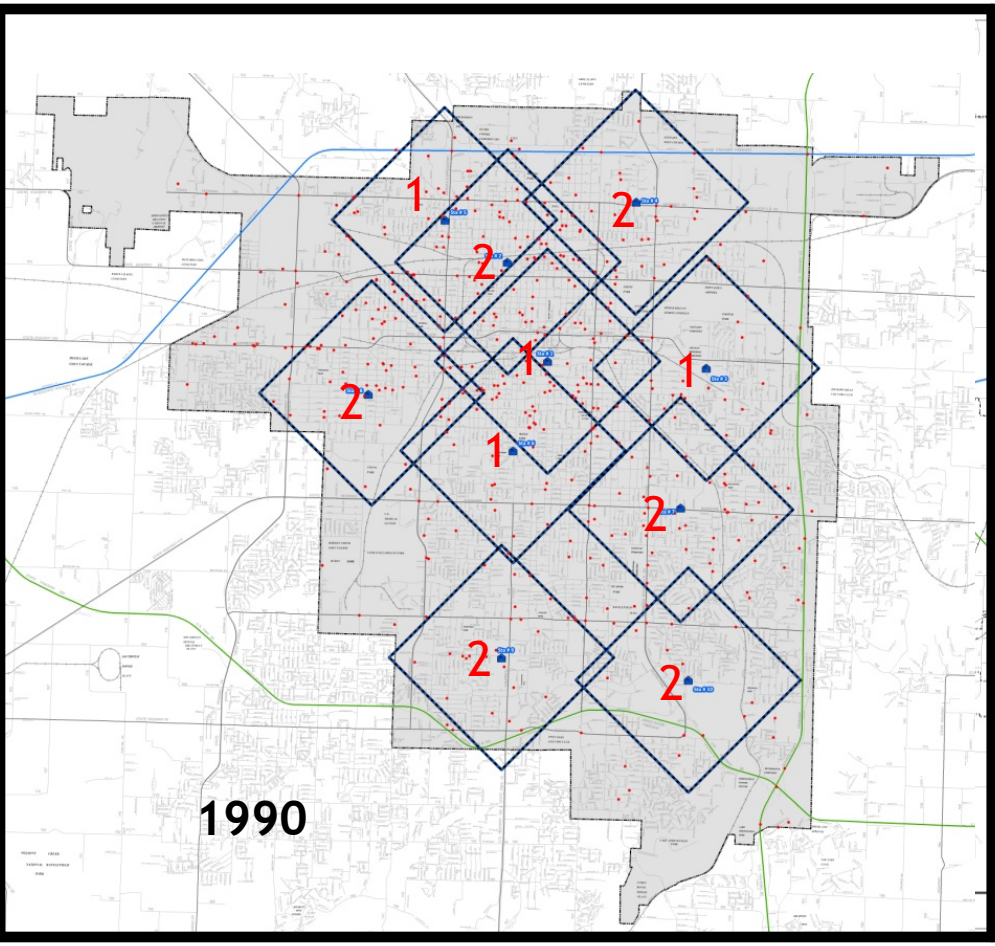
FIRE DEPARTMENT 101
APPARATUS TYPES

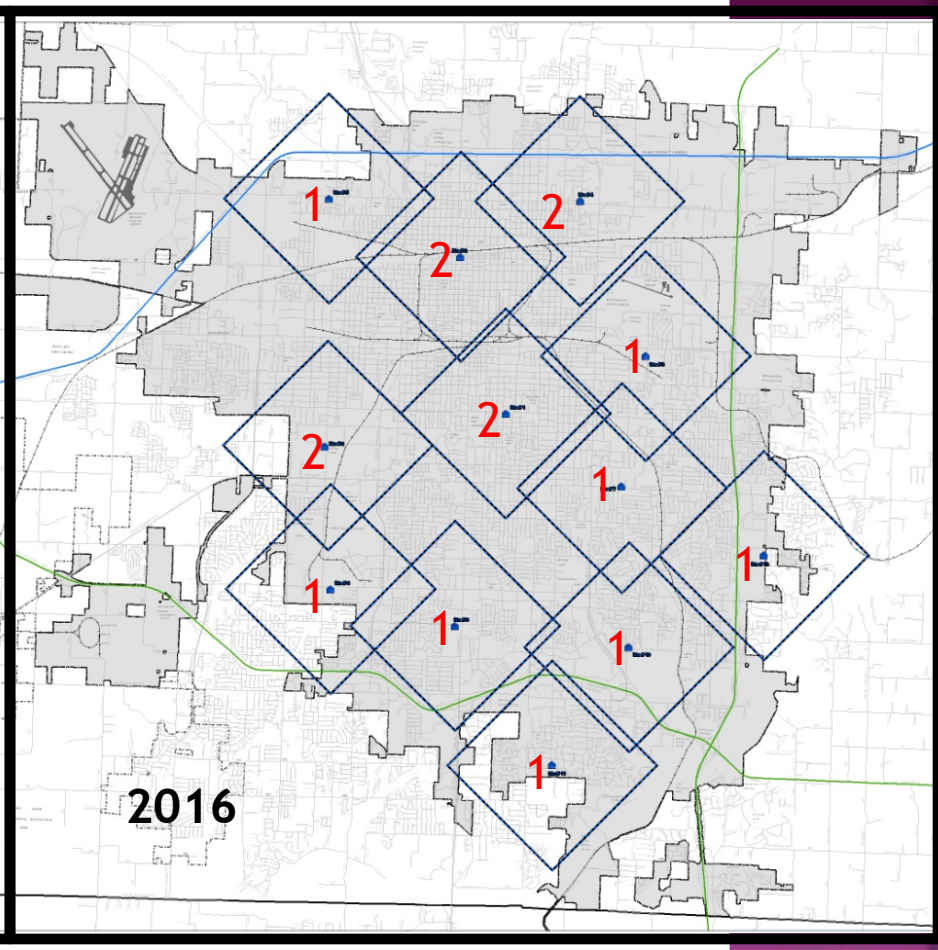
- Engines – fire extinguishment
- Trucks – smoke removal, laddering, elevated streams
- Rescues – search and rescue
- Chiefs – command & safety
- Specialty
  - HAZMAT
  - Water Rescue
  - Bomb
  - Technical Rescue
  - Air Supply/Rehab

FIRE DEPARTMENT 101
STAFFING AND DEPLOYMENT

- Two competing objectives
  - Have stations spread out to cover as much of the City as possible within an acceptable response time (**Distribution**)
  - Have stations close together to provide enough total resources arrive within an acceptable response time (**Concentration**)
- Third related objective
  - Having enough resources within a district to handle simultaneous incidents (**Reliability**)

DISTRIBUTION, CONCENTRATION, RELIABILITY





NFPA 1710 & OSHA 1910.120

- https://www.youtube.com/watch?v=LBB2etMr0HQ&feature=youtu.be

FIRE DEPARTMENT 101 FIREFIGHTING

- What it takes to fight a fire.

Task	Personnel
Command/Safety	2
Fire Attack	2
Backup Attack Line	2
Search and Rescue	2
Ventilation	2
Rapid Intervention	2
Pump Operator/Water Supply	2
TOTAL = **Effective Response Force**	15

- More personnel/unit = less units responding

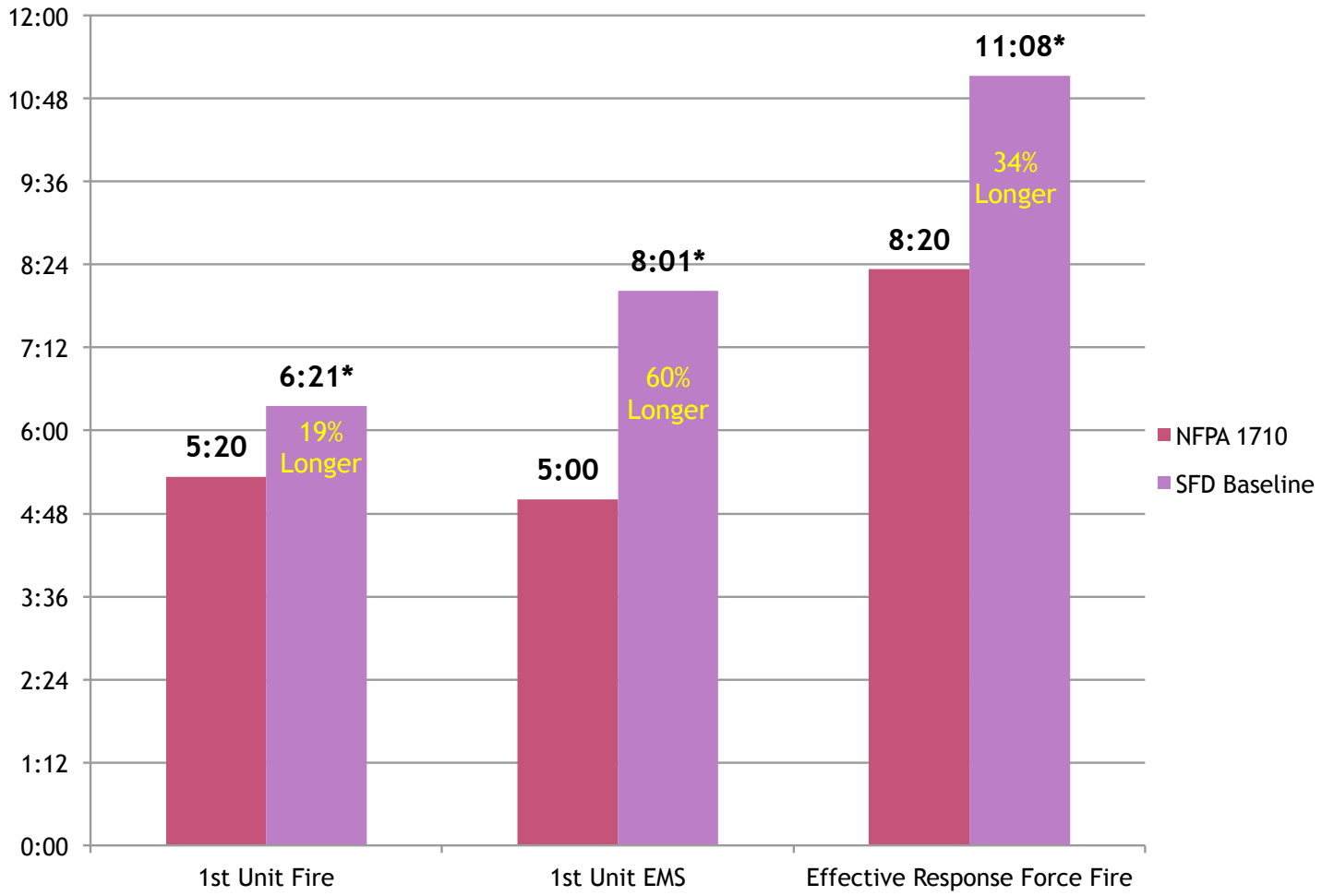
FIRE DEPARTMENT 101 FIREFIGHTING

- Units dispatched to meet 15.

Apparatus Type (Min Staffing)	Number of Units	Minimum Personnel
Engine(3)	2	6
Truck(3)/Rescue(2)	2	5
Heavy Rescue(4)	1	4
Chief(1)	2	2
TOTAL	7	17

- More personnel/unit = less units responding

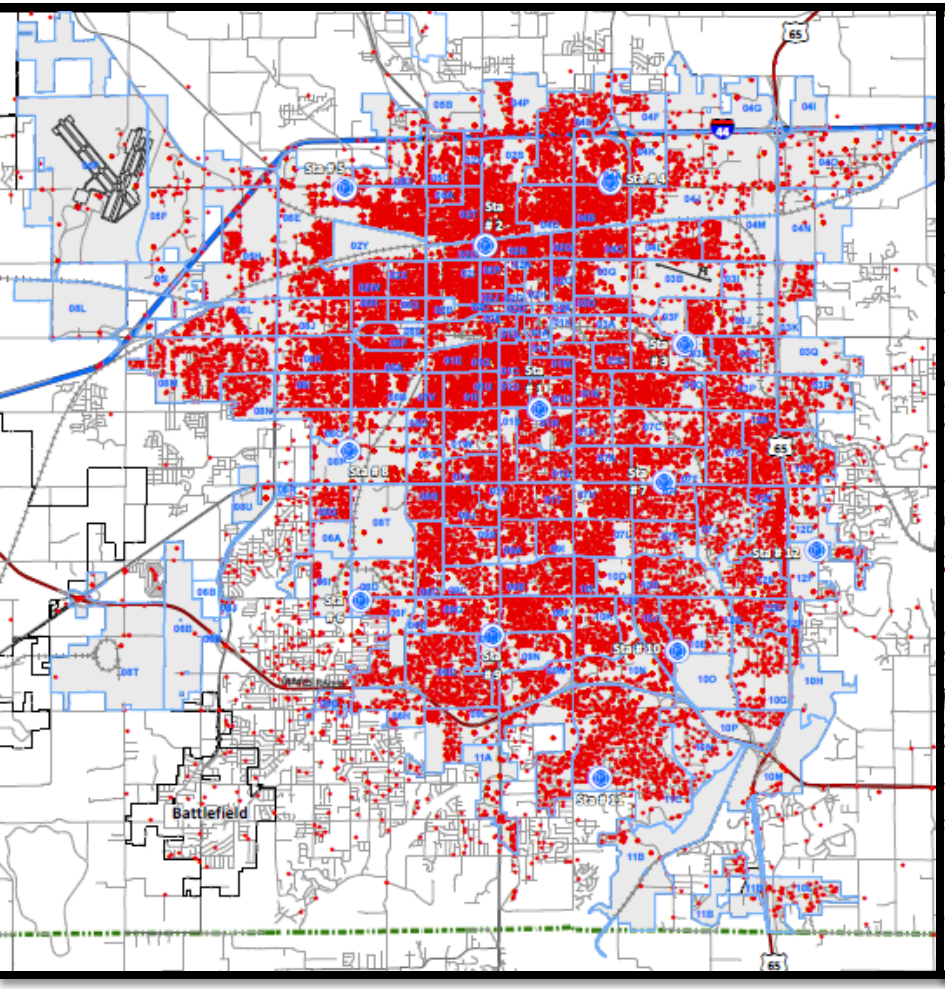
NFPA 1710 & SFD BASELINE

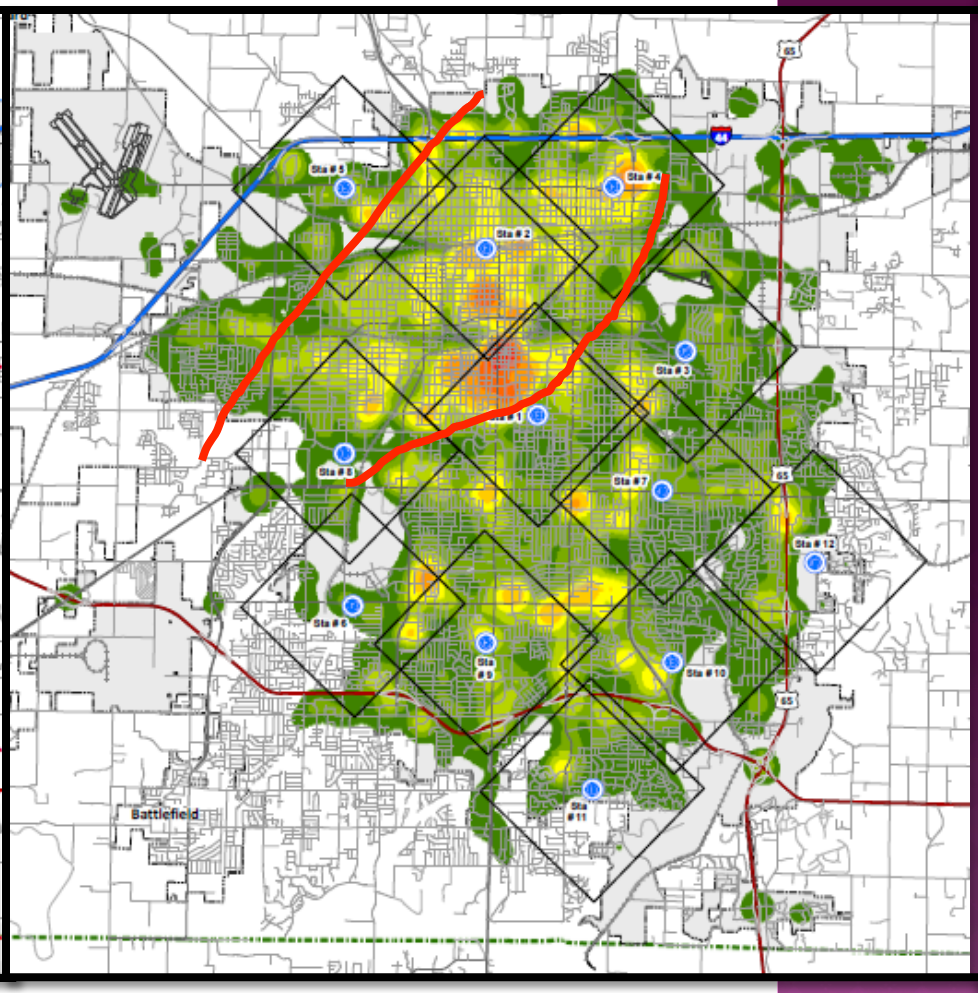


*Baselines reduced by 1 minute to allow for 911 call processing time

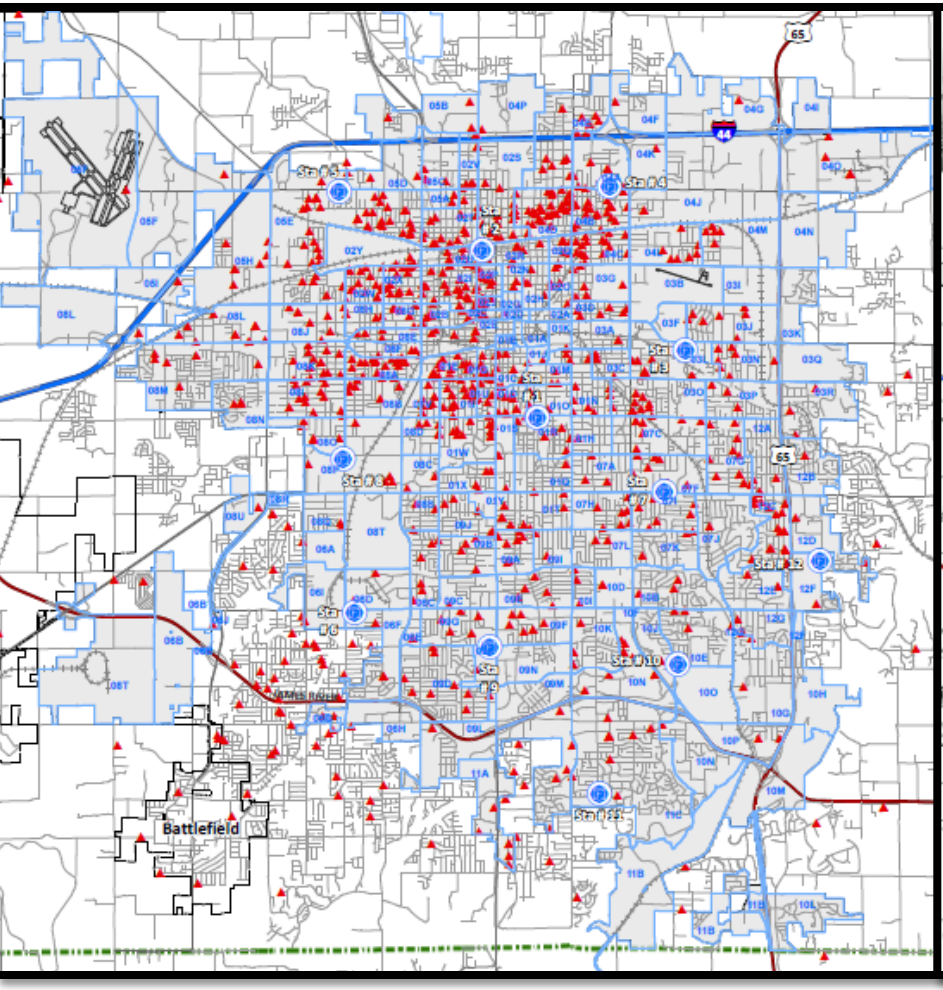
HISTORICAL DATA

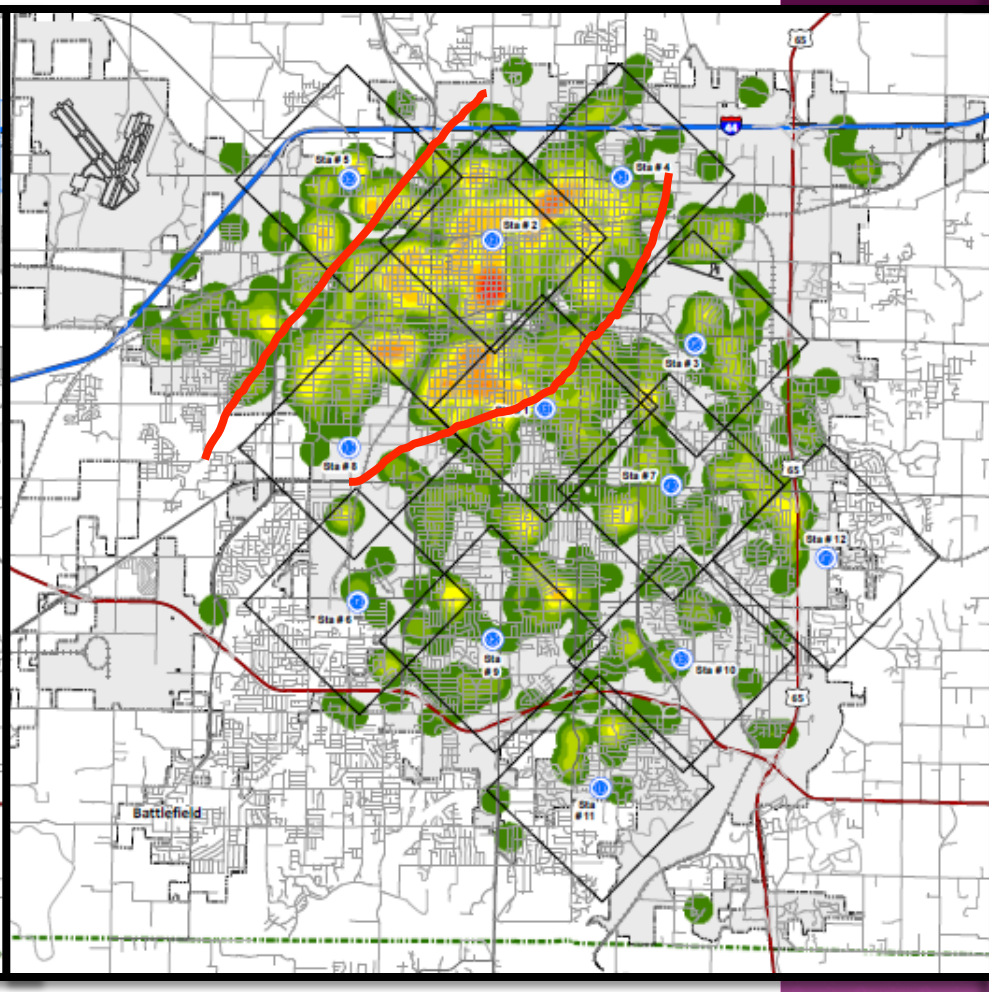
ALL INCIDENTS - 2012-2016



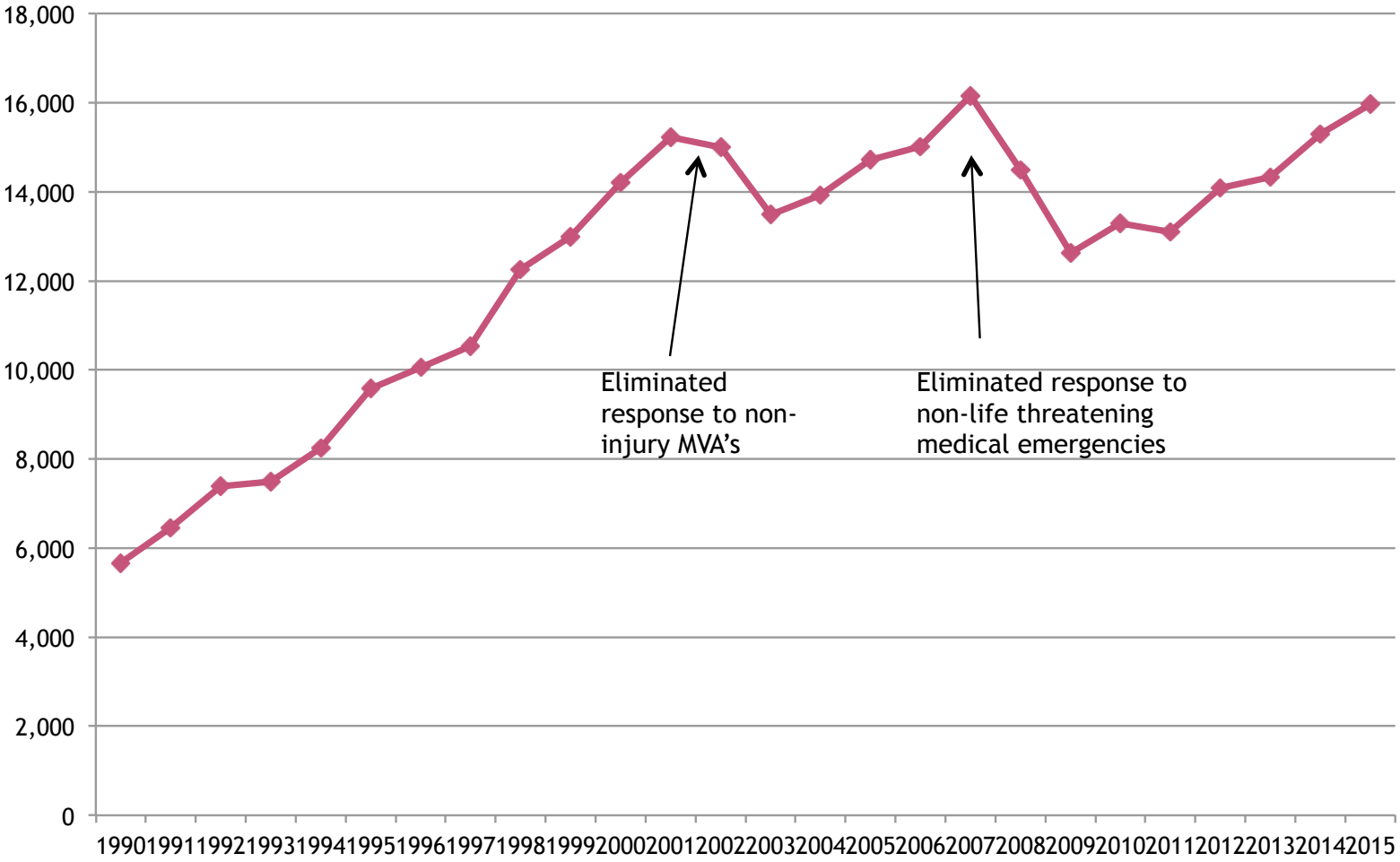


STRUCTURE FIRE INCIDENTS 2012-2016



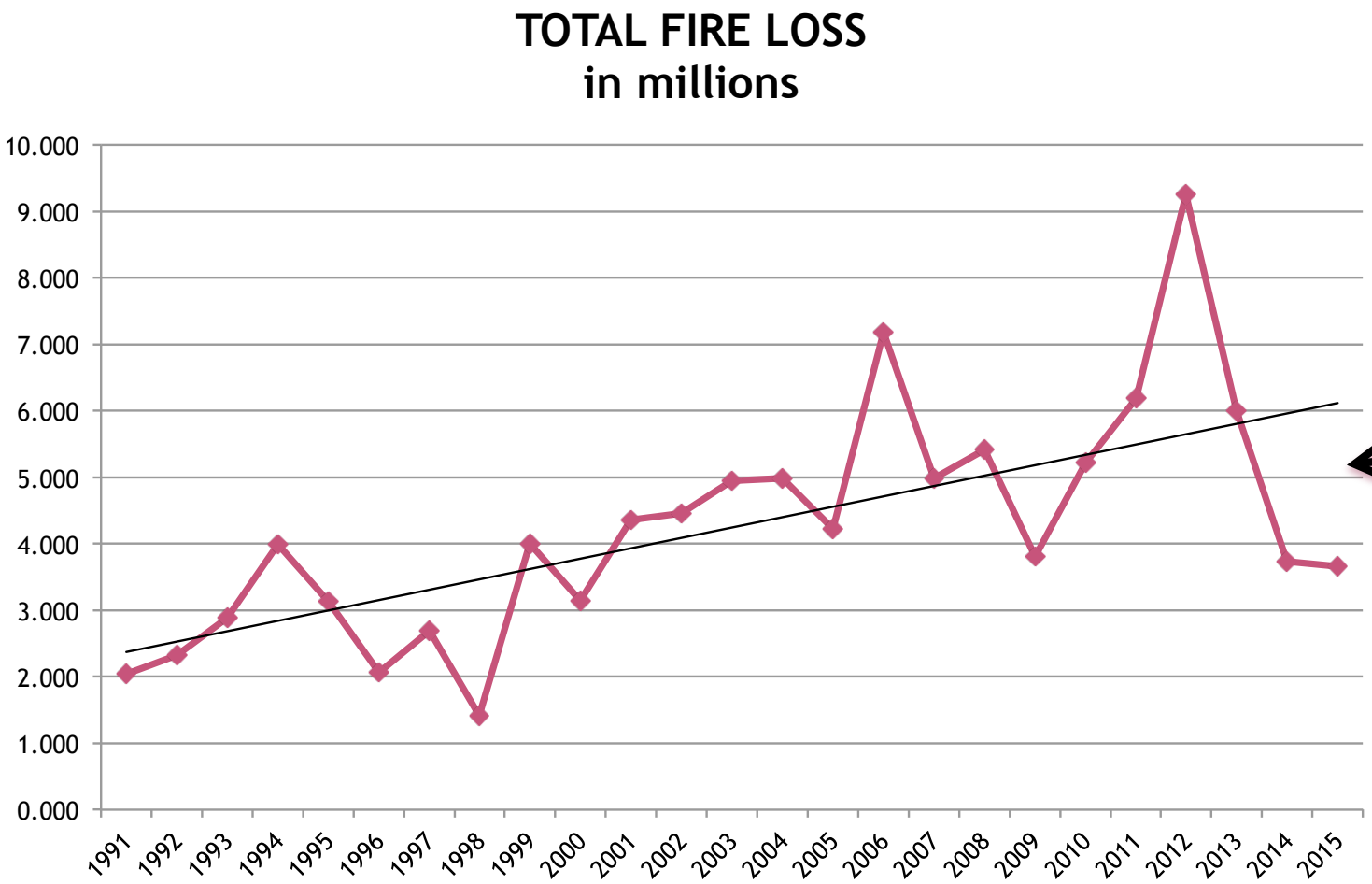


FD INCIDENTS 1990-2015



182%

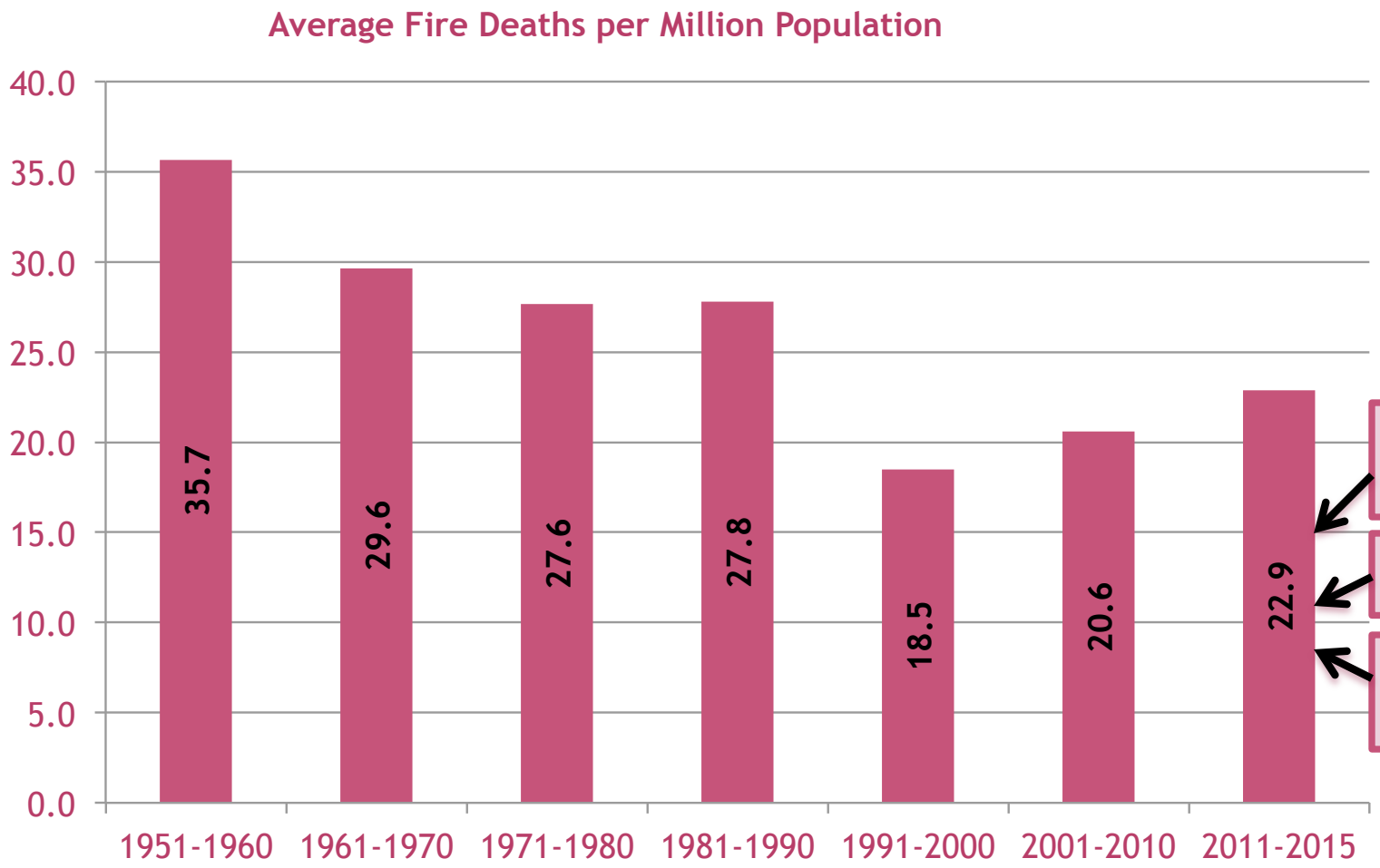
TOTAL FIRE LOSS



$5.1/million
1991 Inflation
Adjusted Expected
Trend

*NFPA: Fire Loss in the U.S. During 2015, 9/16

FIRE DEATHS 1990-2015



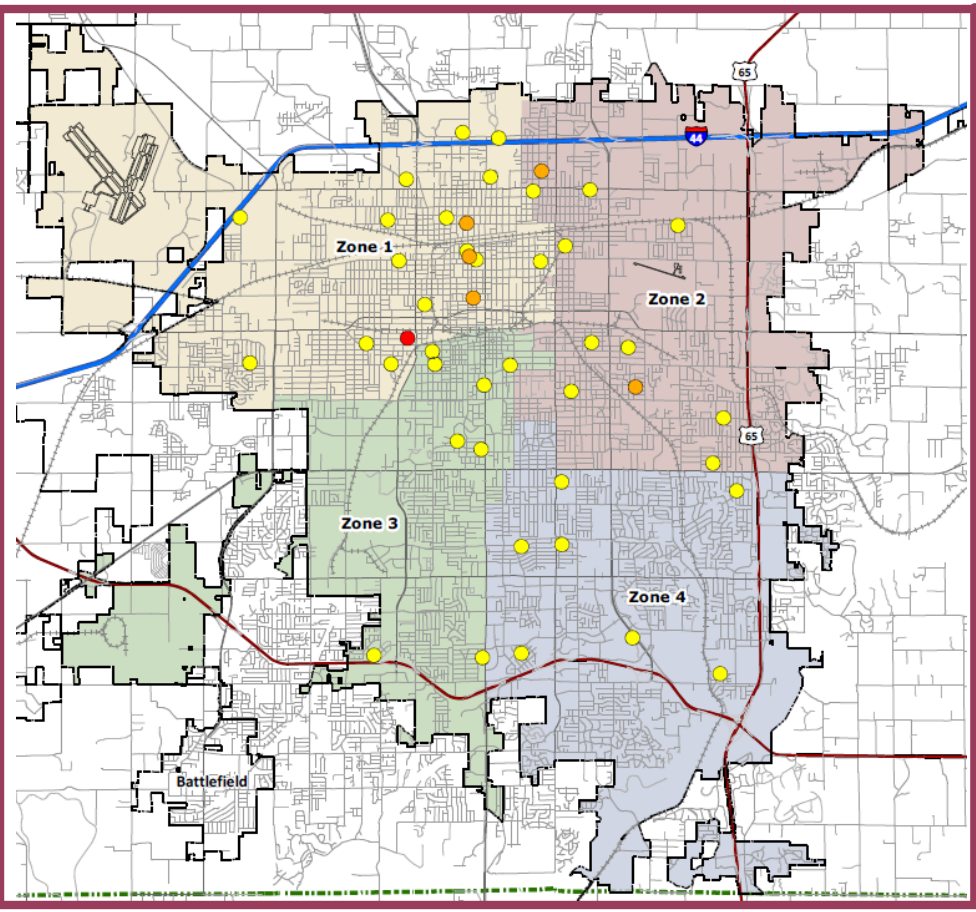
15.0/million Missouri Avg. 2014*

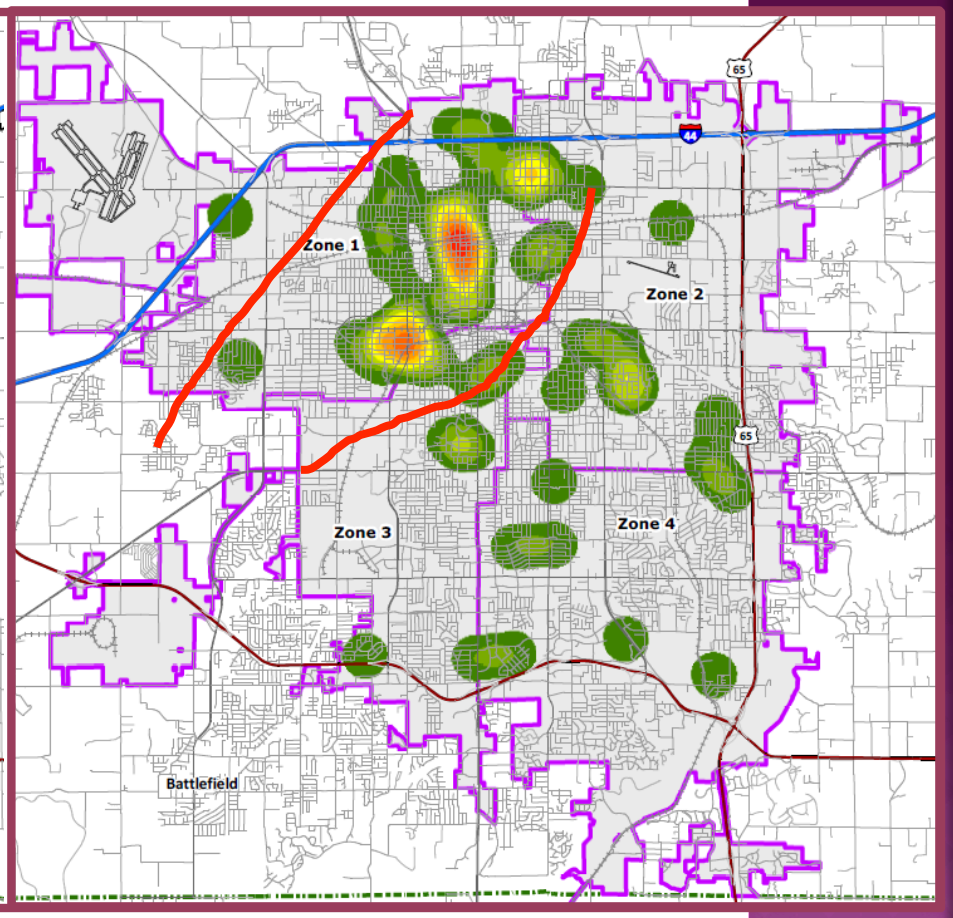
10.9/million U.S. 10-yr avg.*

7.9/million Same Size Cities**

*USFA: U.S. fire deaths, fire death rates, and risk of dying in a fire, 2005-2014
**NFPA: Fire Loss in the U.S. During 2015, 9/16

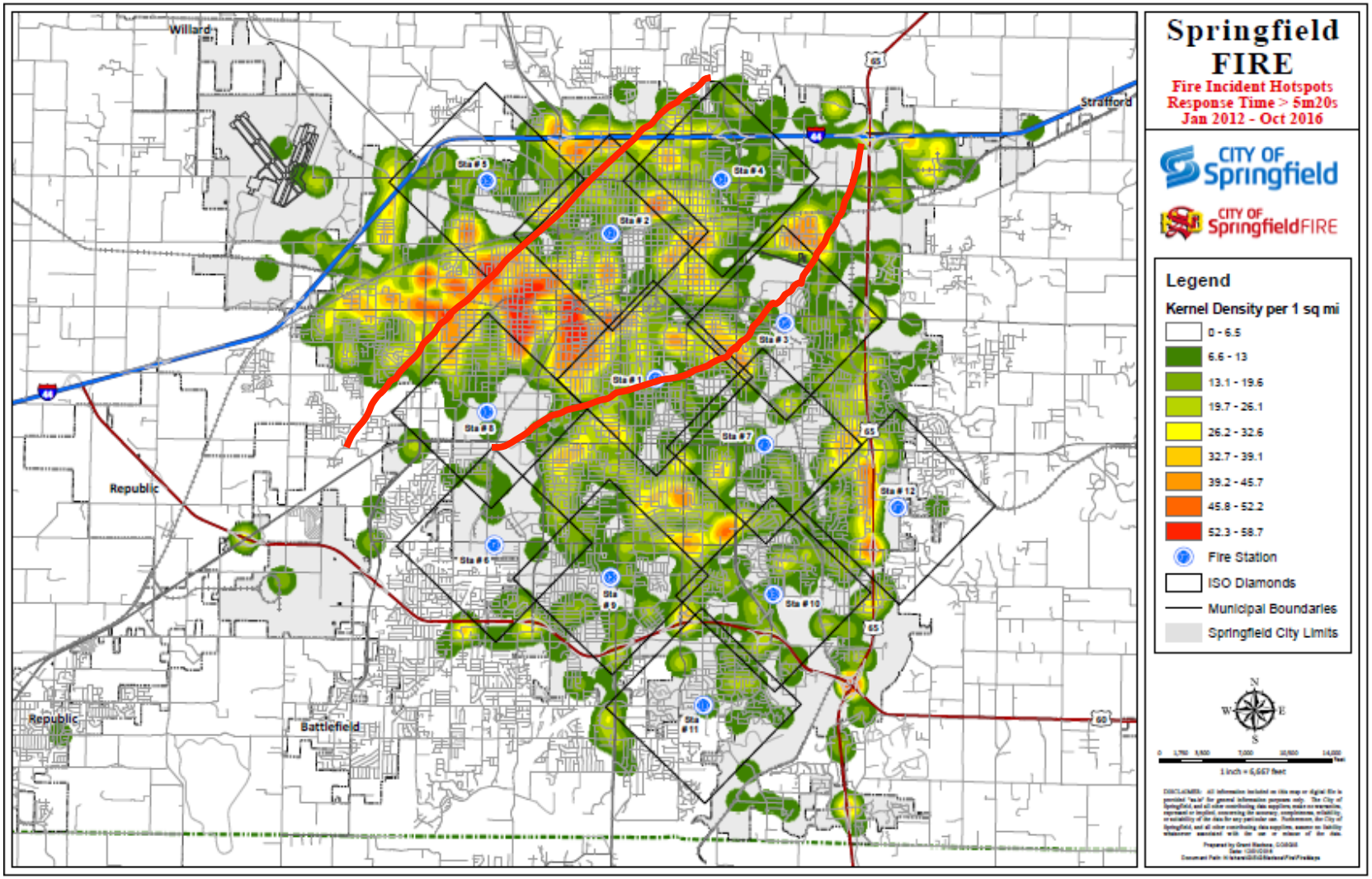
FIRE DEATHS 2000-2015



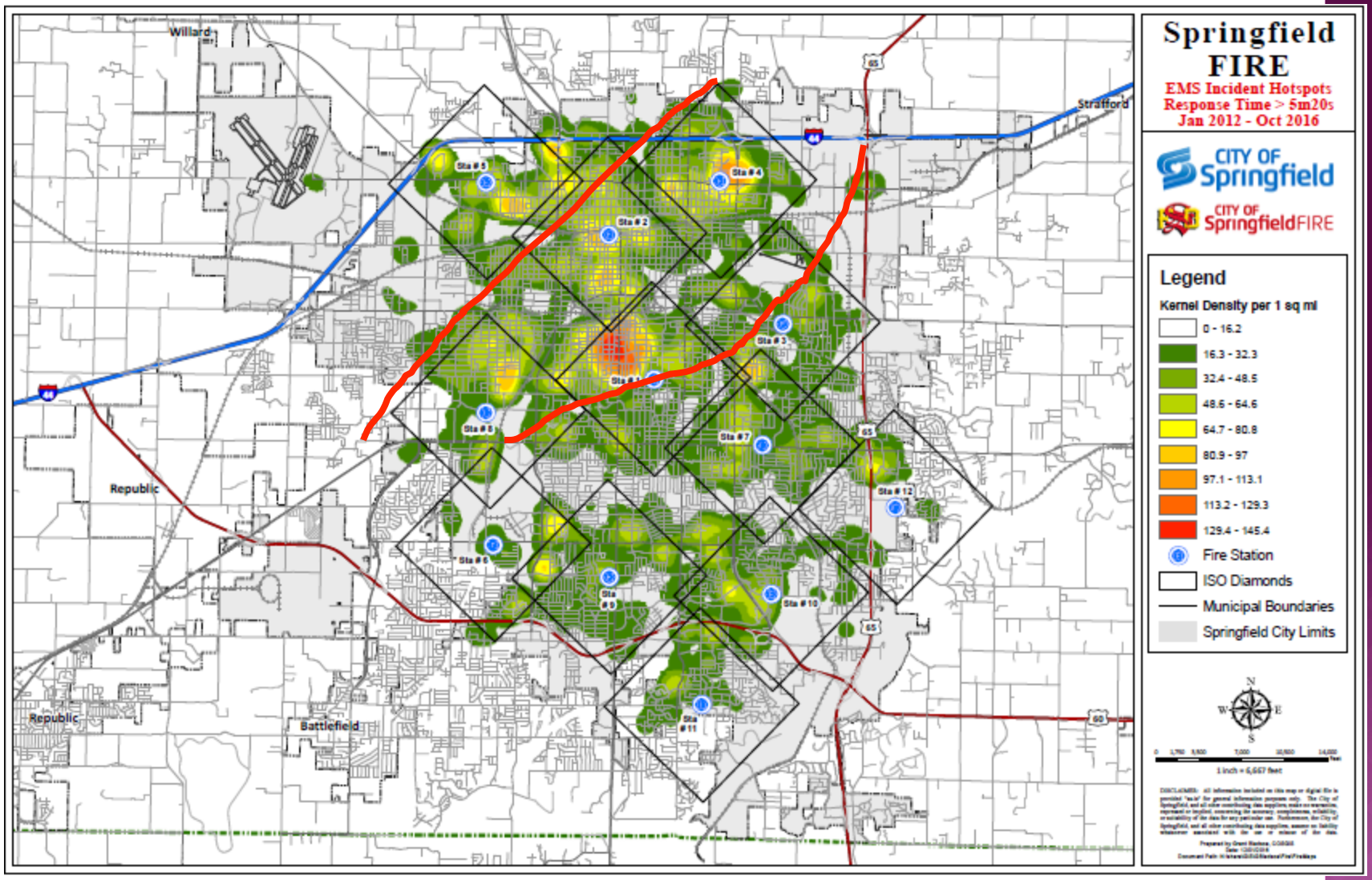


- Single death
- Double death
- Triple death

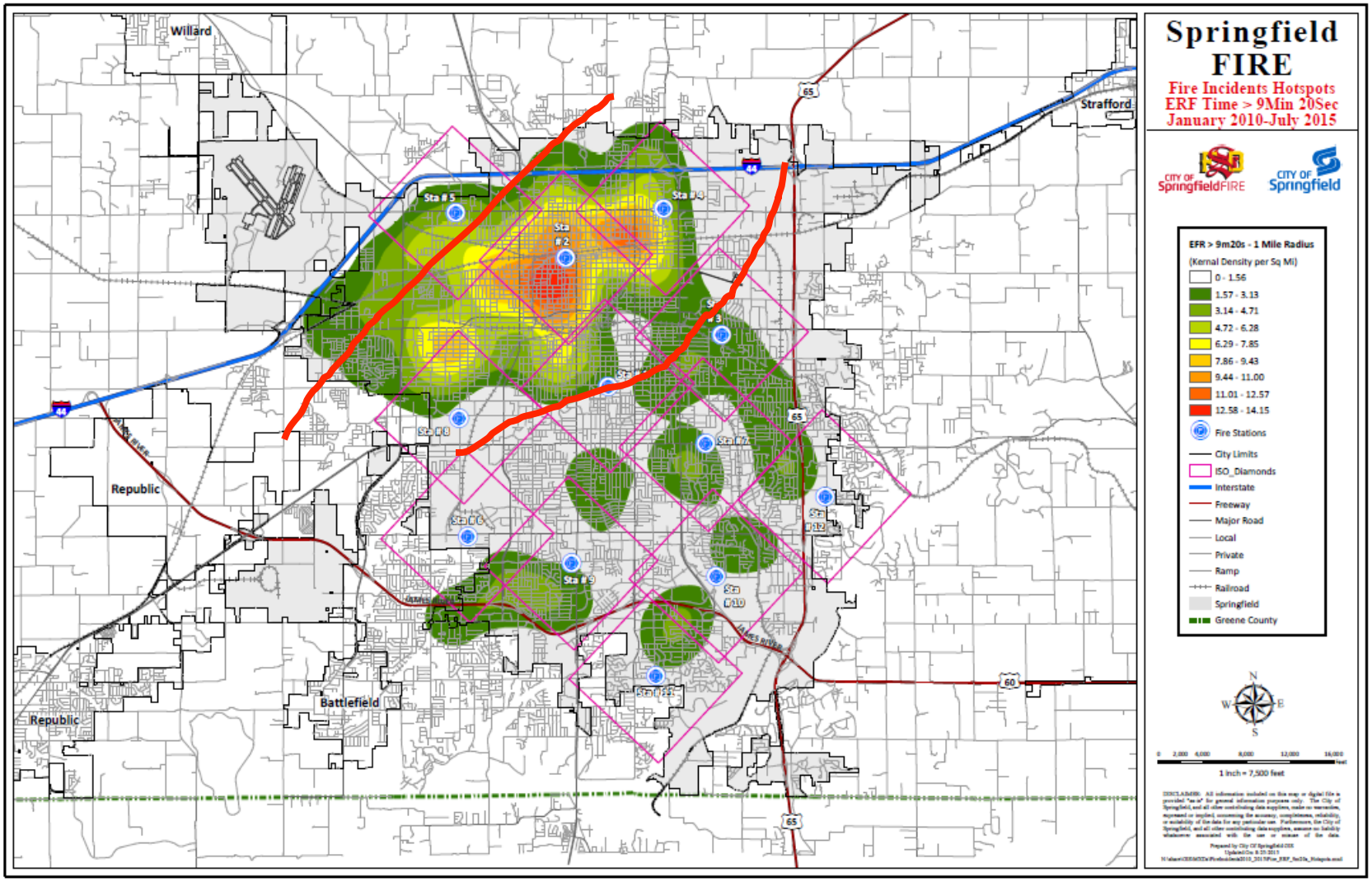
FIRE INCIDENTS
1ST UNIT > 5 MINUTES 20 SECONDS



EMS INCIDENTS
1ST UNIT >5 MINUTES

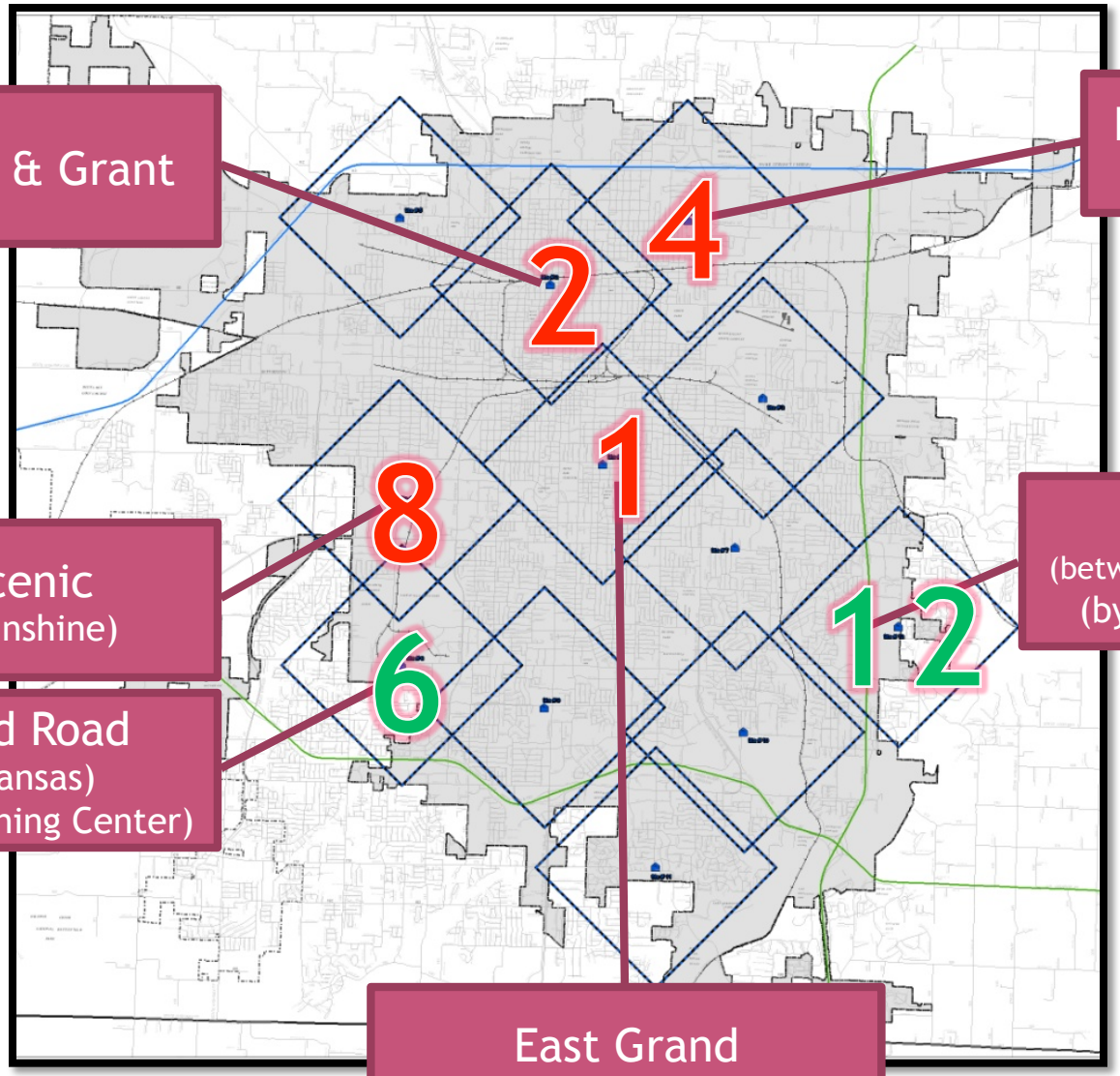


FIRE INCIDENTS
ERF >9 MINUTES 20 SECONDS



RESOURCE USE EXTREMES

Stations 1, 2, 6, 8, & 12



Commercial & Grant

Kearney & Delaware
(near Glenstone)

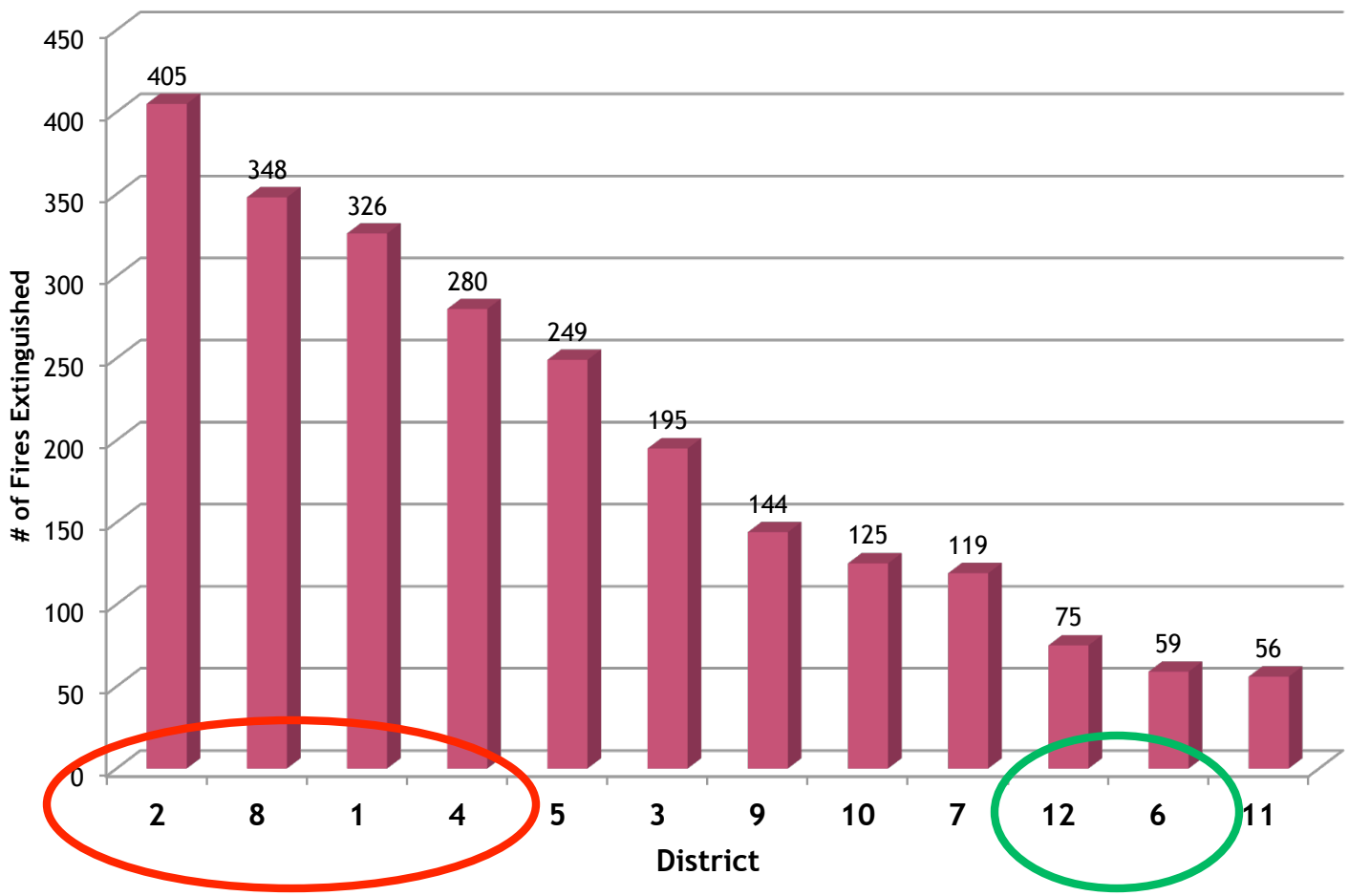
South Scenic
(North of Sunshine)

Blackman Road
(between Sunshine and Battlefield)
(by Logan-Rogersville FPD)

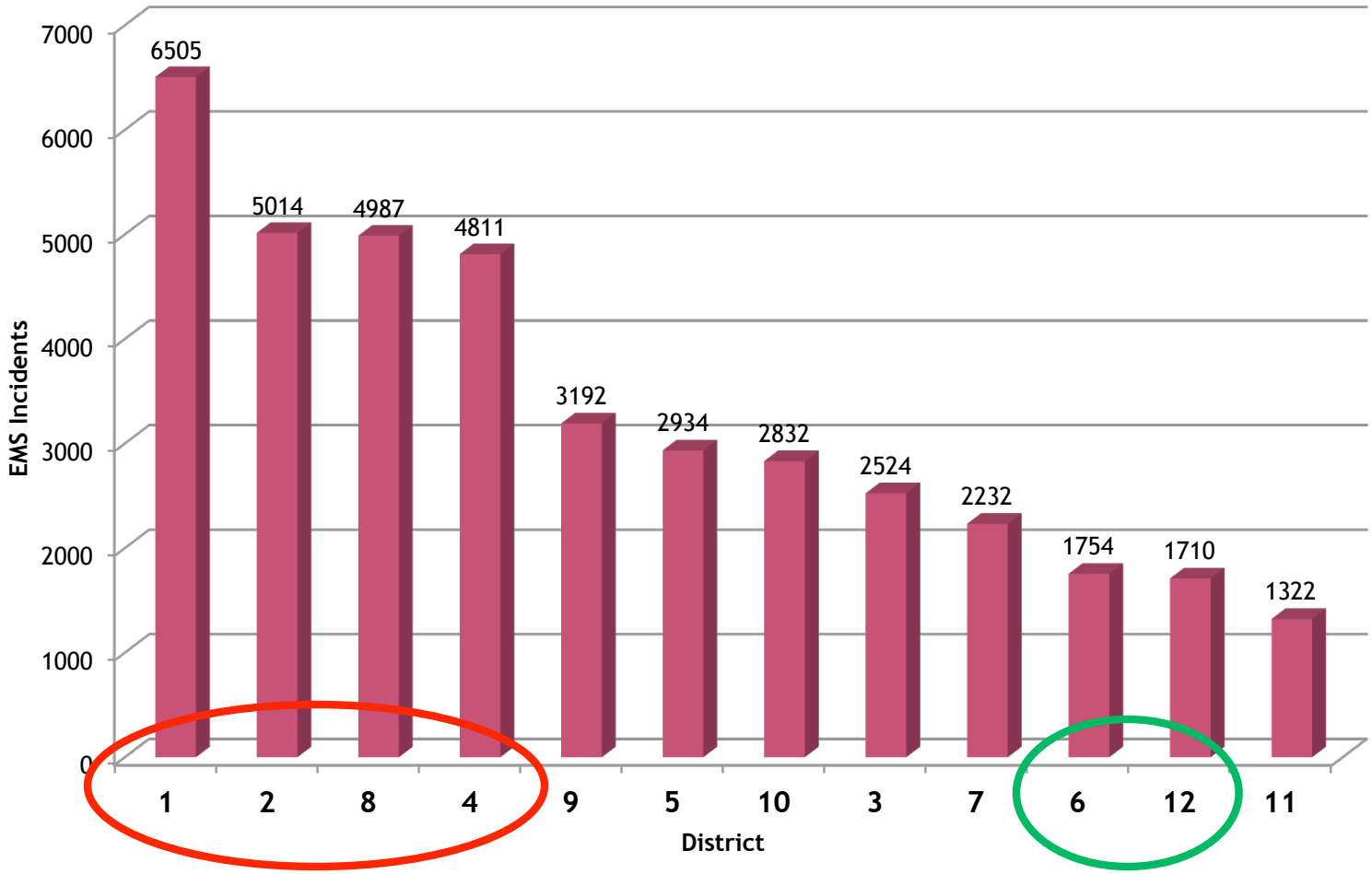
Battlefield Road
(West of Kansas)
(Police/Fire Training Center)

East Grand
(by Missouri State University)

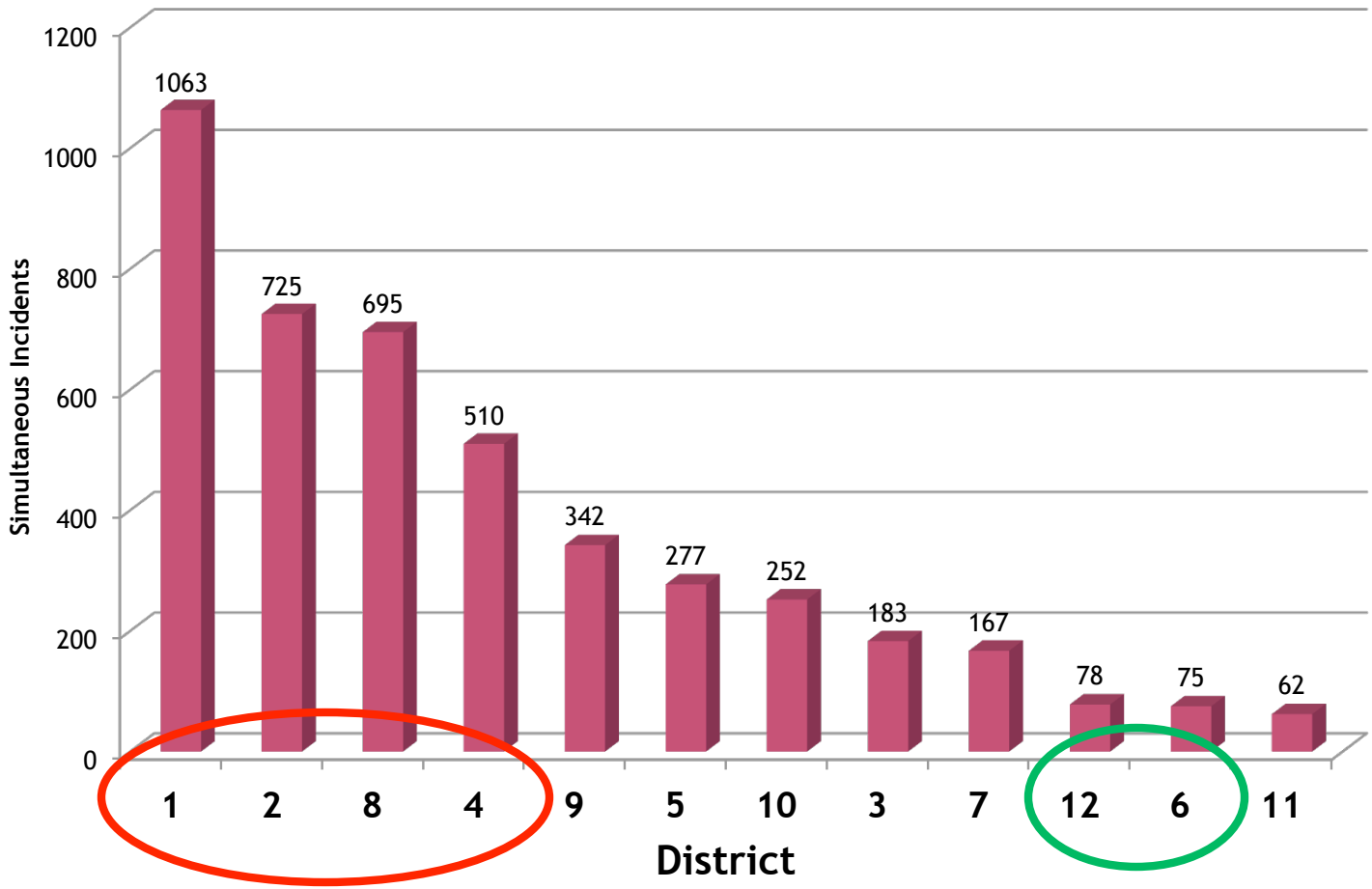
FIRES EXTINGUISHED BY STATION



EMS INCIDENTS BY DISTRICT



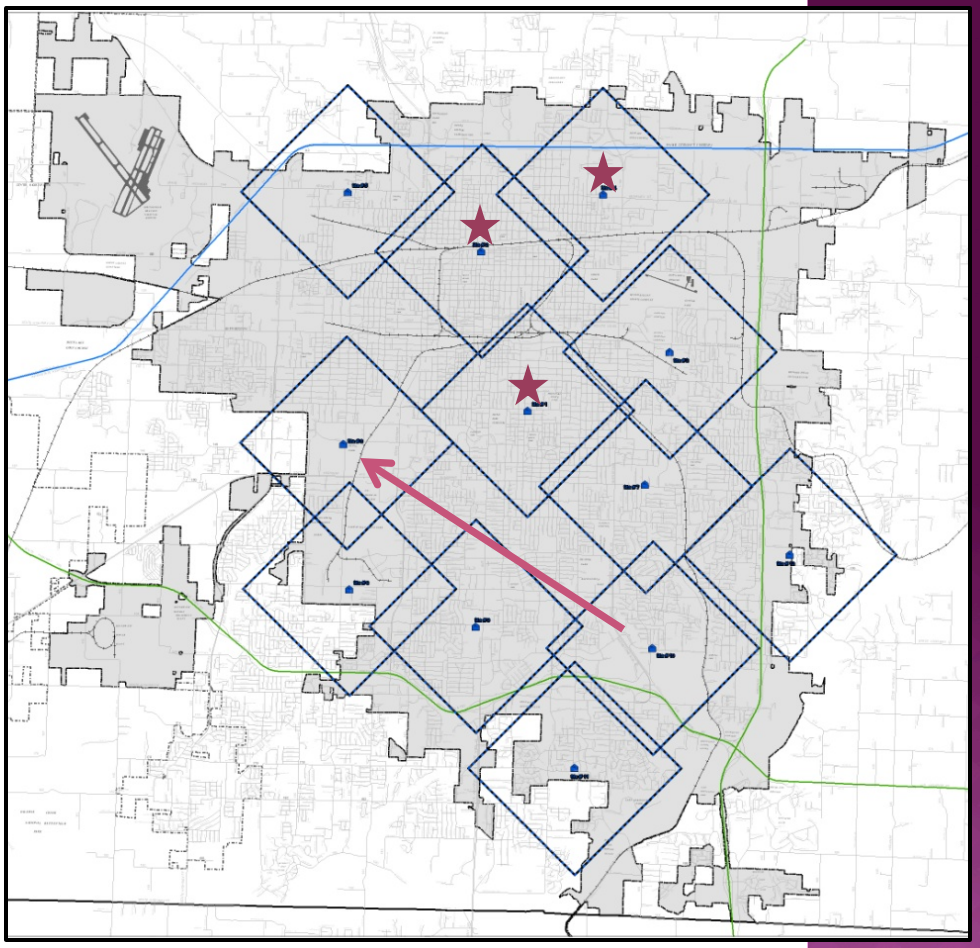
SIMULTANEOUS INCIDENTS



ACTIONS TO IMPROVE EMERGENCY RESPONSES WITHIN SPRINGFIELD

INTERNAL CHANGES MADE IN 2015

- Split a dual company at Station 10, moving the apparatus to Station 8.
- Established a priority staffing model where any staffing above the minimum is moved to boost the staffing at the busiest stations.



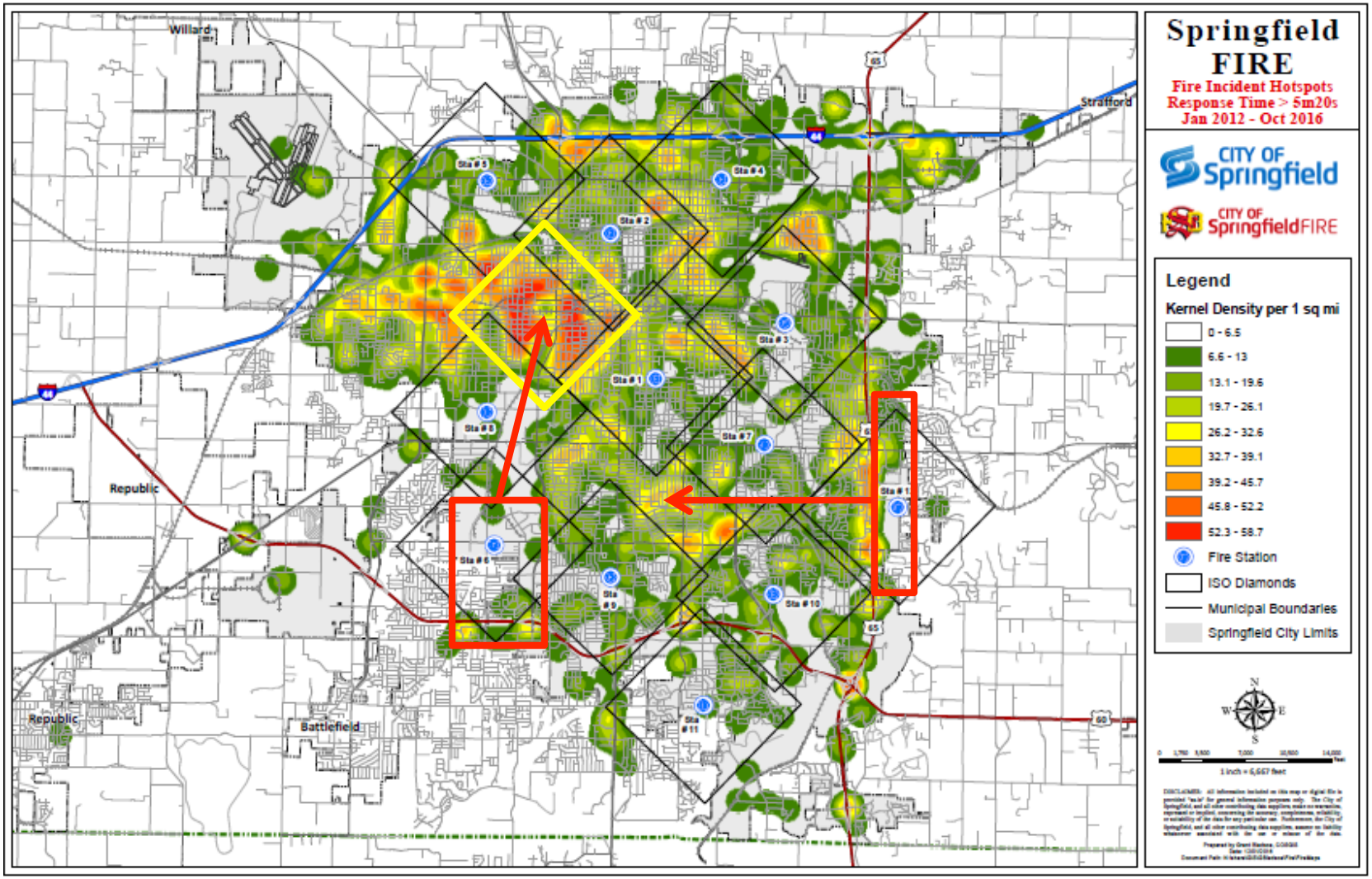
PROPOSAL

- **Redistribute the staffing and/or apparatus from Station 6 to improve responses within west-central Springfield**
  - Use E6 staffing to increase minimum staffing in target zone
  - Use E6 apparatus to add an apparatus to Station 1
  - Move Eng 6 to a temporary facility in west-central Springfield
  - Move Eng 6 staffing to increase staffing on 2nd Rescue

PROPOSAL (CONT)

- **Redistribute the staffing and/or apparatus from Station 12 to improve responses within central Springfield**
  - Use E12 staffing to increase minimum staffing in south Springfield
  - Move Eng 12 apparatus to a more central station
  - Move Eng 12 staffing to increase staffing on 2nd Rescue

CONCLUSION


Springfield
FIRE
Fire Incident Hotspots
Response Time > 5m20s
Jan 2012 - Oct 2016
CITY OF Springfield
CITY OF SpringfieldFIRE
Legend
Kernel Density per 1 sq mi
0 - 6.5
6.6 - 13
13.1 - 19.6
19.7 - 26.1
26.2 - 32.6
32.7 - 39.1
39.2 - 45.7
45.8 - 52.2
52.3 - 58.7
Fire Station
ISO Diamonds
Municipal Boundaries
Springfield City Limits
Willard
Strafford
Republic
Battlefield
Sta # 1
Sta # 2
Sta # 3
Sta # 4
Sta # 5
Sta # 6
Sta # 7
Sta # 8
Sta # 9
Sta # 10
Sta # 11
N
W
E
S

FEEDBACK