# LOS ANGELES FIRE COMMISSION

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December 17, 2024

Honorable Karen Bass
Mayor, City of Los Angeles
Room 303, City Hall
Attn: Legislative Coordinator

Honorable Members of the City Council
City of Los Angeles
City Hall, Room 395
Attn. City Clerk

[BFC 24-116] – INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS STANDARDS OF COVER ANALYSIS

At its meeting of December 17, 2024, the Board of Fire Commissioners approved the report and its recommendations. The report is hereby transmitted to the Mayor and the City Council for consideration.

Should you need additional information, please contact the Board of Fire Commissioners' office at 213-978-3838.

Sincerely,

Renee Ramirez
Acting Commission Executive Assistant II

Attachment

cc: Fire Chief Kristin Crowley (via email)

December 17, 2024

# LOS ANGELES FIRE DEPARTMENT

KRISTIN M. CROWLEY
FIRE CHIEF

APPROVED: 12/17/2024
BOARD OF FIRE COMMISSIONERS
BY:
COMMISSION EXECUTIVE ASSISTANT

November 18, 2024

BOARD OF FIRE COMMISSIONERS
FILE NO. 24-116

TO: Board of Fire Commissioners

FROM: Kristin M. Crowley, Fire Chief

SUBJECT: IAFF STANDARDS OF COVER ANALYSIS

| FINAL ACTION: | ✓ Approved | Approved w/Corrections | Withdrawn |
|---|---|---|---|
| | Denied | Received & Filed | Other |

## SUMMARY

The Los Angeles City Fire Department (LAFD) maintains a relentless commitment to operational effectiveness. In 2023, a Standards of Cover (SOC) analysis (BFC 23-055) was completed to measure the effectiveness of the LAFD deployment model. This SOC focused on Emergency Medical Service (EMS) deployment through the years 2018-2020. A second SOC has been completed as a partnership with the International Association of Fire Fighters (IAFF). This SOC provides a broad analysis of LAFD response during 2018-2022 in comparison to National Fire Protection Association (NFPA) standard 1710 and offers incremental steps to improve the effectiveness of resource deployment.

## RECOMMENDATIONS

That the Board:
Receive the report and transmit it to the Mayor and City Council.

## FISCAL IMPACT

None

## DISCUSSION

In many ways, the current staffing, deployment model, and size of the LAFD have not changed since the 1960s. The population of the City of Los Angeles has increased from 2,479,015 in 1960 to 3,898,747 in 2020 while the LAFD shrank from 112 stations to 106 stations. During that span of time the staffing did not grow proportionally. A t the same time, the call volume increased from 100,985 incidents in 1969 to 504,604 incidents in 2023.

The IAFF SOC begins by using state-of-the-art industry standard mapping software to demonstrate that the locations of the current 106 fire stations are inadequate to meet

the needs of the entire City. The mapping software exposes large gaps of coverage throughout the City. While following applicable speed limits, no vehicle can arrive on-scene of all parts of the City within the four-minute recommendation from NFPA 1710. The software analyzed the traffic patterns from a Wednesday afternoon at 1700 hours. When the fire stations were built many decades ago, they were adequate for the needs of the community. The statistically significant increase in population and traffic has rendered the location of the fire stations inadequate.

The IAFF SOC then analyzed the response of millions of apparatus to test the actual arrival time of the apparatus. The LAFD responds to just over 500,000 calls yearly but dispatches over 1.1 million apparatus to those calls. The SOC analyzed dispatches for Emergency Medical Service (EMS) calls and fire-related calls. The results indicated that overall, the LAFD did not meet the 4-minute travel time 55% of the time. Additionally, the poor performance grew worse. In 2018, EMS incidents saw the first arriving unit arrive over the four-minute recommendation 49% of the time, while in 2022, the first arriving unit arrived over the four-minute recommendation 61% of the time.

An analysis of the 90th percentile of all incidents indicates that the overall response time of LAFD resources has increased from 6:51 in 2018 to 7:53 in 2022. This dramatic increase is nearly double the time the NFPA recommends for first-arriving units.

The IAFF recommends increased staffing and infrastructure to allow additional units to serve the growing population adequately. The national average of firefighters in densely populated cities ranges from 1.54 to 1.81 per 1,000 population. The LAFD staffs about half of the recommendation, and statistically, it staffs 0.91 firefighters per 1,000 people. Simply put, the LAFD is half the size that the NFPA recommends a professional fire department to be.

Staffing recommendations can be divided into three categories. The first category is a set of short-term recommendations that include staffing on the existing 200 series fire engines known as "pumps." The short term is defined as within the next 1-3 years. LAFD pumps already have a driver position in the rank of Engineer. Staffing all pumps will require 378 authorities. The SOC also recommends 32 ambulances to be staffed during peak hours. The additional ambulances will reduce the out-of-district incidents that cause cross-over of resources and reduce unit hour utilization. Alternative response vehicles like Fast Response Vehicles or Advanced Provider Response Units could satisfy this requirement.

The next set of recommendations covers a medium term of 3-6 years. Seven (7) Battalion Chief offices are recommended to reduce the span of control to the industry standard of one Chief Officer for every five fire stations. Currently, one Battalion has eleven stations, while others have eight. An EMS substation is also recommended in each Geographic Bureau to house ambulances and focus on EMS delivery during peak hours.

The last set of recommendations focuses on the long term, 6 years and beyond. During this time, the City is expected to grow 24%. Additional dispatchers are necessary to reduce call processing time. The LAFD currently uses a staffing model that was in place before the invention of the cell phone and increased callers. Call volume into the dispatch center has more than quadrupled with no increase in staffing.

The IAFF recommends an additional 84 fire stations. An analysis of the methodology of this recommendation amends the recommendation to 62 fire stations due to automatic and mutual aid agreements that will cover the City's border areas.

The fiscal impact for the staffing necessary would be spaced over several years as authorities are created, hired for, and staffed. The fiscal impact for necessary infrastructure would be immediate and ongoing. The immediate need would include the acquisition of land and the construction of fire stations. The ongoing need would include the continual replacement of aging infrastructure yearly.

**CONCLUSION**

The LAFD is committed to being the premier, all-hazard public safety and emergency service provider that exceeds the expectations of the diverse communities we serve. This commitment is unattainable without the requisite resources, staffing, and infrastructure to meet the increased population and complexity of a modern fire service response. The overall response time, nearly double the national recommendation, indicates that additional resources are needed as soon as possible fiscally. Without funding, the poor response worsens as the population increases.

Board Report prepared by Eric Roberts, Battalion Chief, Planning Section.

Attachment

# Los Angeles Fire Department

Standards of Cover Analysis



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01 **Fire Station Location**

An analysis of the impact that station location has on response

02 **Fire Service Response**

An analysis of the response volume over the last five years

03 **Broad Staffing Recommendations**

Short, Medium, and Long Term recommendations

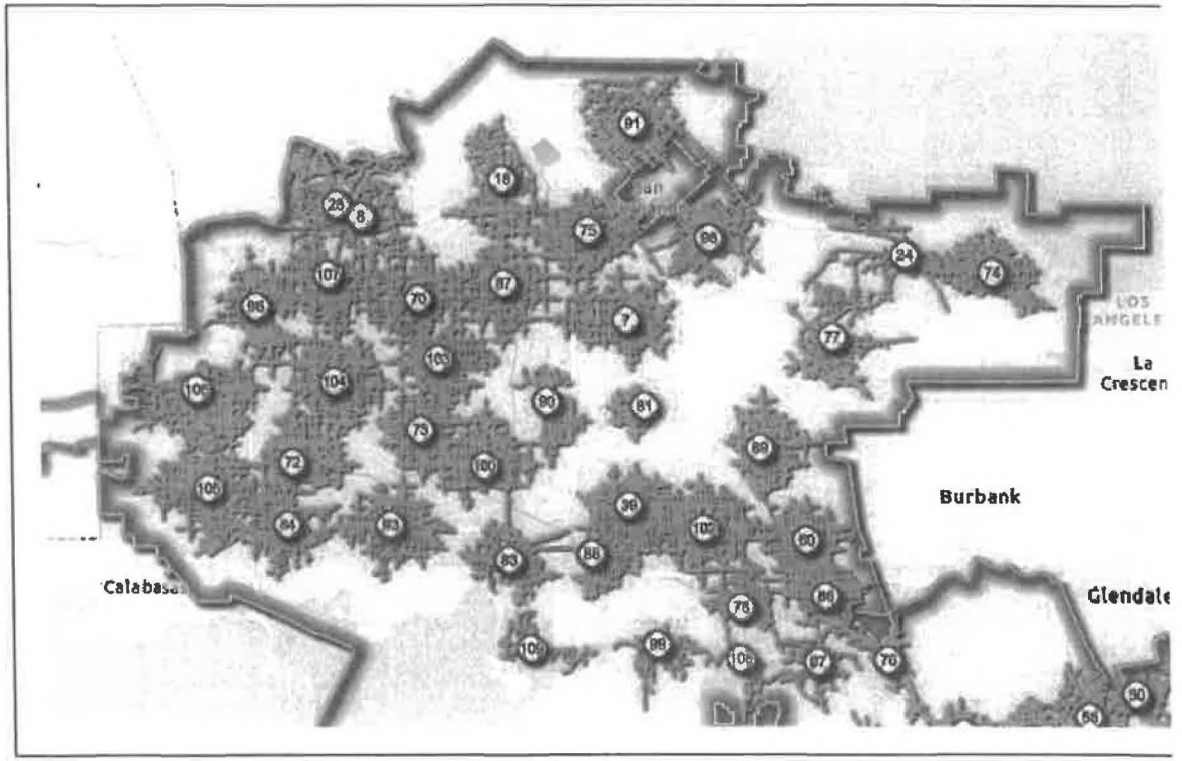
04 **Infrastructure Recommendations**

Bond proposal to fully right size the Fire Department to meet the needs of the customers

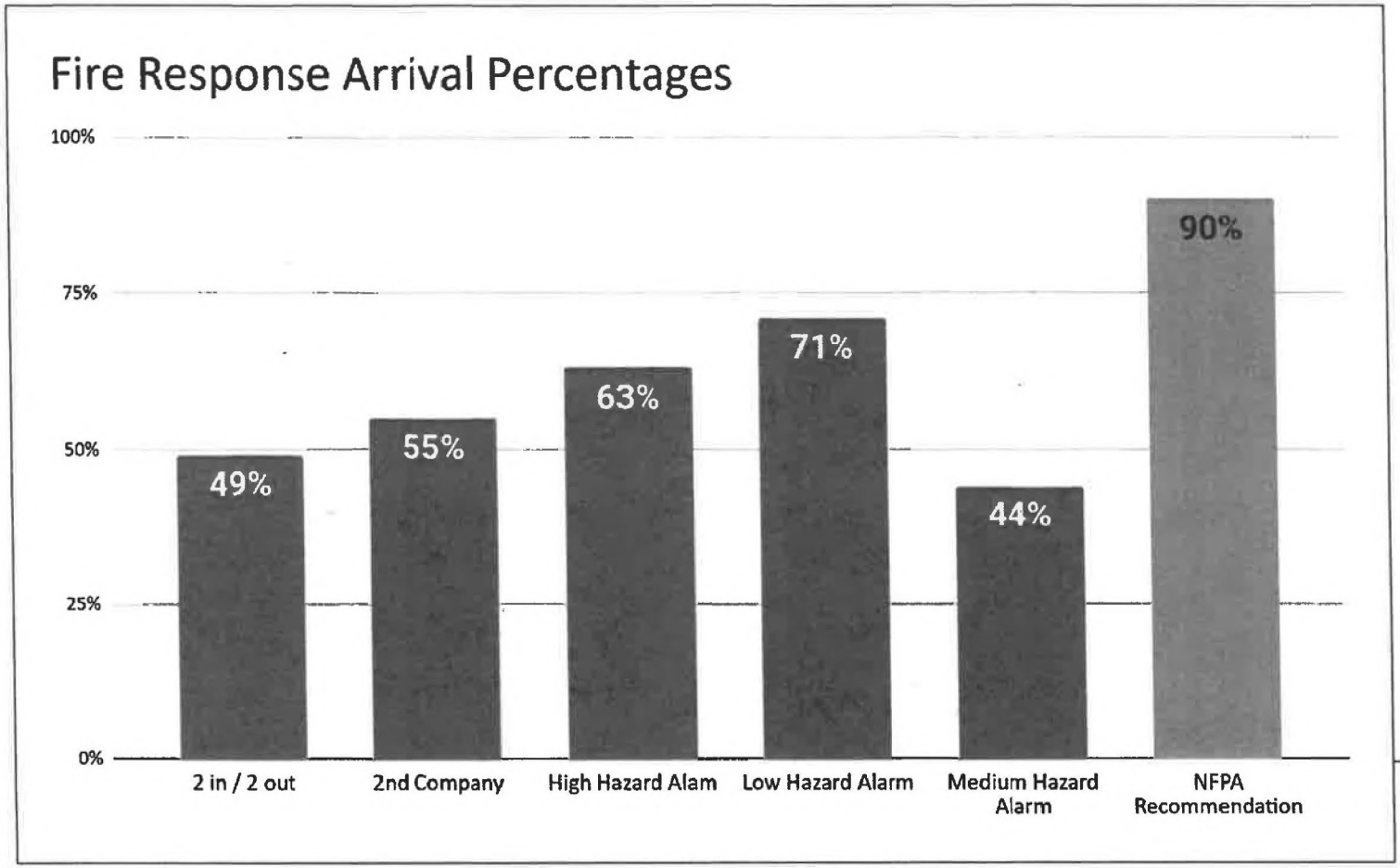
# 01

# Fire Station Location

Based on its current fire station locations, LAFD is only able to respond to 49.2% of roads within its response area within 4 minutes of travel.



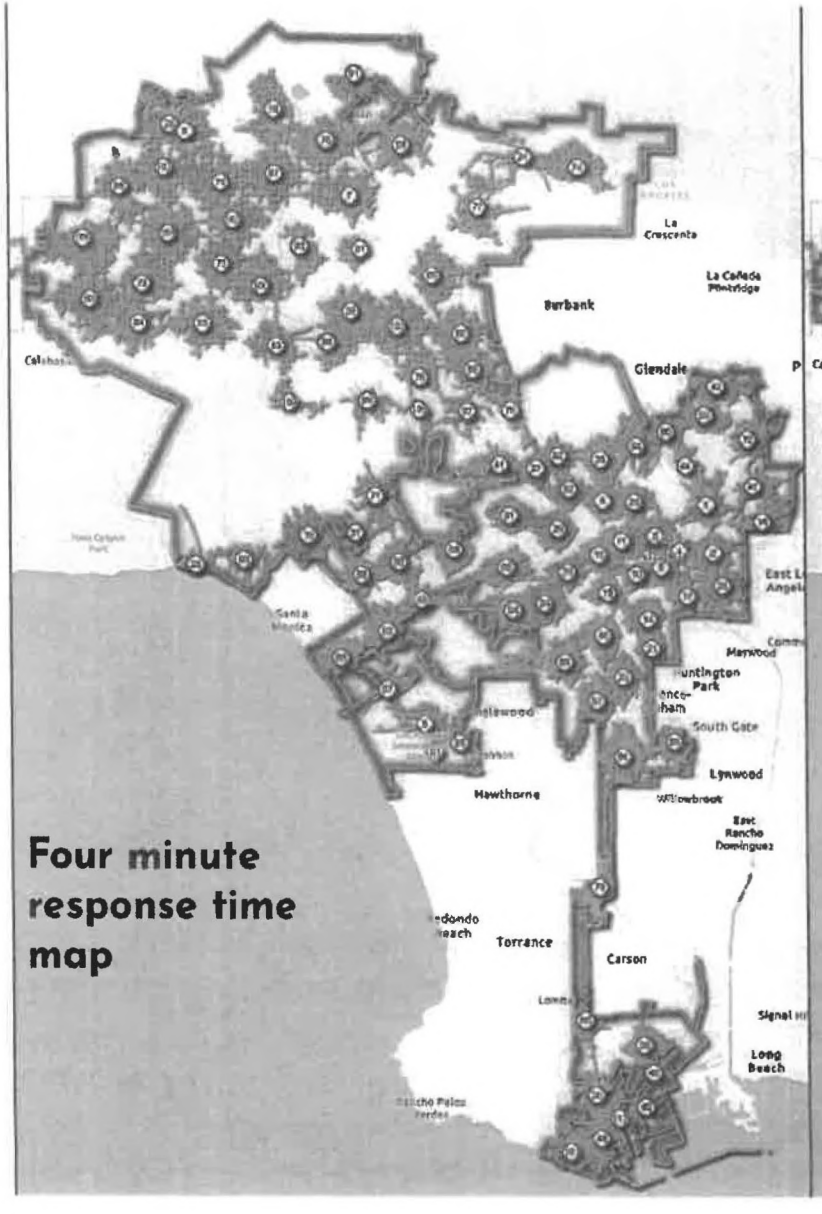
# 01 Fire Station Location



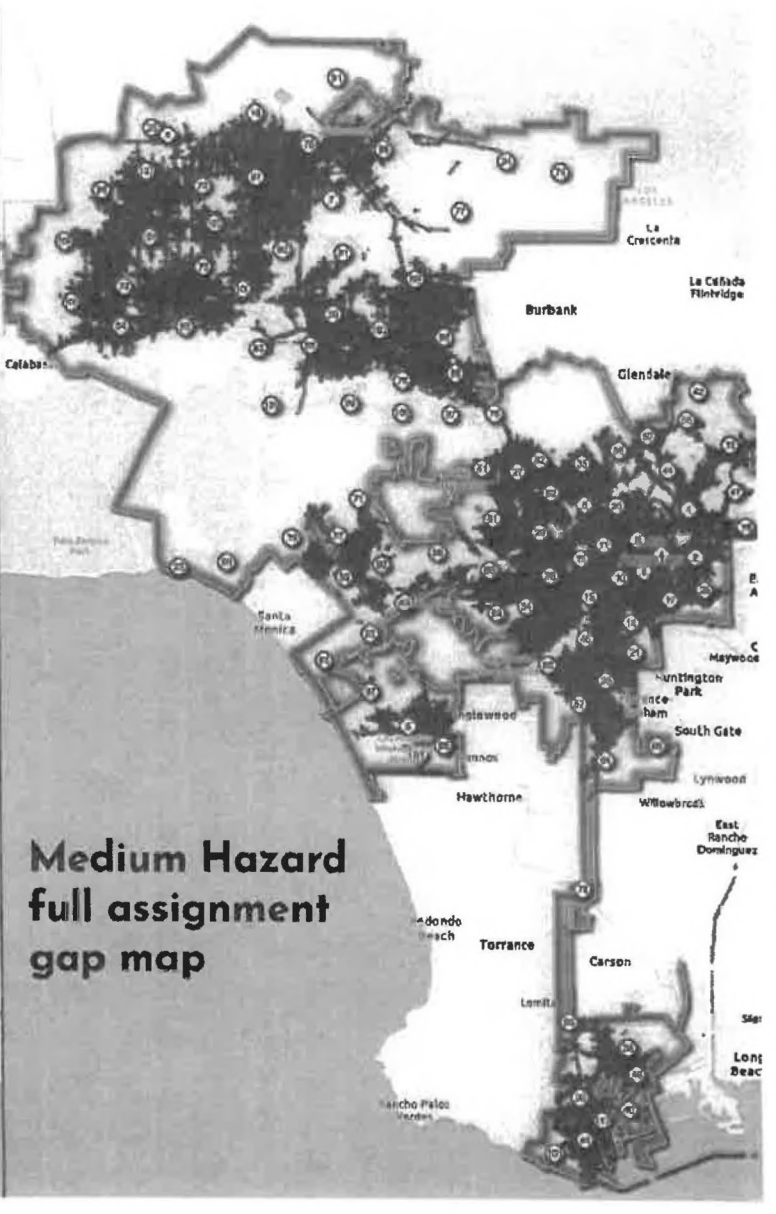
# 01

These two maps demonstrate the gaps in coverage that causes resources to arrive four minutes 49% of the time (green map).

The blue map demonstrates the areas of a the City were a medium hazard alarm cannot arrive in the 8 minutes recommended.




**Four minute response time map**




**Medium Hazard full assignment gap map**

# 02 Fire & EMS Service Response

1. Overall, for the 5 years, LAFD did not meet the 4-minute travel time standard for **55%** of emergency medical incidents.
2. During the 5 years, the percentage of emergency medical incidents where the first-arriving unit had a travel time greater than 4 minutes increased from **49%** in 2018 to **61%** in 2022.
3. The problem is getting worse. The LAFD's 90th percentile travel time for the first-arriving unit at an emergency medical incident exceeded the 4-minute NFPA 1710 travel time objectives each year from 2018 to 2022, worsening as the years progressed. It was 6:51 in 2018 and grew to **7:53** in 2022.

# 03 Broad Staffing Recommendations

## Short Term
(1-3 years)

FULLY STAFF ALL 200 HUNDRED SERIES APPARATUS WITH FOUR (4) MEMBERS.

i. 378 additional Firefighters

PURSUE 32 ADDITIONAL AMBULANCES

i. To be staffed during peak hours

ii. 192 additional Firefighters

## Medium Term
(3-6 years)

ADD SEVEN (7) BATTALIONS

i. 42 additional Firefighters

ADD ONE (1) EMS SUBSTATION PER BUREAU THAT HOUSES AMBULANCES

## Long Term
(6 years & beyond)

ACHIEVE DISPATCH ACCREDITATION TO IMPROVE DISPATCH TIMES

i. 60 additional Firefighters

ii. 40 positions for administrative needs



**Additional Firefighters**

**1.54 - 1.81**
National Best Practice

**0.91**
Current LAFD Ratio

# 03 Staffing Comparison

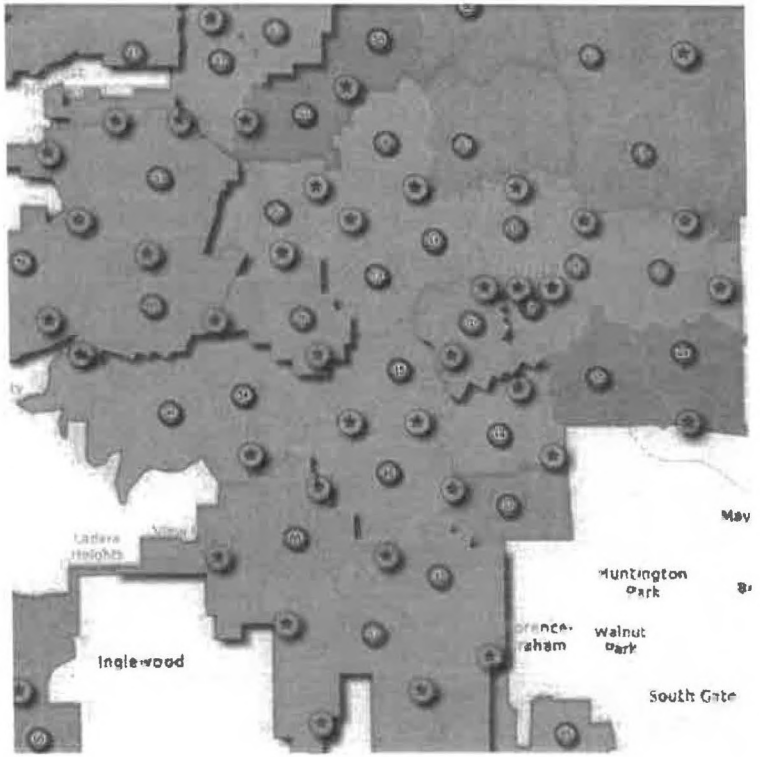



**1.54 - 1.81**
National Best Practice

**0.91**
Current LAFD Ratio

# 04 Infrastructure Recommendations

| | OCB | OVB | OSB | OWB | Totals |
|---|---|---|---|---|---|
| Short Term | 3 | 14 | 14 | 2 | 33 |
| Medium Term | 12 | 2 | 6 | 2 | 22 |
| Long Term | 2 | 12 | 5 | 10 | 29 |
| Totals | 17 | 28 | 25 | 14 | 84 |




**62*** Additional Fire Stations

# LOS ANGELES FIRE DEPARTMENT SERVICES

CHALLENGE

### Fire Station Location

Fire Stations built over 50 years ago are not ideally located and can only arrive on time less than 50% of the time.

### Fire Responses

An analysis of responses to fires and EMS shows that the resources arrive on time half of the time.

### Medical Responses

The problem is getting worse, the total average response time has grown to nearly eight minutes (7:53).

SOLUTION

### More Fire Stations

Standard of Cover recommends 62 additional stations.

### More Firefighters

NFPA recommends: 1.81 Firefighters per 1,000 citizens. LAFD has: 0.91 per 1,000 citizens.

### More Resources

More resources will reduce response times.