

#### Dallas Fire Rescue's Future Station Location Analysis Public Safety Committee May 8, 2023

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# **Presentation Objective**



- Dallas Fire-Rescue strives to deliver efficient and effective emergency response to the City of Dallas.
- Data analytics are utilized to measure system performance and identify areas for improvement
- This presentation focuses on identified current and future facility needs for the strategic placement of additional resources to ensure excellent service delivery
  - First step of a multi-year project for expansion of available facilities and resources
  - Data driven process based on historical trends, current system performance, and future growth projections



## **Presentation Overview**



- Current Resources
- Emergency Response Data
- Fire Station Site Optimization Studies
- Identified Optimal Sites
- Next Steps



#### **Current Resources**





# 59 Fire Stations, strategically placed across the city, housing:

- 58 Fire Engines
- 23 Fire Trucks
- 46 Front-Line Rescues
- 5 Peak Demand Rescues (10a-10p)
- Various Other Specialty Response Units
  - Urban Search & Rescue, Hazardous Materials, Aircraft Rescue and Fire Fighting, Swift Water Rescue, Wildland, Boosters, etc.

# **Emergency Response Data**



#### • 2022 Data:

- Nearly 290,000 Responses
  - Nearly 85% were EMS-related
- Response Times:
  - 89% Structure Fire Responses within 5:20
  - 85% Medical Responses within 9:00
- Unit Hours of Utilization:
  - 38% Rescue
    - Optimal 25-30%



# **Emergency Response Data**



#### **Historical Data Trends**



#### Since 2017, DFR has added the following front-line units:

- 6 Rescues
- 2 Fire Engines
- 1 Fire Truck
- Call Volume has risen nearly 40,000 (15.4%) in that time
- Single Function Paramedic Program launched in 2022 to stabilize staffing of Peak Demand ambulances and increase number of available units on a more consistent basis





# Fire Station Site Optimization Studies



- 2020 DFR Harvard Business School Collaboration
  - Criteria:
    - Incident Data
    - Response Plans
    - NFPA 1710 Standards
    - Responses that did not meet NFPA 1710 Standard
    - Commercial & Industrial Real Estate Development Announcements
    - Real Estate Prices based on Square Foot Averages
    - Population Changes
  - Identified geographical areas needing response improvement
  - One area is the site of new Station 59
    - 201 N. Jim Miller Road, opened July 8, 2022



# Fire Station Site Optimization Studies

- 2022 DFR DBI Collaboration
  - Built on previous study with Harvard
    - Need for updated statistics and analytics
      - Post-pandemic
      - New growth projections
  - Criteria:
    - Total calls outside of NFPA response time standards
    - 2045 NCTCOG Projected Population
    - Distance to nearest Station
    - Total calls outside of NFPA response time standards in adjacent areas
    - Equity Atlas score
    - Change over time 2019 to 2021 of response time metrics





## **Identified Optimal Sites**

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## **Identified Optimal Sites**





## Site 1 South RL Thornton Fwy and Loop 12



Category Name	Scoring
Travel or Response Time (from proposed stations)	5
Total calls outside of established NEDA response times	F
Total calls outside of established NFPA response times	5
2045 NCTCOG Projected Population	5
	_
Distance to nearest Station	4
I otal calls outside of established NFPA response times in adiacent areas	5
	-
Equity Atlas score	5
Change over time 2019 to 2021 of response time metrics	5
Total Score	4.85





#### Site 2 East 635 at West Kingsley Rd



Category Name	Scoring
Travel or Response Time (from proposed stations)	5
Total calls outside of astablished NEDA response times	F
Total calls outside of established NFPA response times	5
2045 NCTCOG Projected Population	5
Distance to nearest Station	4
Total calls outside of established NFPA response times in adjacent areas	5
Equity Atlas score	4
Change over time 2019 to 2021 of response time metrics	5
Total Score	4.8





#### Site 3 W Illinois Ave at S Hampton Rd



Category Name	Scoring
Travel or Response Time (from proposed stations)	5
Total calls outside of established NFPA response times	5
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2045 NCTCOG Projected Population	5
Distance to nearest Station	4
Total calls outside of established NFPA response times in	
adjacent areas	4
Equity Atlas score	5
Change over time 2019 to 2021 of response time metrics	4
Total Score	4.75





#### Site 4 I-20 at S Westmoreland Rd



Category Name	Scoring
Travel or Response Time (from proposed stations)	4
Total calls outside of established NFPA response times	5
2045 NCTCOC Projected Depulation	F
	5
Distance to nearest Station	4
Total calls outside of established NEDA response times in	
adjacent areas	5
Equity Atlas score	Δ
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Change over time 2019 to 2021 of response time metrics	4
Total Score	4.75





#### Site 5 Lasater Rd



Category Name	Scoring
Travel or Response Time (from proposed stations)	5
Total calls outside of established NFPA response times	5
2045 NCTCOG Projected Population	5
Distance to nearest Station	5
Total calls outside of established NFPA response times in adjacent	
areas	3
Equity Atlas score	2
Change over time 2019 to 2021 of response time metrics	4
Total Score	4.70





## **Next Steps**



- Collaboration with Real Estate Division
  - Identification of potential sites within close proximity of optimal station locations
- Collaboration with Bond Office
  - Potential timeline for implementation: 3-5 years





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