

Memorandum



DATE: October 7, 2016

TO: Honorable Members of the Public Safety Committee:
Adam Medrano (Chair), B. Adam McGough (Vice Chair), Sandy Greyson, Tiffinni A. Young,
Jennifer S. Gates, Philip T. Kingston

SUBJECT: **Dallas Fire-Rescue Department Recommended Projects for the 2017 Bond Program**

On Monday, October 10, 2016, you will be briefed on the Dallas Fire-Rescue Department's Recommended Projects for the 2017 Bond Program by Assistant Director Zaida Basora of the Equipment & Building Services Department and Interim Assistant Chief Robert S. Valles of the Dallas Fire-Rescue Department.

The briefing materials are attached for your review.

Please contact me if you have any questions or need additional information.



Eric D. Campbell
Assistant City Manager

[Attachment]

cc: Honorable Mayor and Members of the City Council
A.C. Gonzalez, City Manager
Larry Casto, City Attorney
Craig D. Kinton, City Auditor
Rosa A. Rios, City Secretary
Daniel F. Solis, Administrative Judge
Ryan S. Evans, First Assistant City Manager

Jill A. Jordan, P.E., Assistant City Manager
Mark McDaniel, Assistant City Manager
Joey Zapata, Assistant City Manager
M. Elizabeth Reich, Chief Financial Officer
Sana Syed, Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor & Council

Dallas Fire-Rescue Department



Recommended Projects for the 2017 Bond Program

Public Safety Committee
October 10, 2016





Purpose

- Review the Fire-Rescue Department's recommended projects for the 2017 Bond Program
- Discuss issues relating to new and replacement fire stations
- Present priority ranking list of facilities

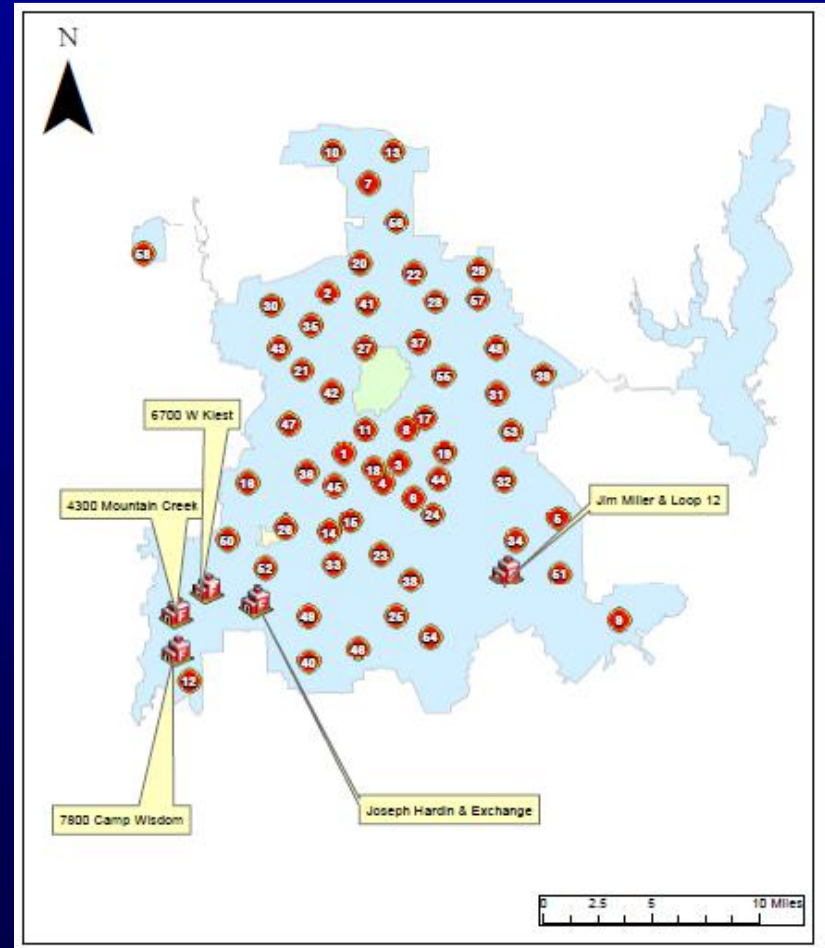


Fire Stations

Currently the City of Dallas has **58 fire stations** and owns the following sites for future stations:

- Jim Miller Rd. and Loop 12
- 7800 W. Camp Wisdom
- 4300 Mountain Creek Pkwy.
- 6700 W. Kiest Blvd.
- Joseph Hardin and Exchange

Note: Future stations at these sites are not funded





Background

Four new stations, one expansion and fourteen replacement stations funded since 1991:

Station	Address	District	Open
Replacement Station #23	1660 Corinth St.	4	1991
New Station #29	9830 Shadow Way	10	1993
Replacement Station #26	3303 Sheldon	1	1994
New Station #30	11381 Zodiac	6	1997
Replacement Station #25	2112 56 th St.	8	2002
Replacement Station #34	1234 Carbona	5	2002
Replacement Station #39	2850 Ruidosa	9	2003
Replacement Station #38	2839 Wilhurt	4	2007
New Station #40	Kirnwood and Hampton	8	2007
Replacement Station #35	3800 Walnut Hill	13	2008
Replacement Station #33	754 W. Illinois	3	2008
Replacement Station #42	3333 W. Mockingbird Ln.	14	2008
Expansion Station #10	4451 Frankford Road	12	2010
New Station #50	841 S. Walton Walker Blvd.	6	2012
Replacement Station #37	6780 Greenville Avenue	9	2013
Replacement Station #32	4262 N. Jim Miller Rd.	4	2014
Replacement Station #27	8401 Douglas Avenue	13	2015
Replacement Station #44	Fitzhugh and Lagow	7	2016
Replacement Station #6	2301 Pennsylvania Avenue	7	2016



Background (continued)

Bond Program History - New and Replacement Fire Station Construction Funding

- 2006 Bond Program: 5 replacement, 1 expansion, 1 new
- 2003 Bond Program: 4 replacement, 1 new
- 1998 Bond Program: 1 replacement
- 1995 Bond Program: 1 replacement
- 1985 Bond Program: 1 replacement, 3 new
- 1982 Bond Program: 1 replacement, 3 new
- 1978 Bond Program: 1 renovation, 1 replacement, 1 new
- 1975 Bond Program: 4 new
- 1972 Bond Program: 2 replacements, 2 new
- 1967 Bond Program: 4 replacements, 1 new



Background (continued)

- Original Fire-Rescue Department Master Plan for New and Replacement Fire Stations created in 1973
- Periodically updated based on service needs for new and replacement fire stations
- EBS and Fire-Rescue Department staff reviewed facilities
 - existing building and site conditions
- **2017 Needs Inventory totals - \$220 million (excl. MM)**
 - 19 replacement stations - \$175 million
 - 4 new fire stations - \$35 million
 - 5000 Dolphin Rd. Campus- \$10 million
 - Major maintenance not included- pending FCA



Typical Fire Station Building Program

- Current Fire Station Building Program for new and replacement facilities:
 - Approximately 12,000 square feet
 - 3 full apparatus bays
 - 1 half bay
 - Accommodation of current equipment size and weight
 - On-site apparatus turnaround for backing equipment into bays
 - Parking spaces for 22 vehicles
 - Decontamination room, equipment clean room, vented equipment storage room, areas for administration, physical training, study, laundry, and gender separated shower, restrooms, and dormitory
 - Lobby with accessible public restroom



Typical Fire Station Building Program (continued)

- Standardized facility provides flexibility in coverage and equipment assignment
- Functional and support spaces and equipment
 - Gender separation in bath / dorm areas
 - Safety of fire fighter personnel
 - Addresses ADA (Americans with Disabilities Act)
- Assumes site of 1.5 to 2 acres min.
 - Adequate size for safe maneuvering of fire apparatus



Evaluation Criteria for New Stations

- Criteria for New Stations
 - Master Plan needs - service demand drivers
 - Service Response Time
 - Total call volume
 - Population density
 - Building trends and development growth patterns
 - Hazards



Evaluation of Existing Stations

- Existing Stations evaluated for the following:
 - Building performance and life cycle
 - Structural conditions
 - Building envelope and roof
 - Building systems (mechanical, electrical, and plumbing) condition
 - Functional layout - how well the layout facilitates:
 - Service operations
 - Equipment care and storage
 - Livability
 - Location
 - Opportunities for expansion
 - Service response time
 - Ingress and egress



Summary of Conditions at Existing Stations

- There are 58 fire stations across the city
 - 23 Fire Stations included in the Needs Inventory
 - 4 are new stations
 - 19 stations are over 50 years old
- Most existing fire stations are insufficient in the following respects:
 - Site Considerations
 - Limited opportunity for expansion due to size of existing site
 - Availability of additional adjacent land
 - Short apparatus approaches limit equipment maneuvering and often result in safety risk
 - Limited parking for public and staff



Summary of Conditions at Existing Stations (continued)

- Building Considerations
 - Inadequate bay space, size, configuration, and building foundations do not accommodate state-of-the-art fire fighting and EMS equipment
 - Foundation damage due to settlement (cracking and shifting)
 - Cracked load-bearing and masonry exterior walls
 - Poor roof condition
 - Lack of building insulation
 - Lack of fire-fighting gear storage room, decontamination room, and clean room for fire fighting equipment
 - Poor layout and circulation - inadequate watch office area
 - Inadequate areas for administration, physical training, study, shower, toilet, laundry, kitchen, dining and dormitory
 - No public lobby or restrooms



Summary of Conditions at Existing Stations (continued)

- Building Systems Considerations
 - Not energy efficient
 - Inadequate HVAC systems
 - Air infiltration through windows
 - Poor ventilation in bays and dormitory
 - Plumbing problems with sewage backflow
 - Inadequate kitchen range hoods without built-in fire protection
 - No fire protection systems (sprinklers or alarms)
 - Require extensive Code compliance updates



Summary of Conditions at Existing Stations (continued)

- Many existing stations do not meet National Fire Protection Association (NFPA) recommended standards for equipment and operating conditions:
 - Gender separation – restrooms, showers, dorms
 - Decontamination room for equipment
 - Ventilated gear storage



Renovation Analysis - Fire Stations Recommended For Replacement

- None of the fire stations recommended for replacement meet the Building Program or NFPA standards
- Potential renovation/expansion would require:
 - Substantial renovation effort to meet the design criteria
 - Additional land area, as most existing sites are too small
 - Replacement of all building systems except structure and exterior walls
 - Phased renovation or temporary facilities to maintain current coverage
 - Estimated renovation cost approx. 85% of estimated average replacement cost
- Replacement is the most cost effective solution
 - Average estimated cost would be \$8.5 million



Summary of Recommendation

Needs Inventory

Replacement of 19 Fire Stations	\$175 million
4 New Fire Stations	\$35 million
5000 Dolphin Renovation and Burn Building Replacement	\$10 million
Total	\$220 million



Fire Rescue Department's Recommended Priorities

Project	District	2017 Bond Cost
1. New Station at Jim Miller and Loop 12	4	8.7 M
2. Dolphin Rd. Burn Building Replacement	7/Citywide	2 M
3. Dolphin Rd. Fire Administration Renovation	7	8 M
4. Station 46 Replacement (331 E. Camp Wisdom)	5	8.5 M
5. Station 31 Replacement (9365 Garland Rd.)	9	9.8 M
6. Station 36 Replacement (3241 N. Hampton Rd.)	3	8.9 M
7. Station 4 Replacement (816 Akard St.)	2	10.8 M
8. Station 43 Replacement (2844 LombardyM)	6	9.6 M
9. Station 41 Replacement (5920 Royal Ln.)	13	11.3 M
10. Major Maintenance multiple facilities	Citywide	5 M
Total:		\$82.6M

Bond Program Amount

**\$.8 Billion
(\$82.6 M)**

- Top ten priorities for DFR
 - 2006 Bond Program included \$56.7 M for Fire Rescue facilities



1. Jim Miller & Loop 12

\$8.7 M

- Growing neighborhood development
- Cost estimate includes:
 - Building design, construction - \$8.7 million
 - Engine and Rescue - \$1 million
- Station to be designed to meet current station program standards
- Necessary to meet response time goals
- Annual staffing / operating cost - \$2.5 million





2. & 3. 5000 Dolphin Rd. Renovations

\$10 M

- Burn Building and Drill Tower Replacement
 - Replace 3-story open drill tower and one story burn building with updated structures
- Administration Building Renovation
 - Renovation of office and classroom space



Existing burn building



Proposed examples of burn building and 4-story drill tower



4. Replace Station #46

331 E. Camp Wisdom

\$8.5 M

- 55 years old
- 2 full bays (undersized), lacks 2 half bays
- Existing site location limits expansion
- Insufficient parking
- Inadequate to current station program needs
- Site provides insufficient apparatus approach and maneuvering into bays
- Inadequate areas for gear storage, physical training, study, showers, etc.





5. Replace Station #31

9365 Garland Rd.

\$9.8 M

- 69 years old
- 2 full bays (undersized), lacks 2 half bays
- Water damage from second floor plumbing problems
- Insufficient sanitary sewer due to addition of toilet fixtures
- Existing site location prohibits expansion
- Insufficient parking (17 spaces)
- Inadequate to current station program needs
- Site provides insufficient apparatus approach and maneuvering into bays
- Heavy traffic at current site sometimes delays response time; difficult ingress and egress
- Inadequate areas for gear storage, physical training, study, showers, etc.





6. Replace Station #36

3241 N. Hampton Rd.

\$8.9 M

- 62 years old
- 2 full bays (undersized), 1 half bay, lacks 1 half bay
- Foundation settlement, cracked masonry load bearing walls
- Existing corner site location prohibits expansion
- Insufficient parking (15 spaces)
- Inadequate to current station program needs
- Site provides insufficient apparatus approach and maneuvering into bays
- Inadequate areas for gear storage, physical training, study, showers, etc.





7. Replace Station #4

816 S. Akard

\$10.8 M

- 65 years old
- 4 full bays - ladder truck, engine, booster and battalion chief
- Foundation settlement, cracked masonry load bearing walls
- Insufficient parking (11 spaces)
- Inadequate to current station program needs
- Site provides insufficient apparatus approach and maneuvering into bays
- Heavy traffic at current site sometimes delays response time
- Inadequate areas for gear storage, physical training, study, showers, etc.



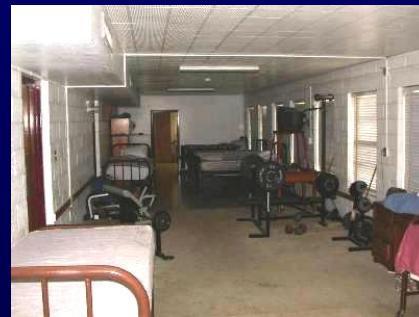


8. Replace Station #43

2844 Lombardy

\$9.6 M

- 58 years old
- 2 full bays (undersized), 1 half bay, lacks 1 half bay
- Foundation settlement, concrete spalling at perimeter walls
- Roof leakage
- Existing site location prohibits expansion
- Insufficient parking (11 spaces)
- Inadequate to current station program needs
- Inadequate areas for gear storage, physical training, study, showers, etc.





9. Replace Station #41

5920 Royal Lane

\$11.3 M

- 57 years old
- 2 full bays (undersized), 1 half bay, lacks 1 half bay
- Existing site location prohibits expansion
- Insufficient sewer, requires clean-out each month
- Insufficient parking (20 spaces)
- Inadequate to current station program needs
- Site provides insufficient apparatus approach and maneuvering into bays
- Heavy traffic at current site sometimes delays response time
- Inadequate areas for gear storage, physical training, study, showers, etc.





Questions
