

# **Market Analysis** Spring 2019

#### Contacts

#### Paul Fiorilla

Associate Director of Research Paul.Fiorilla@Yardi.com (800) 866-1124 x5764

#### Jack Kern

Director of Research and Publications Jack.Kern@Yardi.com (800) 866-1124 x2444

#### **Author**

#### Anca Gagiuc

Associate Editor

# **Hefty Supply Tempers Rent Growth**

Despite a development pipeline that brought online almost 95,000 units since 2014, the North Texas multifamily market continued to show healthy fundamentals last year and into the first quarter of 2019. Supply however dampened rent growth to a certain degree, bringing it to 2.8% year-overyear through March, slightly below the U.S. average.

The metro remained a national leader in job creation last year, with the addition of 102,500 positions for a 2.6% expansion, 90 basis points above the U.S. figure. Professional and business services was the top-performing sector (22,800 jobs), followed by trade, transportation and utilities (21,400 jobs). Charles Schwab broke ground on a 70-acre office campus estimated to house some 8,600 employees once completed, while Infosys Ltd.'s tech innovation hub in Richardson is set to hire 500 people by 2020.

More than 26,800 units were delivered in 2018 for a new cycle high, with an additional 44,700 apartments underway as of March. Following last year's \$5 billion transaction volume, investors already traded nearly \$900 million in multifamily assets in the first quarter of 2019, at a per-unit price of \$105,032. With rapid economic expansion and population gains slated to keep demand healthy, we expect the average Dallas-Fort Worth rent to rise 4.3% in 2019.

#### **Recent Dallas Transactions**

#### The Estates of Las Colinas



City: Irving, Texas Buyer: Ashcroft Capital Purchase Price: \$65 MM Price per Unit: \$157,430



City: Fort Worth, Texas Buyer: Internacional Realty Purchase Price: \$62 MM Price per Unit: \$166,578

#### The Wimberly



City: Dallas Buyer: BSR Trust Purchase Price: \$53 MM Price per Unit: \$142,742

#### The Club at Stonegate

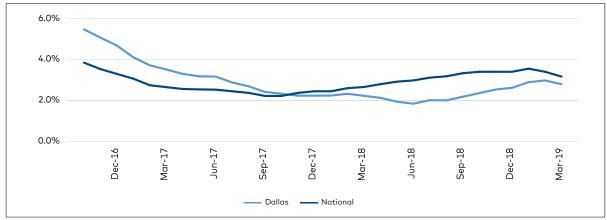


City: Fort Worth, Texas Buyer: Archwood Real Estate Purchase Price: \$51 MM Price per Unit: \$142,222

#### **Rent Trends**

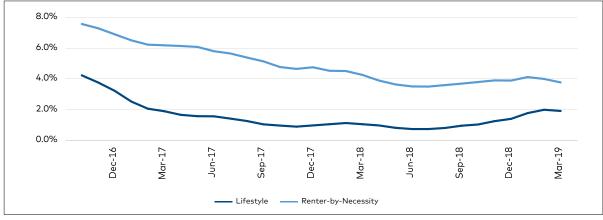
- Softened by the sustained supply surge, Dallas-Fort Worth rents were up 2.8% year-over-year through March, 40 basis points behind the U.S. average. The average rent in DFW was \$1,175 as of March, below the \$1,430 national figure.
- The working-class Renter-by-Necessity segment continued to lead growth, with the average rent up 3.8% to \$967. Meanwhile, Lifestyle rates appreciated 1.9% to \$1,389. The spread between the two segments reflects consistent developer interest in upscale projects in the context of sustained workforce housing demand. However, recent robust supply helped narrow the spread, from 330 basis points as of March 2018 to 190 basis points one year later.
- Only four submarkets saw rent contractions: South Downtown (-0.6% to \$1,657), Tarrant (-0.2% to \$1,005), the Medical District (-0.3% to \$1,361) and Benbrook (-0.5% to \$1,106). Several areas recorded strong gains, including fringe Fort Worth submarkets such as Weatherford (7.8%), Kennedale (7.5%) and Keller/Westlake (7.3%), but also Northwest Dallas (7.3%) and South Oak Cliff (6.9%).
- Despite the prolonged supply surge, DFW demand should keep up in the near future due to ongoing economic and demographic expansions. We expect the average rent to rise 4.3% in 2019.

Dallas vs. National Rent Growth (Sequential 3 Month, Year-Over-Year)



Source: YardiMatrix

Dallas Rent Growth by Asset Class (Sequential 3 Month, Year-Over-Year)

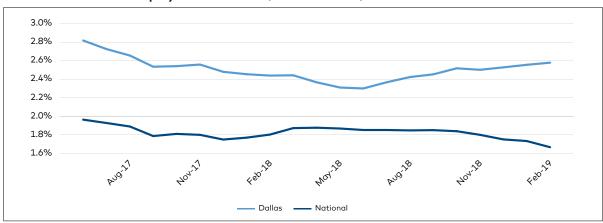


Source: YardiMatrix

# **Economic Snapshot**

- The metro added 102,500 jobs in the 12 months ending in February for a 2.6% expansion, well ahead of the 1.7% national rate. DFW's business-friendly environment and robust population growth turned the metro into a regional powerhouse, its economy among the fastest-growing large cities in the country. Unemployment stood at 3.9% in January, an increase of 30 basis points over 12 months.
- Professional and business services continued to lead growth, with the addition of 22,800 positions. Infosys Ltd. unveiled plans to open its next tech innovation hub in Richardson, where it intends to hire 500 workers by 2020. The rich talent pool coming out of UT Dallas also made Walmart choose the Metroplex for Walmart Technology, the company's second internal innovation center. Charles Schwab is bound to become one of the largest employers in the area north of Fort Worth, as it recently broke ground on the \$100 million first phase of a 70-acre office campus, expected to house 2,600 employees upon completion. A 617,000-square-foot second phase is slated to add two more office buildings, with room for an additional 6,000 employees.
- Trade, transportation and utilities, up 21,400 jobs, shows promising signs, with several distribution centers announced in the metro. Home Depot's 152-acre hub is set to employ 800 people and Thirty-One Gifts is moving its national distribution center to Flower Mound, along with 650 employees.

Dallas vs. National Employment Growth (Year-Over-Year)



Sources: YardiMatrix, Bureau of Labor Statistics (not seasonally adjusted)

**Dallas Employment Growth by Sector** (Year-Over-Year)

|      |                                     | Current Employment |         | Year Change |       |
|------|-------------------------------------|--------------------|---------|-------------|-------|
| Code | Employment Sector                   | (000)              | % Share | Employment  | %     |
| 60   | Professional and Business Services  | 627                | 16.8%   | 22,800      | 3.8%  |
| 40   | Trade, Transportation and Utilities | 791                | 21.2%   | 21,400      | 2.8%  |
| 70   | Leisure and Hospitality             | 392                | 10.5%   | 18,800      | 5.0%  |
| 65   | Education and Health Services       | 459                | 12.3%   | 11,700      | 2.6%  |
| 55   | Financial Activities                | 307                | 8.2%    | 7,600       | 2.5%  |
| 15   | Mining, Logging and Construction    | 221                | 5.9%    | 7,100       | 3.3%  |
| 30   | Manufacturing                       | 281                | 7.5%    | 6,600       | 2.4%  |
| 90   | Government                          | 448                | 12.0%   | 5,400       | 1.2%  |
| 80   | Other Services                      | 124                | 3.3%    | 3,700       | 3.1%  |
| 50   | Information                         | 81                 | 2.2%    | -2,600      | -3.1% |

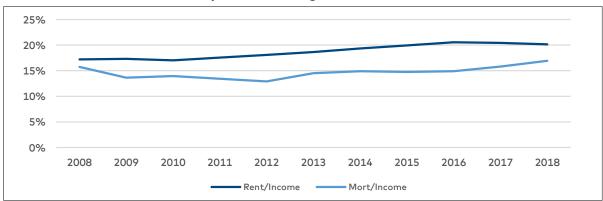
Sources: YardiMatrix, Bureau of Labor Statistics

# **Demographics**

## **Affordability**

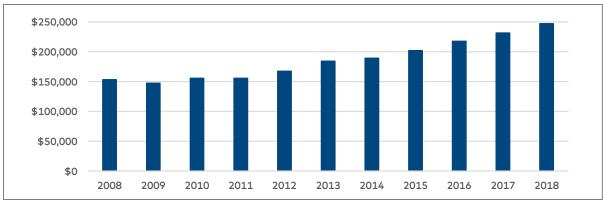
- Dallas-Fort Worth home prices continued to rise, with the median value up 6.7% in 2018 to \$247,175, while recording a solid 67% improvement from the 2009 trough. Although housing costs are rising due to the region's sustained growth, the metro remains relatively affordable. This is true not only when compared to coastal gateway markets such as San Francisco, New York City or Boston but also against emerging tech markets such as nearby Austin.
- Owning remained the more affordable option last year, with the average mortgage payment accounting for 17% of the area median income, while the average rent equated to 20%.

Dallas Rent vs. Own Affordability as a Percentage of Income



Sources: YardiMatrix, Moody's Analytics

## **Dallas Median Home Price**



Source: Moody's Analytics

# **Population**

- The metro's population rose 2.0% in 2017, nearly three times the national rate.
- Dallas-Fort Worth gained almost 950.000 residents between 2010 and 2017, for a 14.7% expansion.

# Dallas vs. National Population

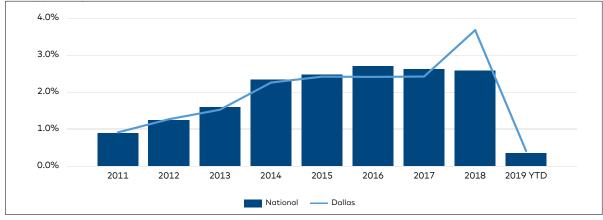
|                 | 2013        | 2014        | 2015        | 2016        | 2017        |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| National        | 316,234,505 | 318,622,525 | 321,039,839 | 323,405,935 | 325,719,178 |
| Dallas<br>Metro | 6,817,243   | 6,950,715   | 7,101,031   | 7,253,424   | 7,399,662   |

Sources: U.S. Census, Moody's Analytics

# Supply

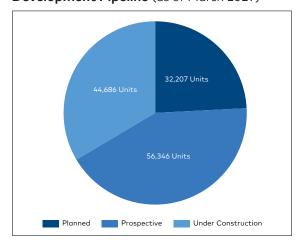
- The metro had 44,686 units under construction as of March, posting the largest multifamily pipeline in the country, way ahead of New York City (28,775 units), Washington, D.C. (28,416), Los Angeles (27,610) and Miami (26,724). Yardi Matrix expects the completion of 22,410 units in Dallas-Fort Worth in 2019.
- Developers added 3,167 units in the first quarter of 2019, which comes on the heels of last year's strong cycle peak, with 26,857 apartments coming online. The bulk of deliveries consisted of upscale properties. As a result of robust development, the occupancy rate in stabilized properties dropped 40 basis points over 12 months, to 94.0% as of February.
- Far North and core Dallas submarkets topped the pipeline as of March, with North Frisco/West McKinney (4,519 units underway), Cityscape/Downtown (4,011 units), North Garland/Rowlett/Sachse (3,294 units) and North Carrollton/The Colony (2,229 units) leading the way. Fort Worth submarkets with consistent pipelines included Downtown (1,498 units), the Medical District (967 units) and Grapevine (821 units).

Dallas vs. National Completions as a Percentage of Total Stock (as of March 2019)



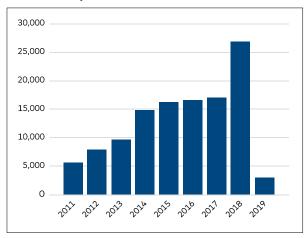
Source: YardiMatrix

**Development Pipeline** (as of March 2019)



Source: YardiMatrix

Dallas Completions (as of March 2019)

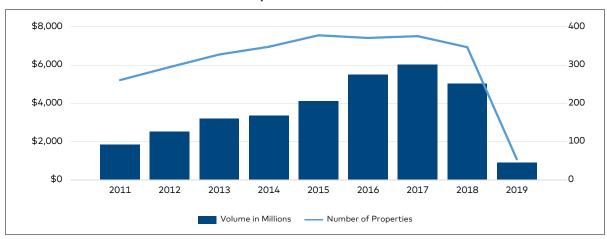


Source: YardiMatrix

## **Transactions**

- Almost \$900 million in multifamily assets traded in the first quarter in confirmed transactions. This comes after 2018's roughly \$5 billion, this cycle's third-best year for multifamily deal volume. At \$105,032, the average DFW per-unit price remained relatively flat in the first quarter against the 2018 figure, but well below the \$153,504 U.S. figure.
- Dallas remains a prime destination for institutional investors and foreign capital. Acquisition yields were mostly flat in 2018, staying in the 4.5% to 5.0% range for Class A assets and as high as 7.0% for value-add deals.
- North Dallas submarkets attracted the most capital in the 12 months ending in March, with North Frisco/West McKinney (\$248 million) topping the list.

# Dallas Sales Volume and Number of Properties Sold (as of March 2019)



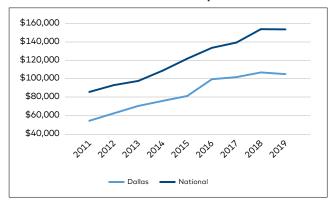
Source: YardiMatrix

## Top Submarkets for Transaction Volume<sup>1</sup>

| Submarket                                 | Volume<br>(\$MM) |  |
|---|------------------|--|
| North Frisco/West McKinney                | 248              |  |
| North Preston Corridor                    | 212              |  |
| South Frisco/Parker                       | 184              |  |
| North Carrollton/The Colony               | 152              |  |
| Blue Mound                                | 151              |  |
| Lake Village/South Irving/<br>West Dallas | 143              |  |
| Lancaster/Red Bird                        | 143              |  |
| Las Colinas                               | 138              |  |

Source: YardiMatrix

## Dallas vs. National Sales Price per Unit



Source: YardiMatrix

<sup>&</sup>lt;sup>1</sup> From April 2018 to March 2019

# **News in the Metro**

Brought to you by:



# Get the latest in local real estate news on Multi-HousingNews.com



Steadfast Cos. Sells 400-Unit DFW Community

Greystone originated a \$36.6 million Fannie Mae acquisition loan for the new owner, Texas-based CONTI Organization, which plans to rebrand the property as Bella Vista Apartments.



StreetLights Residential Opens Luxury Community

The Christopher represents the second phase of RED Development's project The Union, a mixed-use property located in the city's Uptown area.



Dallas Community Commands \$53M

The sale marked the fourth acquisition for BSR Real Estate Investment Trust in under a year, bringing the entity's portfolio to a total of 51 multifamily assets.



LaSalle Investment Management Buys Dallas Property

Drawn to the metro's growing population and strong job market, the firm has purchased a 152-unit luxury rental community in the affluent Turtle Creek submarket.



The Praedium Group Sells TX Community

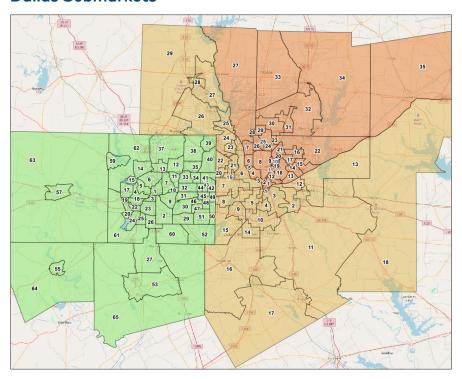
Leaends at Chase Oaks in Plano offers 346 units and has undergone a comprehensive capital improvements program since its purchase back in 2014



JPI Begins Work On 282-Unit Dallas Community

Jefferson Texas Plaza is the developer's 10th community in the Irving-Las Colinas submarket. The property will be close to the University of Dallas and the Toyota Music Factory complex.

# **Dallas Submarkets**



| Area # | Submarket                             |
|--------|---------------------------------------|
| 1      | South Downtown                        |
| 2      | Pleasant Grove                        |
| 3      | Fair Park                             |
| 4      | South Oak Cliff                       |
| 5      | North Oak Cliff/Irving                |
| 6      | Lake Village/South Irving/West Dallas |
| 7      | North Grand Prairie                   |
| 8      | Kiest                                 |
| 9      | Duncanville/South Grand Prairie       |
| 10     | Lancaster/Red Bird                    |
| 11     | Southeast Dallas County               |
| 12     | Northwest Mesquite                    |
| 13     | Northeast Mesquite                    |
| 14     | Desoto                                |
| 15     | North Cedar Hill                      |
| 16     | Midlothian/South Cedar Hill           |
| 17     | Ennis/Waxahachie                      |
| 18     | Kaufman/Terrell                       |
| 19     | Barton Estates/Garden Oaks/           |
|        | Hospital District                     |
| 20     | Irving                                |
| 21     | Las Colinas                           |
| 22     | Espanita/Timberlake                   |
| 23     | Oaks                                  |
| 24     | Valley Ranch                          |
| 25     | Coppell/South Lewisville              |
| 26     | Central Lewisville                    |
| 27     | North Lewisville/Trophy Club          |
| 28     | East Denton                           |
| 29     | Downtown Denton                       |

| Area # | Submarket                           |
|--------|-------------------------------------|
| 1      | Downtown                            |
| 2      | Fairmount/Morningside/Worth Heights |
| 3      | Medical District                    |
| 4      | Westover Hills                      |
| 5      | Crestwood/River Oaks/Sansom Park    |
| 6      | Far North/Stockyards                |
| 7      | Haltom City                         |
| 9      | Stop Six                            |
| 10     | Meadowbrook                         |
| 11     | Richland Hills                      |
| 12     | Watauga                             |
| 13     | Blue Mound                          |
| 14     | Saginaw                             |
| 15     | Lake Worth                          |
| 17     | White Settlement                    |
| 18     | Ridgelea                            |
| 19     | Western Hills                       |
| 20     | Benbrook                            |
| 22     | Colonial/TCU                        |
| 23     | Hemphill                            |
| 24     | Wedgewood                           |
| 25     | Edgecliff Village                   |
| 26     | Sycamore                            |
| 27     | Burleson/Joshua                     |
| 29     | Kennedale                           |
| 30     | Dalworthington Gardens/Pantego      |
| 31     | Handley                             |
| 32     | Randol Mill                         |
| 33     | Hurst                               |

| Area # Submarket |                          |
|------------------|--------------------------|
| 34               | Bedford                  |
| 35               | Colleyville              |
| 37               | Keller/Westlake          |
| 38               | Southlake                |
| 39               | Grapevine                |
| 40               | Euless                   |
| 41               | Tarrant                  |
| 42               | Riverside                |
| 43               | Lamar                    |
| 44               | Green Oaks               |
| 45               | North Arlington          |
| 46               | Downtown Arlington       |
| 47               | South Davis/Turtlerock   |
| 48               | East Arlington           |
| 49               | Great Southwest          |
| 50               | Florence Hill            |
| 51               | Fitzgerald               |
| 52               | Mansfield                |
| 53               | Cleburne/Alvarado        |
| 55               | Granbury                 |
| 57               | Weatherford              |
| 59               | Azle                     |
| 60               | Rendon                   |
| 61               | Southwest Tarrant County |
| 62               | Northwest Tarrant County |
| 63               | Outlying Parker County   |
| 64               | Outlying Hood County     |
| 65               | Outlying Johnson County  |

| Area # Submarket  1 Cityscape/Downtown  2 Uptown  3 South Oak Lawn  4 North Oak Lawn  5 Bachman Lake/West Northwest Highwa  6 Northwest Dallas  7 Carrollton/Farmers' Branch  8 Park Cities/Preston Hollow/West Oak Law  9 Telecom Corridor  10 West Vickery Park  11 Greenville Corridor/Ridgewood Park  12 Gastonwood/Junius Heights/ Lake Park Estates  13 Forest Hills  14 Dixon Branch  15 South Garland  16 Central Garland  17 South Lake Highlands  18 Casa Linda Estates/Cloisters/Lakewood  19 East Vickery Park  20 North Vickery Park |      |
|---|------|
| 2 Uptown 3 South Oak Lawn 4 North Oak Lawn 5 Bachman Lake/West Northwest Highwo 6 Northwest Dallas 7 Carrollton/Farmers' Branch 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 3 South Oak Lawn 4 North Oak Lawn 5 Bachman Lake/West Northwest Highwo 6 Northwest Dallas 7 Carrollton/Farmers' Branch 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park  |      |
| 4 North Oak Lawn 5 Bachman Lake/West Northwest Highwo 6 Northwest Dallas 7 Carrollton/Farmers' Branch 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 5 Bachman Lake/West Northwest Highward 6 Northwest Dallas 7 Carrollton/Farmers' Branch 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park  |      |
| 6 Northwest Dallas 7 Carrollton/Farmers' Branch 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 7 Carrollton/Farmers' Branch 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park  | vay  |
| 8 Park Cities/Preston Hollow/West Oak Law 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 9 Telecom Corridor 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 10 West Vickery Park 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park  | wn   |
| 11 Greenville Corridor/Ridgewood Park 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 12 Gastonwood/Junius Heights/ Lake Park Estates 13 Forest Hills 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| Lake Park Estates  13 Forest Hills  14 Dixon Branch  15 South Garland  16 Central Garland  17 South Lake Highlands  18 Casa Linda Estates/Cloisters/Lakewood  19 East Vickery Park  | k    |
| 14 Dixon Branch 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 15 South Garland 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 16 Central Garland 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park  |      |
| 17 South Lake Highlands 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 18 Casa Linda Estates/Cloisters/Lakewood 19 East Vickery Park   |      |
| 19 East Vickery Park  |      |
|   | ood  |
| 20 North Vickery Park   |      |
|   |      |
| 21 North Lake Highlands   |      |
| 22 North Garland/Rowlett/Sachse   |      |
| 23 Richardson   |      |
| 24 Northwood Hills/Valley View  |      |
| 25 Prestonwood/Galleria   |      |
| 26 Addison  |      |
| 27 North Carrollton/The Colony  |      |
| 28 Rosemeade  |      |
| 29 North Preston Corridor   |      |
| 30 West Plano   |      |
| 31 East Plano/Allen   |      |
| 32 South Frisco/Parker  |      |
| 33 North Frisco/West McKinney   |      |
| 34 East McKinney/Wylie/Princeton  |      |
| 35 North Hunt County/Greenville/Commerc   | erce |

### **Definitions**

Lifestyle households (renters by choice) have wealth sufficient to own but have chosen to rent. Discretionary households, most typically a retired couple or single professional, have chosen the flexibility associated with renting over the obligations of ownership.

Renter-by-Necessity households span a range. In descending order, household types can be:

- A young-professional, double-income-no-kids household with substantial income but without wealth needed to acquire a home or condominium;
- Students, who also may span a range of income capability, extending from affluent to barely getting by;
- Lower-middle-income ("gray-collar") households, composed of office workers, policemen, firemen, technical workers, teachers, etc.;
- Blue-collar households, which may barely meet rent demands each month and likely pay a disproportionate share of their income toward rent;
- Subsidized households, which pay a percentage of household income in rent, with the balance of rent paid through a governmental agency subsidy. Subsidized households, while typically low income, may extend to middle-income households in some high-cost markets, such as New York City;
- Military households, subject to frequency of relocation.

These differences can weigh heavily in determining a property's ability to attract specific renter market segments. The five-star resort serves a very different market than the down-and-outer motel. Apartments are distinguished similarly, but distinctions are often not clearly definitive without investigation. The Yardi® Matrix Context rating eliminates that requirement, designating property market positions as:

| Market Position | Improvements Ratings |
|-----------------|----------------------|
| Discretionary   | A+ / A               |
| High Mid-Range  | A- / B+              |
| Low Mid-Range   | B / B-               |
| Workforce       | C+/C/C-/D            |

The value in application of the Yardi® Matrix Context rating is that standardized data provides consistency; information is more meaningful because there is less uncertainty. The user can move faster and more efficiently, with more accurate end results.

The Yardi® Matrix Context rating is not intended as a final word concerning a property's status—either improvements or location. Rather, the result provides reasonable consistency for comparing one property with another through reference to a consistently applied standard.

To learn more about Yardi® Matrix and subscribing, please visit www.yardimatrix.com or call Ron Brock, Jr., at 480-663-1149 x2404.

# Fogelman drives deals with Yardi® Matrix



#### **DISCLAIMER**

Although every effort is made to ensure the accuracy, timeliness and completeness of the information provided in this publication, the information is provided "AS IS" and Yardi Matrix does not guarantee, warrant, represent or undertake that the information provided is correct, accurate, current or complete. Yardi Matrix is not liable for any loss, claim, or demand arising directly or indirectly from any use or reliance upon the information contained herein.

#### COPYRIGHT NOTICE

This document, publication and/or presentation (collectively, "document") is protected by copyright, trademark and other intellectual property laws. Use of this document is subject to the terms and conditions of Yardi Systems, Inc. dba Yardi Matrix's Terms of Use (http://www.yardimatrix.com/Terms) or other agreement including, but not limited to, restrictions on its use, copying, disclosure, distribution and decompilation. No part of this document may be disclosed or reproduced in any form by any means without the prior written authorization of Yardi Systems, Inc. This document may contain proprietary information about software and service processes, algorithms, and data models which is confidential and constitutes trade secrets. This document is intended for utilization solely in connection with Yardi Matrix publications and for no other purpose.

Yardi®, Yardi Systems, Inc., the Yardi Logo, Yardi Matrix, and the names of Yardi products and services are trademarks or registered trademarks of Yardi Systems, Inc. in the United States and may be protected as trademarks in other countries. All other product, service, or company names mentioned in this document are claimed as trademarks and trade names by their respective companies.

© 2019 Yardi Systems, Inc. All Rights Reserved.