

# **DART Light Rail's Effect on Taxable Property Valuations and Transit-Oriented Development**

*Prepared for*  
**Dallas Area Rapid Transit**

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## Executive Summary

This report updates our previous studies of the direct and indirect economic impacts of the DART Light Rail (LRT) system. Two specific topics are addressed in detail:

- 1) How has proximity to an LRT station affected taxable property values?  
And,
- 2) To what degree is DART rail serving as a catalyst for transit-oriented development (TOD)?

Our earlier research showed that properties near DART light rail stations recorded valuation increases about 25 percent greater than those in a control group of neighborhoods not served by DART rail between 1994 and 1998. Examining the 1997 to 2001 time period, and using a somewhat different methodology, we find that proximity to a DART station has continued to exert a positive influence on residential and office property valuations. Median values of residential properties increased 32.1 percent near the DART rail stations compared to 19.5 percent in the control group areas. Thus, residential properties near light rail stations on average increased in value 39 percent more than comparable properties not served by rail. For office buildings, the increase was 24.7 percent for the DART properties versus 11.5 percent for the non-DART properties, so that office buildings near DART Light Rail increased in value 53 percent more than comparable properties not near rail. Proximity to DART rail did not appear to have a significant differential impact on retail or industrial property valuations.

Visits and interviews with most suburban DART member cities, as well as several non-DART cities, revealed a keen interest in transit-oriented development, with the LRT

serving as the centerpiece in many instances. Business leaders, planners, and elected officials are committed to public transportation for three main reasons:

- 1) To spur development and redevelopment in their communities, especially their “old town” neighborhoods;
- 2) To provide an alternative to the automobile for commuters and visitors; and
- 3) To help the region improve its air quality and avoid possible sanctions by the Environmental Protection Agency.

Though master plans vary from suburb to suburb, each hopes to make the DART LRT an integral part of vibrant, pedestrian-friendly, multi-use developments. Several cite Mockingbird Station in Dallas as a model they wish to emulate. Others are planning for low-rise office and light industrial development around the rail stations, while several hope that DART will help make their revitalized downtowns “destinations” for visitors and conventioners.

Officials in the non-DART communities expressed a strong desire to buy into DART or a wider regional public transit system. All of these communities have matured beyond the “suburban bedroom” state and support sizeable local businesses as well as rapidly growing populations.

## **Section I**

### **The Positive Influence of the DART LRT on Adjacent Property Values**

#### Introduction

In what follows, we report the findings of our analysis of the impact of DART light rail service and stations on immediate-area property valuations. This assessment extends our previous analysis conducted for the 1994 to 1998 period, in which we found that a sample of properties around DART light rail stations saw their values rise faster than both overall valuations in Dallas County and a control group of properties. In our new study for the 1997 to 2001 time frame, we expand on our earlier work by taking a census of *all* properties located within a quarter-mile radius of the rail stations and comparing the increases in property valuations to a group of similar properties not located within the study area.

#### Description of examined properties

This analysis focuses on DART light rail stations located outside of the Dallas Central Business District. With the extensive use of tax increment financing funds to renovate properties and spur development in the central business district, we believe that measuring any unique impacts of DART rail would be nearly impossible in a statistically valid manner.

The geographic areas of focus -- our “study areas,” -- are defined by one-quarter mile radii centered on 23 DART stations located outside of the Dallas central business district (see Table 1). This includes some stations, such as Galatyn Park, that opened after 2001 tax roll data were available. The newer stations are included because their potential

impacts may already be reflected in market valuations of surrounding properties. While it is likely that any effect from the presence of DART rail stations on surrounding property values will extend beyond our arbitrary boundary, we believe the effect will diminish rapidly beyond the quarter-mile radius.

**Table 1**  
**DART Light Rail Stations Examined**

| Station Names               |              |                   |
|-----------------------------|--------------|-------------------|
| Arapaho Center              | Kiest        | Spring Valley     |
| Cedars                      | LBJ/Central  | Tyler Vernon      |
| Cityplace                   | LBJ/Skillman | VA Medical Center |
| 8 <sup>th</sup> and Corinth | Ledbetter    | Walnut Hill       |
| Forest Lane                 | Lovers Lane  | Westmoreland      |
| Galatyn Park                | Mockingbird  | White Rock        |
| Hampton                     | Morrell      | Zoo               |
| Illinois                    | Park Lane    |                   |

The key to identifying the unique effects of DART rail stations on property valuations is the careful selection of a group of “control” properties that share similar location and market characteristics. For example, DART rail stations are located at the intersection of significant thoroughfares. Therefore, our control group properties are located within a quarter-mile radius area at the next major intersection outside of the rail station area. In several cases, the rail station area and control group area are effectively contiguous. In other instances, the control group area is not contiguous but separated from the DART area by just a few hundred feet.

Our examination breaks down the properties into distinct market classes, including residential, office, retail and industrial. We have further separated residential properties into two categories: those with improvements and those that were unimproved (vacant) in 2001.

## Data analysis

Using data from the Dallas County Central Appraisal District, we calculated changes in taxable property values between 1997 and 2001. While some researchers have expressed concern about the reliability of appraisal district data on property valuations, we believe that any variance in taxable versus actual market value will be effectively controlled because of the very large number of properties examined. Differences in taxable valuations may be due to a variance in how individual property owners challenge taxable assessments. However, these average out when all properties are considered. Moreover, we have no reason to believe there is any difference in the average behavior of property owners in the study group versus the control group as it relates to challenging property value assessments.

The appraisal information was screened for obvious data entry errors, such as a large building with a taxable value of \$100. In addition, some properties were not included because of excessively high valuation changes over the four-year study period. These exclusions included only a few study and control group properties, totaling less than one percent of the total properties examined in this analysis.

In performing our analysis, we focused on changes in median property values. The median is the “middle” value where one-half of the properties are valued higher and one-half are valued lower. Examining the changes in median values keeps extremely high- or low-valued properties from exerting too large an influence on the value of the averages. For example, in studying the income characteristics of a local population, median incomes are considered to be a more accurate measure of well being than average income.

## Findings

Table 2 summarizes the results of the data analysis. The number of properties in each group is indicated by the “N=” notation.

**Table 2**  
**Changes in Median Property Valuations, 1997-2001**

| Control                                                   |           | DART      |
|-----------------------------------------------------------|-----------|-----------|
| <b>Office</b> (Control N = 121, DART N = 47)              |           |           |
| 1997                                                      | \$331,450 | \$519,240 |
| 2001                                                      | \$369,460 | \$647,730 |
| Total Change                                              | \$38,010  | \$128,490 |
| % Change                                                  | 11.5%     | 24.7%     |
| <b>Residential</b> (Control N = 4,393, DART N = 3,262)    |           |           |
| 1997                                                      | \$37,560  | \$35,605  |
| 2001                                                      | \$44,880  | \$47,025  |
| Total Change                                              | \$7,320   | \$11,420  |
| % Change                                                  | 19.5%     | 32.1%     |
| <b>Residential-vacant</b> (Control N = 169, DART N = 400) |           |           |
| 1997                                                      | \$3,000   | \$2,250   |
| 2001                                                      | \$3,000   | \$2,500   |
| Total Change                                              | \$0       | \$250     |
| % Change                                                  | 0.0%      | 11.1%     |
| <b>Retail</b> (Control N = 155, DART N = 111)             |           |           |
| 1997                                                      | \$230,000 | \$243,000 |
| 2001                                                      | \$300,000 | \$311,730 |
| Total Change                                              | \$70,000  | \$68,730  |
| % Change                                                  | 30.4%     | 28.3%     |
| <b>Industrial</b> (Control N = 158, DART N = 104)         |           |           |
| 1997                                                      | \$234,900 | \$221,180 |
| 2001                                                      | \$285,405 | \$250,000 |
| Total Change                                              | \$50,505  | \$28,820  |
| % Change                                                  | 21.5%     | 13.0%     |

Source: Dallas County Central Appraisal District, authors' calculations

The findings of the data analysis confirmed our expectation of higher market values for residential and office properties located in close proximity to a light rail

station. What's more, median values of residential and office properties increased more rapidly near the DART LRT stations than they did in the control group areas: 32.1 percent versus 19.5 percent in the case of residential and 24.7 percent versus 11.5 percent in the case of offices. These results suggest that DART rail is an amenity-enhancing service most keenly affecting the market values of properties where people live and where there are comparatively high concentrations of non-industrial jobs -- i.e., office buildings. Location near a DART rail station also appears to have a positive influence on the market value of vacant residential lots.<sup>1</sup>

Retail properties show no significant difference in the change in median values between outlets located near the rail stations and those in the control group. This may simply reflect the fact that retail growth during the boom years of 1997 to 2001 was fairly evenly dispersed across Dallas County. Still, retail properties within one-quarter mile of DART stations are quite competitive and should fare well in the future as the LRT expansion improves access to these venues.

Proximity to a DART LRT station does not appear to have a positive influence on industrial property valuations. In fact, the median valuation of industrial properties near DART is lower than in the control group and valuation increases have been smaller in recent years. This result is consistent with the findings by Landis et al (1995) in a study of five California transit rail systems.<sup>2</sup> It may be that the presence of LRT lines interferes with site ingress and egress for large commercial motor vehicles delivering raw materials

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<sup>1</sup> Note that the median value for the control group properties does not change. However, the average (mean) value of vacant-residential lots did rise by 5.1 percent for the non-station areas versus 10 percent for lots located near a rail station.

<sup>2</sup> Landis, J., Guhathakurta, S, and Zhang, M. (1995). "Rail Transit Investments, Real Estate Values, and Land Use Change: A Comparative Analysis of Five California Transit Systems," Institute of Urban and Regional Development, University of California at Berkeley.

and picking up finished goods at industrial facilities. Additionally, the characteristics of industrial sites, including low employment population density, high infrastructure requirements and high space requirements, are not compatible with the higher densities of population and land use associated with a light rail corridor. Thus, LRT tends to displace freight in a rail corridor, and it is to be expected that industrial properties would have no advantage from the arrival of light rail.

In sum, light rail appears to have its strongest positive influence where site access is improved for people, as exhibited by greater increases in office and residential valuations close to the LRT stations. Easy access to motor freight and heavy rail are more important factors for warehouse and manufacturing plant valuations.

### Conclusion

Rapid population and employment growth in north Texas, including Dallas County, marked the years 1997 to 2001. This was also a period characterized by a very strong property market. Nonetheless, ***proximity to a current or future DART LRT station appears to have had an additional positive impact on median valuations for residential and office classes of property.*** Importantly, these higher values translate into enhanced property tax revenues for DART member cities.

## **Section II**

### **Transit-Oriented Development in the Dallas Suburbs: The Influence of the DART LRT**

#### Introduction

To gain a better understanding of how communities in the Dallas area view transit-oriented development (TOD), we conducted a series of interviews with leaders in 15 different Dallas suburban communities, including some not currently members of DART. Participating cities were Allen, Carrollton, Cedar Hill, Desoto, Duncanville, Fairview, Farmers Branch, Garland, Grand Prairie, Irving, Lancaster, McKinney, Midlothian, Plano and Richardson. In particular, we wished to ascertain whether, and how, the advent of the light rail system (LRT) was being integrated into urban planning. Participants in the interviews included city managers, assistant city managers, traffic directors, city planners, town administrators, mayors, legislative representatives, Chamber of Commerce officers and business developers. (See Table 3 at the end of this section.)

#### Interviews with elected officials, planners, and developers

The majority of the interviews were conducted in personal meetings, with one community responding via telephone interview and two others responding via e-mail requests. While the interviews were free flowing in nature, a predetermined set of questions was employed to keep discussions focused on economic development revolving around the LRT system. The questions were:

- 1) How do you, as a government official, perceive DART Light Rail Transit (LRT) will affect your community? What kinds of commentary are you receiving from the community?

- 2) Are there differences in support for LRT and DART between private citizens and the business community?
- 3) Is the rail system influencing land use planning around the stations?
- 4) Is the DART LRT stimulating mixed-use property development?
- 5) Is the city using any fiscal incentives to stimulate private development of areas near light rail stations?

All respondents voiced positive comments regarding the LRT, and most cities are planning, or have already completed, mixed-use development around the stations. Not a single city relayed any negative commentary from its citizens regarding DART or the LRT. In all cases, the opposite was noted. Residents are eager and excited about having access to the LRT transit option.

Six of the non-DART cities we interviewed acknowledged that the LRT has become a driver for regional economic development and that they would like to somehow link up their communities with DART rail. Rapid growth in these cities has created increased congestion on existing transportation corridors, taxing the patience of both local residents and pass-through commuters. Residents of non-DART cities are also concerned with the environmental degradation that has accompanied growing traffic congestion. The non-DART interviewees recognized that the lack of public transit options may be a hindrance to future development, and several elected officials expressed an interest in trying to get Austin to “change the rules” to permit membership by means other than dedicating a full one percent sales tax.

#### The DART LRT as a stimulus to development and redevelopment

DART rail is not only an amenity for commuters but is fast becoming the preferred way to reach downtown Dallas for special events. Though initially regarded as

a novelty, DART has become more popular with both northern and southern suburbanites to attend downtown activities such as concerts, sporting events, the zoo, the circus and West End venues. The ease of parking and the comfort of riding the light rail trains have drawn thousands of cars off area highways during evenings and weekends.

Businesses, as well as public officials, are committed to TOD across the DART LRT service area. Sites for future LRT stations have become focal points for urban centers. Some cities are locating LRT stations in historic “old towns” in hopes of revitalizing these neighborhoods with homes and businesses. Suburban cities with multiple stations, including Richardson, Plano and Carrollton, have designated one of the stations as an “urban hub” for mixed-use development.

All of the DART cities we interviewed have hired outside consultants to assist with their TOD plans. The consultants have conducted land use studies and special use studies, and in some cases these reports have been integrated with the cities’ comprehensive plans. All of the consultant reports have recommended pedestrian-friendly urban centers, to help promote residential development and ancillary retail, while limiting the amount of vehicular surface parking to encourage rail use. For the most part, suburban “downtown living” consists of apartments, lofts, townhouses and condominiums. Some of these studies have also advocated low-rise office and light industrial development around the rail stations. Several cities hope the DART LRT will turn their newly revitalized urban centers into “destinations” that will attract residents from across the service area as well as visitors and conventioners.

City of Plano officials said that the DART LRT was not the primary driving force for redevelopment of their old downtown, but nonetheless felt that the impending light

rail station was a catalyst that allowed the city to assemble the necessary land area and implement a comprehensive plan. Once the station opens, Plano plans to market their Old Town venues to Dallas conventioners who would be able to board the train in downtown Dallas and arrive in Plano some 40 minutes later.

The City of Richardson is developing partnerships with local businesses to maximize use of its four LRT stations. It has also recently hired several consultants to recommend a comprehensive plan for revitalizing the community around its proposed downtown (Belt Line) LRT station. The Galatyn Park station has been a catalyst for multipurpose developments, including a performing arts center, a hotel, some retail, offices and apartments. The Arapaho Station, which until now has been a “park-and-ride” location, may eventually be the centerpiece of a multi-use development including residences, hotels, offices, cinemas and retail. Specifically, a recent consultant report recommends that the Arapaho station become an “entertainment” destination similar to Mockingbird Station. Since construction would occur on what is now the transit center’s parking lot, the consultant’s plan would also require DART to build a parking garage.

Historically, the automobile has driven development patterns in the City of Garland. Though efforts have been made in the past to stimulate destination retail in the central city, higher density development has not occurred. City officials are hopeful that the downtown LRT station will eventually stimulate adjacent retail and residential development, but so far no developers have shown interest. The Forest Lane station will serve an industrial employment area, and alternative access via DART may alleviate some of the existing traffic congestion.

The City of Irving anticipates the future LRT line will be the catalyst for stimulating development along the eastern edge of Las Colinas. The Las Colinas stations are planned for high-density residential units along with retail and commercial office space in an urban setting. A new civic center and hotel are also in the planning stages, to be integrated into the LRT. The University of Dallas station will make UD the first area university with direct DART LRT service. Eventually, the LRT will link Love Field and DFW Airport, at which time a speedy and comfortable alternative will exist to the growing traffic congestion around both airports.

The Cities of Farmers Branch and Carrollton are scheduled for LRT service in five to seven years. Farmers Branch will have one station, while Carrollton will have three. Farmers Branch is focused on using the rail station to help revitalize its historic downtown center by combining the features of pedestrian-friendly retail and residential. Parking facilities will be constructed to accommodate area commuters, and two tax increment-financing (TIF) districts have been created to spur infrastructure development.

Carrollton has three different visions for its stations, though together they support the Carrollton Renaissance Initiative. The Beltline/Old Town station will be surrounded by retail and residential buildings designed to reinforce the old downtown character of this neighborhood. The Trinity Mills station will blend the multi-modal aspects of a major highway system with LRT options. Mixed-use development is also anticipated. By contrast, the Frankford station is envisioned as a park-and-ride facility to accommodate Denton County commuters heading to other Dallas area destinations.

## Conclusions

As indicated above, many of the DART member cities recognize the logic of mixed-use development along the LRT corridors with emphasis on pedestrian-friendly retail/residential neighborhoods. Indeed, transit-oriented development will eventually create a more urban character to most Dallas-area suburbs. Mockingbird Station is probably the best current example of local TOD, and several suburbs hope to emulate the success of this project. Plano, in particular, has embraced this vision by partnering with the private sector to construct a transit village that already boasts occupancy rates in excess of 90 percent, even though rail service won't begin until December 2002. Though LRT service to the northwest is years into the future, Carrollton and Farmers Branch have embraced TOD and changed their zoning to ensure land around future LRT stations is developed to its highest and best use.

Acknowledging that mobility is perhaps the most serious challenge facing the Metroplex, officials in the non-DART communities we interviewed were candid about their desire to participate in a regional public transit system. Many of these communities have matured beyond the "suburban bedroom" stage and now support sizeable local businesses, as well as second and third generation residents. Some non-DART cities would probably join DART if an alternative to the one-cent sales tax could be found. Others would like to utilize existing freight lines for a commuter rail link-up with the DART LRT.

In sum, Dallas-area business leaders, planners and elected officials are committed to public transportation, both for mobility and developmental goals. Their host communities view the existing and soon-to-open DART LRT stations as tremendous

assets, and we detected little opposition or discontent with DART's current operations and future plans. What's more, non-DART cities want to be an integral part of the region's public transit future.

Importantly, the DART LRT is viewed not just as "rapid transit" but also as a shining example of how individual communities in the region can come together to help solve a region-wide problem -- in this case, mobility. It is widely held that over time, light rail can help the region develop a more cosmopolitan character similar to that found in the great international cities.

## **Section III**

### **DART and Commercial Real Estate**

In our 1999 report, we examined changes in commercial occupancy rates and rents for properties located close to the new DART stations. Though the rail system did not start operating until 1996, we hypothesized that occupancies and rental rates had probably risen in anticipation of the forthcoming rail service. The results of our analysis supported this hypothesis. During the 1994 to 1998 period, proximity to DART LRT stations was a plus for most classes of property, especially Class A and Class C office buildings. We also found impressive gains, in terms of higher occupancy and rental rates, for strip retail centers located near DART stations.

Because of deteriorating economic conditions in the Dallas area over the past two years, we did not conduct a comparable analysis in this update. As the unemployment rate has jumped from 2.5 to 7 percent over the last 20 months, and as thousands of layoffs have been announced by area businesses, office and retail vacancy rates have surged all over Dallas County while rental rates have dropped. Indeed, as of September 2002 office vacancy rates in Richardson's Telecom Corridor were as high as those in Dallas' central business district.

Still, we believe when the economic recovery picks up steam, offices and retail centers close to DART LRT stations will fill up more quickly than those not served by rail because these properties will have the greatest appeal to expanding and relocating businesses.