

LEWISVILLE 2025

# Supplemental Appendix G

## Market Assessment & Programming Concepts

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# MARKET ASSESSMENT AND PROGRAMMING CONCEPTS



## LEWISVILLE VISION 2025



Deep Roots. Broad Wings. Bright Future.

Prepared by:



Prepared for:  
City of Lewisville Texas  
March 2014

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ESRI Business Analyst / Base Maps	
2010 Census / 2011 5 year Estimate - ACS	
Catalyst Urban Development	



Source: DCTA



Source: City of Lewisville



Source: Tierney

## **Acknowledgments**

### **Mayor & Council**

Dean Ueckert - *City Mayor*  
Leroy Vaughn - *Mayor Pro Tem / Place 1*  
Neil Ferguson - *Place 2*  
TJ Gilmore - *Deputy Mayor Pro Tem / Place 3*  
Greg Tierney - *Place 4*  
Rudy Durham - *Place 5*

### **City Staff**

Claude King - *City Manager*  
Steve Bacchus - *Assistant City Manager*  
Donna Barron - *Assistant City Manager*  
Eric Ferris - *Director of Community Development*  
Nika Reineke - *Director of Economic Development and Planning*

### **Vision 2025 Committees**

#### *Connectivity Committee*

Derik Hayenga, Raymond Hernandez, Charles Emery, Jim Moutes, Carol Longacre, Ronald Aljoe, Alessandro Pine, Leanne Lowry, Robert McRedmond, Terry Castagno, Tony Bowen, William Shull

#### *Diversity Committee*

Amanda Ferguson, Tamela Bowie, Doug Hicks, Frank Vaughan, Bobbie Collier, Micahel Pope, Carolyn Richard, Debbie Fu, James Normal, Robert Ketenjian

#### *Growth Committee*

Brent Daniels, Sharon Ellis, Jim Davis, Raymond Daniels, John Paul Lewis, Joy Townsend, James Collier, Robert Solete, Asim Ali, David Gruenwald, Helen Munro, MaryEllen Miksa, Peggy Atkerson

#### *Resource Committee*

Roberty Troyer, Karen Locke, Jennifer Linder, Steve Southwell, Johnathan Hightower, Bill Peck, Amy Wells, Ronnia Cade, Mark Caputo, Phillip Ray, Lindsay Holladay, Toya Gant



## Executive Summary

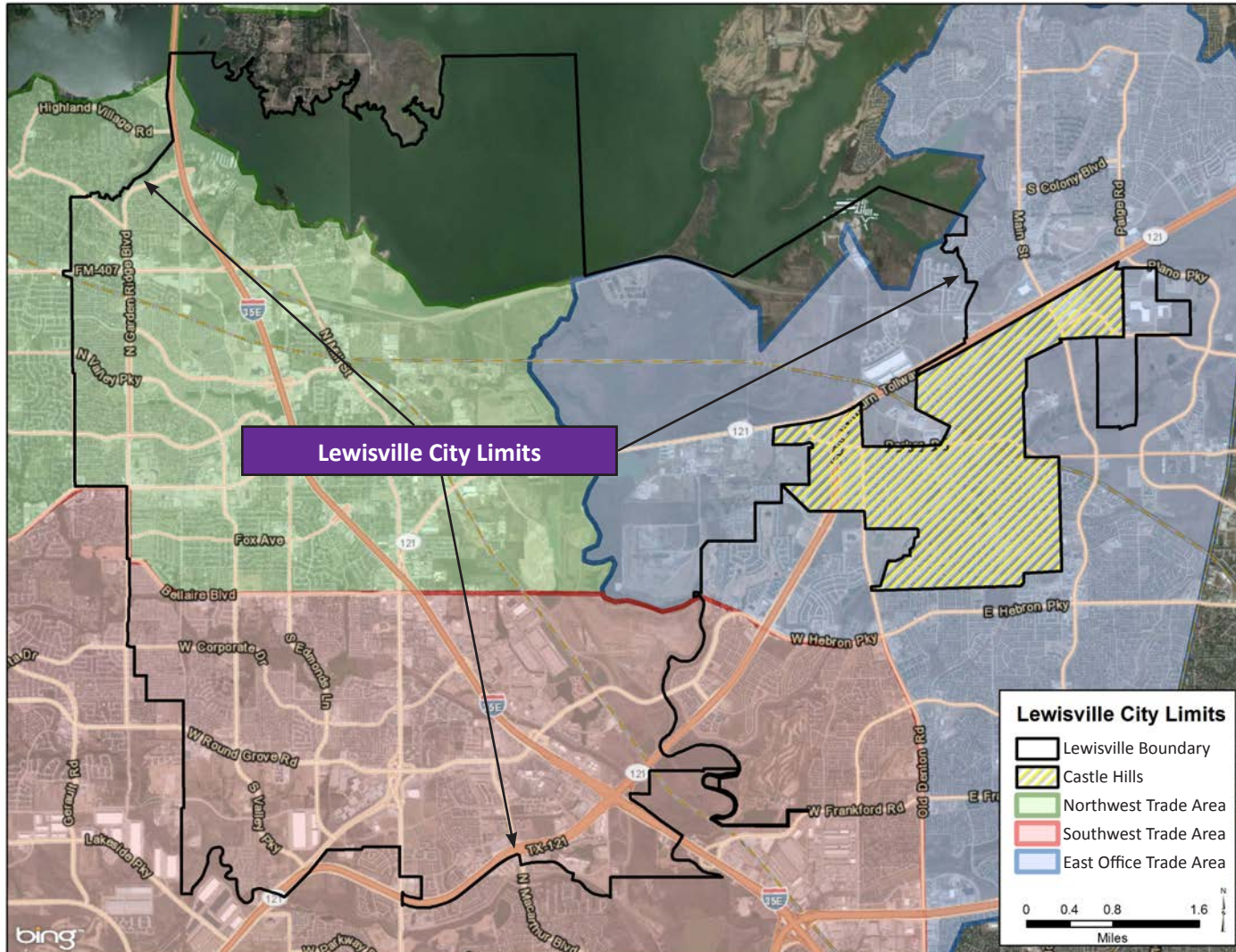
The following market assessment and programming analysis was performed to help guide the future land use, targeted redevelopment, and focus area concept planning as part of the City of Lewisville's Vision 2025 effort. It utilizes a market-based approach in which demographics and population forecasts are measured for customized trade areas centered on the northwest, southwest, and eastern sections of the City. Each trade area is based on a combination of factors including drive time, geographic features, and competing regional activity centers, thus creating differing trade area sizes. The forecasted growth for these trade areas has been measured and converted into potential development programming that may be possible through 2025 across employment, retail and residential land uses. It is important to note that this conceptual programming reflects the study of land use demand only, with the understanding that existing supply may be renovated and expanded to accommodate such potential as well. This conceptual development potential is summarized in the following pages.



## City Limits of Lewisville

The City of Lewisville municipal boundaries fall within the three measured trade areas as the commercial and residential areas within the City serve a larger population potential than the City alone. This boundary is shown as a bold black line on Map 1; and while the Castle Hills community is not within this boundary, it is within the City's ETJ and shown in hatched yellow lines to indicate this planned development area. This map includes transparent color shading that notes market trade areas used to analyze real estate development programming potential.

**Map 1: Lewisville City Limits**



# Lewisville Land Supply

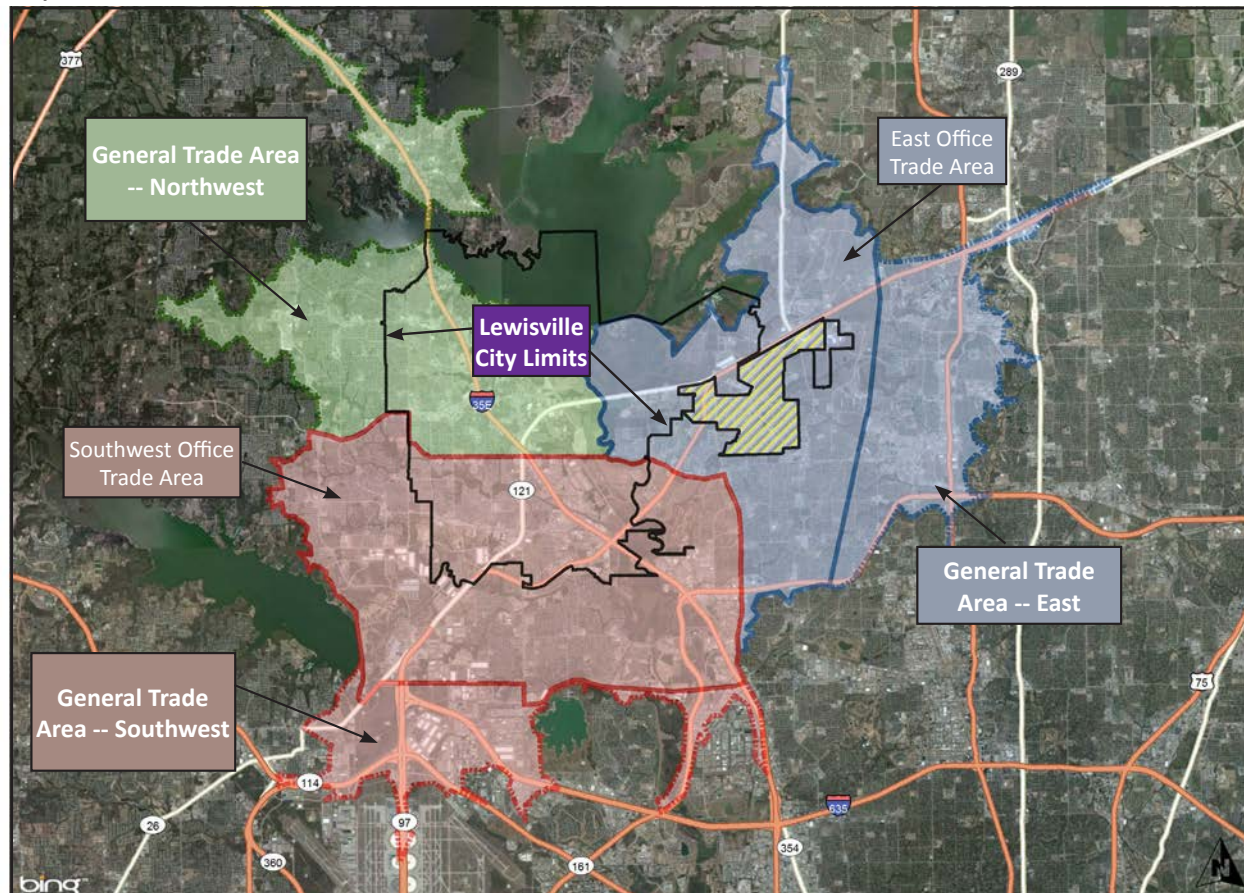




## Lewisville Trade Areas (for Planning Purposes)

As part of the Vision 2025 process, City Staff identified multiple opportunity sites for new investment in the City. To better define the potential for investment in these areas, the sites were grouped into three zones of the City each having separate trade areas; the Northwest, Southwest, and East. As mentioned, each of these trade areas goes beyond the City of Lewisville municipal boundary. The Northwest trade area incorporates areas north of the City along Interstate-35 including areas just west into the City of Flower Mound. The Southwest trade area incorporates areas southward toward DFW International Airport. It is broken down into a trade area for office uses and a general trade area for residential and retail uses due to the strength of the DFW office market area and related need to decrease the office trade area boundary. The East trade area incorporates areas primarily located between State Highway-121 and President George Bush Turnpike. It is broken down into a trade area for office uses and a general trade area for residential and retail uses due to the strength of the Legacy Park office market area and related need to decrease the office trade area boundary. These three trade areas set the demographic parameters and potential capture rates for the land use programming presented in this report for single family residential, mixed-use residential, office, retail uses, and redevelopment potential in existing single family, multifamily, and retail building stock.

**Map 2: Lewisville Trade Area**

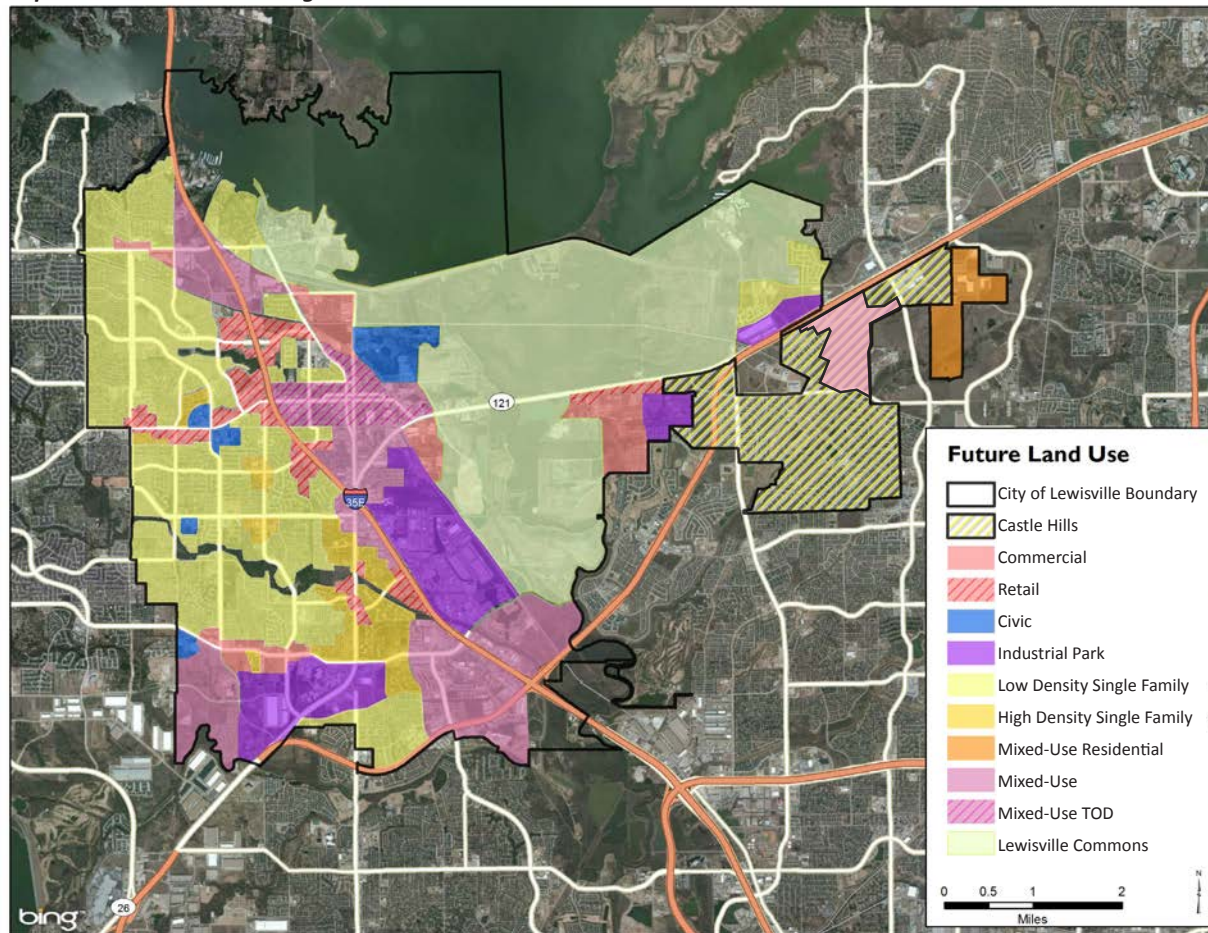


Note: Southwest and East office trade areas are smaller than the housing and retail trade areas due to existing supply of office in Legacy and around DFW airport

## Future Land Use Concept (for Planning Purposes)

The following Future Land Use Designation Map 3 was formulated over a series of community visioning workshops between stakeholders, city staff, and the City's consultants. The land use concepts shown on this map have been used as a framework to determine areas in which change is envisioned, thus becoming new areas having new supply potential for various land use categories. This future land use concept identifies major employment centers located in industrial parks and commercial areas along Interstate-35 and State Highway-121. Retail uses are focused around major intersections that benefit from high visibility and vehicle traffic. Mixed-use and transit-oriented development is emphasized within the core of Lewisville's City Center, around the DCTA A-Line "Old Town" station. Single family housing is concentrated west of Interstate-35, while higher density housing including mixed-use residential, abuts retail and commercial uses at major intersections. The large, light green "Lewisville Commons" land use category includes portions of the 100-year floodplain and Lewisville Lake Education Learning Area. Castle Hills is noted without overall specific future land use designations, as development within the ETJ will occur by project with approval from the City of Lewisville. The mixed-use area noted within Castle Hills are identified to allow for office, retail, and residential uses.

**Map 3: Future Land Use Designation**



## Summary of Lewisville Potential

The following reflects a summary of the land use programming concepts determined in this analysis. Table 1 summarizes the acreages of private development opportunity as measured in this programming concept. It combines both greenfield and redevelopment areas, as well as the greenfield development zones in Castle Hills. For these purposes, greenfield is defined as vacant land areas that are not encumbered by flood plain, dam breach zone, or public uses and reflects approximately 2,734 acres of opportunity. These totals represent potential opportunities derived from broad data analysis, and ultimately site-specific research and due diligence is required to determine project viability. Please refer to the following pages in this report for break-outs that detail greenfield development and redevelopment opportunities specifically.

*Table 1: Summary of Development Opportunity*

Future Land Use Categories	Trade Area Acreage			
	Northwest	Southwest	East	Total
<b>Commercial<sup>1</sup></b>	109 acres	91 acres	59 acres	<b>259 acres</b>
<b>Industrial Park</b>	161 acres	260 acres	164 acres	<b>585 acres</b>
<b>Low Density Single Family</b>	126 acres	81 acres	27 acres	<b>234 acres</b>
<b>High Density Single Family</b>	- acres	59 acres	- acres	<b>59 acres</b>
<b>Mixed-Use Residential<sup>2</sup></b>	150 acres	63 acres	10 acres	<b>223 acres</b>
<b>Mixed-Use</b>	430 acres	188 acres	- acres	<b>618 acres</b>
<b>Mixed-Use Transit Oriented Development</b>	429 acres	- acres	- acres	<b>429 acres</b>
<b>Lewisville Commons</b>	236 acres	- acres	7 acres	<b>243 acres</b>
<b>Retail</b>	70 acres	5 acres	10 acres	<b>85 acres</b>
<b>Total</b>	<b>1,711 acres</b>	<b>746 acres</b>	<b>277 acres</b>	<b>2,734 acres</b>

1 - In the East trade area, the acreage shown is less the 3,000,000 SF of office allowed in Castle Hills

2 - In the East trade area, the acreage shown includes 241 acres designated east of Castle Hills, less the allowed 7,616 units outlined on page 26 of this report



## Greenfield Development Opportunity Sites

Table 2 and Map 4 featured on this page identify all vacant parcels within the City of Lewisville that are not within the 100-year flood plain. These parcels have been categorized by trade area and by the uses shown on the Future Land Use concept, previously identified in Map 3. Because planned development in Castle Hills will affect overall supply and demand in Lewisville proper, the vacant land in the area in Castle Hills has been subtracted in these calculations to arrive at a net greenfield development opportunity site acreage. There is a range of greenfield development opportunity in Castle Hills, as well as the Northwest and Southwest trade areas.

### Analytical Steps:

After reconciling parcels within the 100-year flood plain, the Future Land Use categories defined at the Vision 2025 charrette were overlaid and appended to existing Denton County Appraisal District parcel data.

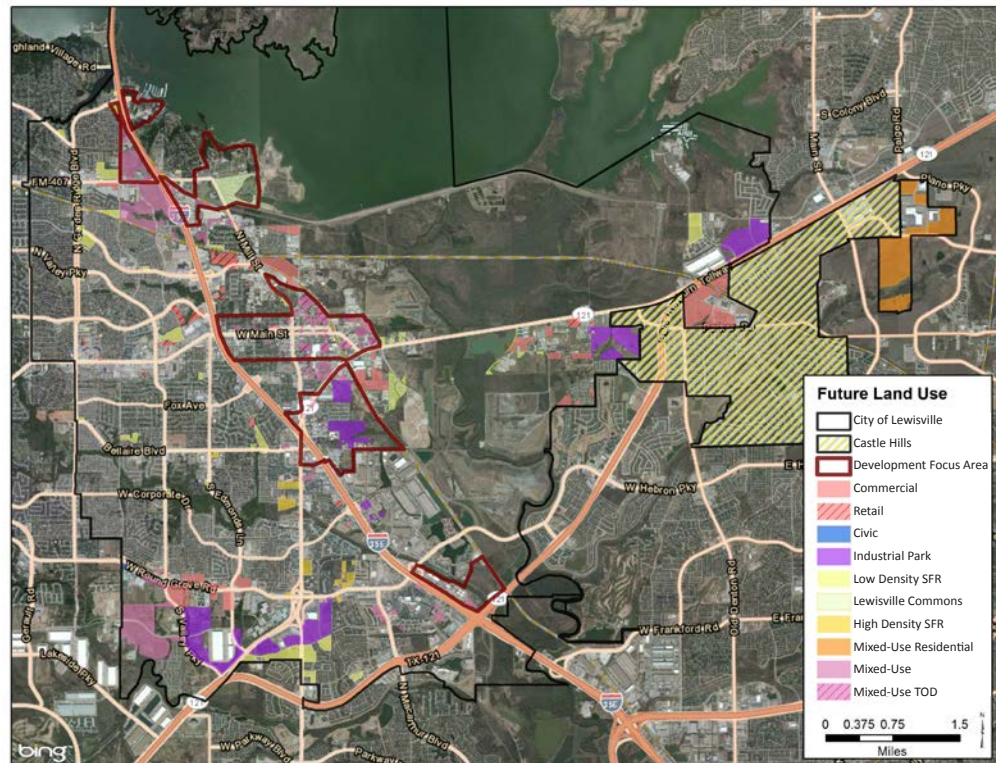
**Table 2: Greenfield Development Opportunity Sites**

Future Land Use Categories	Trade Area Acreage			
	Northwest	Southwest	East	Total
Commercial <sup>1</sup>	109 acres	91 acres	59 acres	259 acres
Industrial Park	79 acres	214 acres	164 acres	457 acres
Low Density Single Family	112 acres	81 acres	27 acres	220 acres
High Density Single Family	- acres	59 acres	- acres	59 acres
Mixed-Use Residential <sup>2</sup>	53 acres	63 acres	10 acres	126 acres
Mixed-Use	210 acres	125 acres	- acres	335 acres
Mixed-Use Transit Oriented Development	70 acres	- acres	- acres	70 acres
Lewisville Commons	38 acres	- acres	7 acres	45 acres
Retail	70 acres	5 acres	10 acres	85 acres
<b>Total</b>	<b>741 acres</b>	<b>637 acres</b>	<b>277 acres</b>	<b>1,656 acres</b>

1 - In the East trade area, the Commercial acreage shown is less the 3,000,000 SF of office allowed in Castle Hills

2 - In the East trade area, the acreage shown includes 241 acres designated east of Castle Hills, less the allowed 7,616 units outlined on page 26 of this report

**Map 4: Greenfield Opportunity by Future Land Use Concept**





## Focus Area Redevelopment

A range of areas within the City limits were highlighted in the visioning process as needing new investment. These development districts are identified as Focus Areas and shown on Map 5. Table 3 identifies all (non-vacant) parcels within a focus area that have been prioritized for redevelopment efforts, exclusive of major employment uses. This analysis has identified the following programming opportunities for each Focus Area:

### Northern Gateway / Lake District

- 14 acres of Low Density Single Family
- 143 acres of Lewisville Commons
- 81 acres of Mixed-Use

### Old Town “Main & Mill” District

- 36 acres of Mixed-Use Residential
- 359 acres of Mixed-Use Transit Oriented Development

### Business 121 / Interstate-35 Intersection District

- 128 acres of Industrial Park
- 56 acres of Mixed-Use Residential
- 110 acres of Mixed-Use

### Southern Gateway District

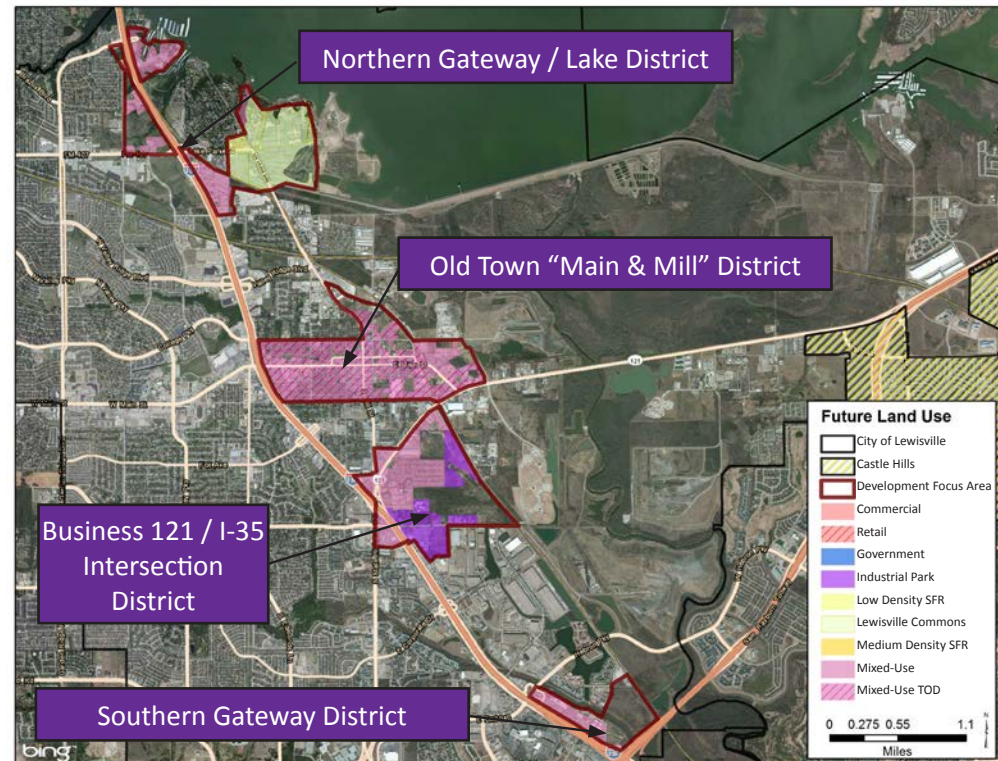
- 46 acres of Mixed Use

Note: These acreages identify potential opportunity only. Actual project viability should be based on detailed underwriting performed by investors and influenced by area comparable rents/lease rates, financing marketplace, and City policy.

**Table 3: Redevelopment Opportunity by Future Land Use Concept**

Future Land Use Categories	Trade Area Acreage			
	Northwest	Southwest	East	Total
Commercial	- acres	- acres	- acres	- acres
Industrial Park	82 acres	46 acres	- acres	<b>128</b> acres
Low Density Single Family	14 acres	- acres	- acres	<b>14</b> acres
High Density Single Family	- acres	- acres	- acres	- acres
Mixed-Use Residential	97 acres	- acres	- acres	<b>97</b> acres
Mixed-Use	220 acres	63 acres	- acres	<b>283</b> acres
Mixed-Use Transit Oriented Development	359 acres	- acres	- acres	<b>359</b> acres
Lewisville Commons	198 acres	- acres	- acres	<b>198</b> acres
Retail	- acres	- acres	- acres	- acres
<b>Total</b>	<b>970 acres</b>	<b>109 acres</b>	<b>- acres</b>	<b>1,079 acres</b>

**Map 5: Focus Areas by Future Land Use Concept**



# Programming & Demand Analysis



## Office Market Indicators

Overall trends for the DFW marketplace indicate favorable conditions for office development. According to Delta Associates, an industry leader in commercial real estate research, the Dallas / Fort Worth market is in an office expansion phase. The Denton / Lewisville submarket reflects a vacancy of 13.1%, down from 19.4% in 2010. With Dallas total vacancy at 16.8% (17.4% including sublet space), the Lewisville submarket is performing stonger than the overall office market.

**Table 4: Office Market Indicators**

SUMMARY OF OFFICE MARKET INDICATORS - ALL SPACE													
Dallas   2010 Through 1st Quarter 2013													
Submarket	March 2013			Direct Vacancy Rate At End Of:				March 2013		Net Absorption (SF) <sup>2/</sup>			
	Total Bldgs	Total Rentable SF All Bldgs. <sup>1/</sup>	Total Vacant SF All Bldgs.					Vacancy Rate w/ Sublet	SF Under Constr. or Renovation				
	2010	2011	2012	1st Q 2013	2010	2011	2012	1st Q 2013					
Dallas CBD	106	36,814,169	10,033,926	24.2%	26.1%	26.2%	26.4%	27.3%	-	(437,000)	(461,000)	308,000	(73,000)
Uptown/Turtle Creek	92	11,715,327	1,293,858	18.0%	15.4%	11.2%	10.8%	11.0%	-	(83,000)	395,000	596,000	26,000
White Rock	79	4,623,430	460,002	8.1%	11.3%	9.9%	9.9%	9.9%	-	120,000	(14,000)	47,000	-
Central Expressway	127	14,745,314	2,315,820	13.8%	13.9%	14.8%	15.5%	15.7%	-	193,000	(47,000)	(111,000)	(65,000)
Preston Center	56	5,011,998	326,170	12.8%	10.3%	6.5%	6.4%	6.5%	85,000	(137,000)	168,000	195,000	1,000
Stemmons Freeway	149	18,528,709	3,501,659	21.9%	20.5%	18.0%	18.1%	18.9%	-	(38,000)	(71,000)	118,000	(24,000)
South Irving	37	2,056,134	159,742	7.5%	7.1%	7.5%	7.8%	7.8%	-	96,000	10,000	(5,000)	(6,000)
Las Colinas/Urban Center	56	9,336,515	2,039,313	26.0%	23.6%	22.2%	21.3%	21.8%	-	(46,000)	250,000	112,000	76,000
Office Center/LBJ Extension	129	15,685,203	1,944,325	14.5%	13.6%	11.7%	11.2%	12.4%	-	36,000	143,000	(58,000)	90,000
DFW Freeport/Coppell	103	10,488,159	1,725,063	17.9%	16.2%	18.6%	15.2%	16.4%	-	24,000	230,000	(343,000)	361,000
West LBJ Freeway	50	5,346,461	1,433,703	21.1%	20.6%	25.0%	26.2%	26.8%	-	(18,000)	38,000	(178,000)	(44,000)
Denton/Lewisville	157	8,127,402	1,115,646	19.4%	15.1%	12.7%	13.1%	13.7%	-	231,000	377,000	263,000	(25,000)
Frisco/The Colony	54	4,018,106	294,614	14.9%	11.5%	6.6%	6.9%	7.3%	-	252,000	136,000	258,000	(11,000)
Allen/McKinney	72	5,320,006	479,516	16.2%	13.6%	9.6%	8.8%	9.0%	70,514	129,000	194,000	337,000	41,000
Upper Tollway/West Plano	179	21,162,438	2,024,575	12.8%	7.7%	7.4%	8.6%	9.6%	625,794	425,000	1,254,000	320,000	(172,000)
Plano	108	8,288,843	1,084,928	16.8%	13.4%	13.0%	13.1%	13.1%	48,702	(54,000)	229,000	32,000	21,000
Richardson	160	16,608,751	3,310,601	25.7%	23.1%	21.2%	19.8%	19.9%	-	(757,000)	405,000	311,000	234,000
North Dallas Tollway	213	21,831,150	4,131,901	21.7%	20.5%	18.5%	18.6%	18.9%	80,000	(124,000)	303,000	743,000	(37,000)
East LBJ Freeway	128	17,984,667	4,441,590	22.5%	22.7%	23.9%	24.6%	24.7%	-	(51,000)	151,000	(64,000)	(44,000)
Garland	60	2,370,364	368,413	13.1%	12.7%	14.7%	15.4%	15.5%	-	(40,000)	10,000	(40,000)	(16,000)
Southeast Dallas	22	833,899	109,685	6.6%	6.4%	14.0%	13.2%	13.2%	49,280	(10,000)	2,000	(63,000)	7,000
Mesquite/Rockwall	41	1,296,426	156,093	11.2%	8.0%	7.7%	11.4%	12.0%	30,000	54,000	34,000	(6,000)	(49,000)
Southwest Dallas	67	3,098,908	396,577	11.4%	12.9%	11.8%	12.7%	12.8%	-	16,000	(34,000)	55,000	(27,000)
Grand Prairie	36	3,420,842	57,385	5.2%	6.6%	1.4%	1.7%	1.7%	-	(53,000)	(53,000)	226,000	(10,000)
<b>TOTAL - Dallas Suburbs</b>	<b>2,175</b>	<b>211,899,052</b>	<b>33,171,178</b>	<b>18.0%</b>	<b>16.3%</b>	<b>15.2%</b>	<b>15.2%</b>	<b>15.7%</b>	<b>989,290</b>	<b>165,000</b>	<b>4,110,000</b>	<b>2,745,000</b>	<b>327,000</b>
<b>TOTAL - Dallas</b>	<b>2,281</b>	<b>248,713,221</b>	<b>43,205,104</b>	<b>18.9%</b>	<b>17.8%</b>	<b>16.8%</b>	<b>16.8%</b>	<b>17.4%</b>	<b>989,290</b>	<b>(272,000)</b>	<b>3,649,000</b>	<b>3,053,000</b>	<b>254,000</b>
<b>Vacancy Rate with Sublet Space</b>				<b>19.7%</b>	<b>18.4%</b>	<b>17.4%</b>	<b>17.4%</b>						

Source: Delta Associates

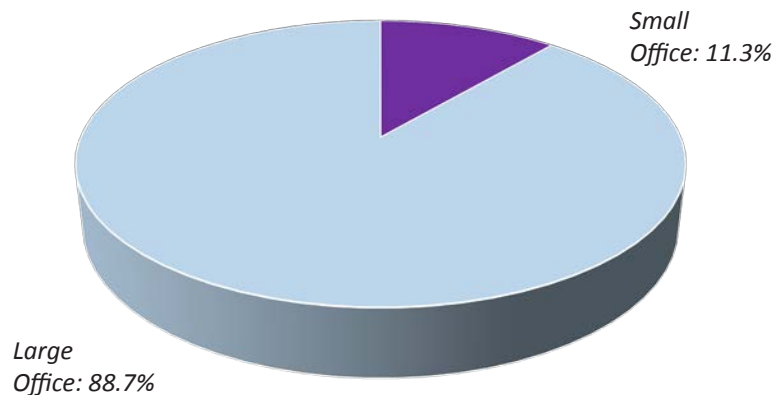
## Employment Factors

Traditional office development is directly related to “white collar” job growth. North Central Texas Council of Government (NCTCOG) data indicates the 10 year potential for 6,900 to 14,600 additional white collar jobs in each office trade area, as defined on Map 1: Lewisville Trade Area. In the case of the Southwest and East trade areas, office trade area boundaries are smaller than the overall trade area to reflect a more accurate office market area for Lewisville that does not include DFW International Airport or Plano Legacy Town Center markets.

White collar jobs, as highlighted in Table 5: Lewisville Employment by the Numbers, make up over 44% of the work force.

The type of office space reflected in Graph 1: Small Office to Traditional Office Proportion was determined by the market breakdown of traditional large office (10+ employees per business) and small business office (1-9 employees). Within Lewisville-area zip codes, traditional office establishments make up 88.7% of the white collar marketplace and small business office establishments make up 11.3%. Small office uses are best suited within the Old Town focus area.

**Graph 1: Small Office to Large Office Proportion**



**Table 5: Lewisville Employment by the Numbers**

Employment Industries	Total
Agriculture, forestry, fishing and hunting, and mining	167
Construction	3,176
Manufacturing	4,576
Wholesale trade	2,123
Retail trade	7,197
Transportation and warehousing, and utilities	1,561
Information	1,284
Finance, insurance, and real estate	5,540
Professional, scientific, management, and administrative	5,319
Educational, and health care and social assistance	7,307
Public administration	696
Arts, entertainment, recreation, accommodation and food	3,998
Other services (except public administration)	2,516
Armed forces	130
<b>Total</b>	<b>45,590</b>
<b>White Collar Jobs</b>	<b>20,146</b>
<b>White Collar Percentage</b>	<b>44.2%</b>

Note: 2011 ACS 5 yr Estimates based on Work From Place Employment Statistics

**Table 6: Lewisville Trade Area Expected Growth**

Trade Areas	NCTCOG 2013 Employment	NCTCOG 2023 Employment	Anticipated Job Growth	White Collar Jobs
Northwest	32,468	40,136	7,668	3,389
Southwest	83,731	98,718	14,987	6,624
East	23,254	30,361	7,107	3,141



## Northwest Trade Area Office Programming

Office land use analysis for each trade area is broken down into three categories: supply, demand, and programming. The built supply factors estimate the number of white collar employees that should be absorbed before new construction. Prototypically, new office space may be constructed when there is over a 90% occupancy factor within the submarket (if lease rates and interest from the finance market justify new development).

In the Northwest trade area, based on area vacancy statistics, 637 employees may still be absorbed into existing supply. This leaves the potential for an additional 3,389 employees over the 10 year study period, requiring approximately 616,944 SF of total office space if market and financing variables can accommodate such potential. Should such development occur, it would likely happen in higher visibility areas with regional access along I-35. Due to the visibility and access of such sites, a high capture rate (25% and 50% respectively) has been applied to the programming forecast that may yield approximately 7.65 acres of potential development in the Northwest trade area. Roughly a quarter of this demand is expected in small office formatting.

Map 6: Northwest Office Trade Area

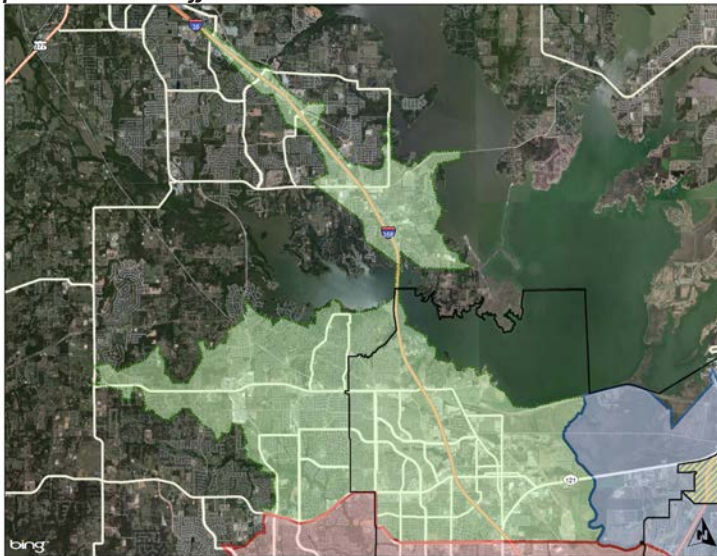


Table 7: Northwest Office Analysis

Northwest Trade Area Office Supply of Jobs	
<b>2013 Built Office Supply Factors</b>	
Total Existing Employees in Trade Area	32,468 employees
Existing White Collar Employees in Trade Area (46.1%) <sup>1</sup>	14,861 employees
Estimated Occupied Office Space (Using 220 sf / employee)	3,269,333 SF
2013 March Delta Transwestern Vacancy Report <sup>2</sup>	13.7% vacancy
Total Office Space	3,788,335 SF
Absorption Required to Reach 90% Occupancy	140,168 SF
Additional White Collar Employees Required to fill 90% Occupancy	637 employees
<b>Northwest Trade Area Office Demand</b>	
NCTCOG Forecasted Total Job Growth (to 2023)	7,668 employees
NCTCOG Forecasted White Collar Job Growth (to 2023)	3,389 employees
<b>I. Potential Job Growth - Large Office</b>	
Potential Large Office Job Growth (88.7%)	3,006 employees
Post-Absorption Potential in New Large Office Space	2,369 employees
Trade Area Large Office Potential (220 SF per employee)	521,199 SF
Percent of Total Captured in New Development	25 %
Lewisville Northwest Large Office SF Programming	130,300 SF
<b>II. Potential Job Growth - Small Office</b>	
Potential Small Office Job Growth (11.3%)	383 employees
Trade Area Small Office Potential (250 SF / employee)	95,750 SF
Percent of Total Captured in New Development	50 %
Lewisville Northwest Small Office SF Programming	47,875 SF
<b>Total Combined Large &amp; Small Tenant 10 Year Office Programming</b>	<b>178,175 SF</b>
<b>Land Required for 4-Story +/- 100,000 SF Office Buildings<sup>3</sup></b>	<b>7.65 acres</b>

1 - White Collar Percentage taken from City of Lewisville

2 - Vacancy Report includes percentages from Denton/Lewisville Area Report from Delta

3 - Calculated at 2 standard office buildings, surface parked at 4.5 spaces per 1,000 SF with 15% of lot landscaped

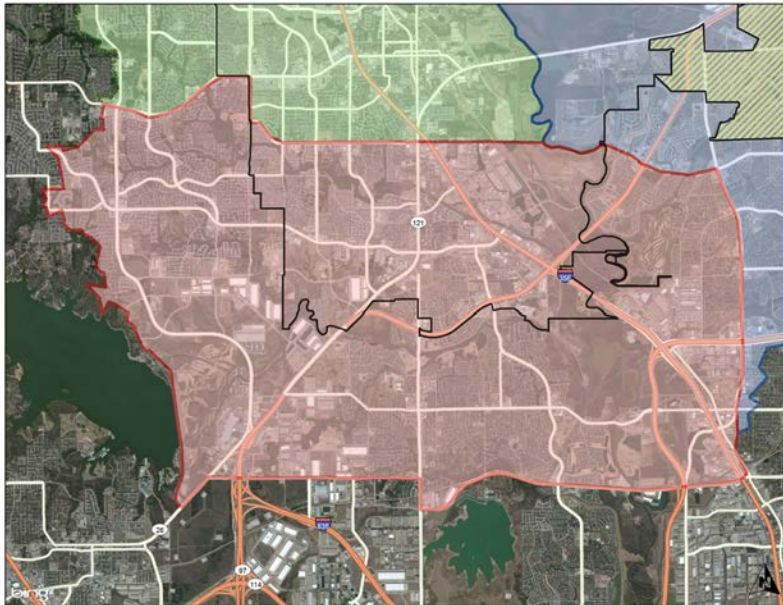
## Southwest Trade Area Office Programming

The Southwest office trade area is smaller than the sector's retail and residential trade areas. This smaller area was defined to account for the traditional office uses that would develop around DFW International Airport.

Existing office supply in the Southwest is expected to absorb an additional 1,643 employees. 10 year projections indicate an additional 6,624 white collar employees requiring over 1 million SF of total office space.

Employment located outside of the DFW International Airport market would likely locate around I-35, SH- 121, and major thoroughfare crossings. 10 year programming relates to the projected capture (25% and 50% respectively) and equates to 13.70 acres of standard office development. With the potential captured demand estimated at roughly 100,000 SF of small office space, this development should preferably locate in a redevelopment focus area identified on page 8.

**Map 7: Southwest Office Trade Area**



**Table 8: Southwest Office Analysis**

<b>Southwest Trade Area Office Supply of Jobs</b>	
<b>2013 Built Office Supply Factors</b>	
Total Existing Employees in Trade Area	83,731 employees
Existing White Collar Employees in Trade Area (46.1%) <sup>1</sup>	38,324 employees
Estimated Occupied Office Space (Using 220 sf / employee)	8,431,220 SF
2013 March Delta Transwestern Vacancy Report <sup>2</sup>	13.7% vacancy
Total Office Space	9,769,664 SF
Absorption Required to Reach 90% Occupancy	361,478 SF
Additional White Collar Employees Required to fill 90% Occupancy	1,643 employees
<b>Southwest Trade Area Office Demand</b>	
NCTCOG Forecasted Total Job Growth (to 2023)	14,987 employees
NCTCOG Forecasted White Collar Job Growth (to 2023)	6,624 employees
<b>I. Potential Job Growth - Large Office</b>	
Potential Large Office Job Growth (88.7%)	5,876 employees
Post-Absorption Potential in New Large Office Space	4,233 employees
Trade Area Large Office Potential (220 SF per employee)	931,260 SF
Percent of Total Captured in New Development	25 %
Lewisville Southwest Large Office SF Programming	232,815 SF
<b>II. Potential Job Growth - Small Office</b>	
Potential Small Office Job Growth (11.3%)	749 employees
Trade Area Small Office Potential (250 SF / employee)	187,139 SF
Percent of Total Captured in New Development	50 %
Lewisville Southwest Small Office SF Programming	93,570 SF
<b>Total Combined Large &amp; Small Tenant 10 Year Office Programming</b>	<b>326,385 SF</b>
<b>Land Required for 4-Story +/- 100,000 SF Office Buildings<sup>3</sup></b>	<b>13.70 acres</b>

1 - White Collar Percentage taken from City of Lewisville

2 - Vacancy Report includes percentages from Denton/Lewisville Area Report from Delta

3 - Calculated at 3 standard office buildings, surface parked at 4.5 spaces per 1,000 SF with 15% of lot landscaped

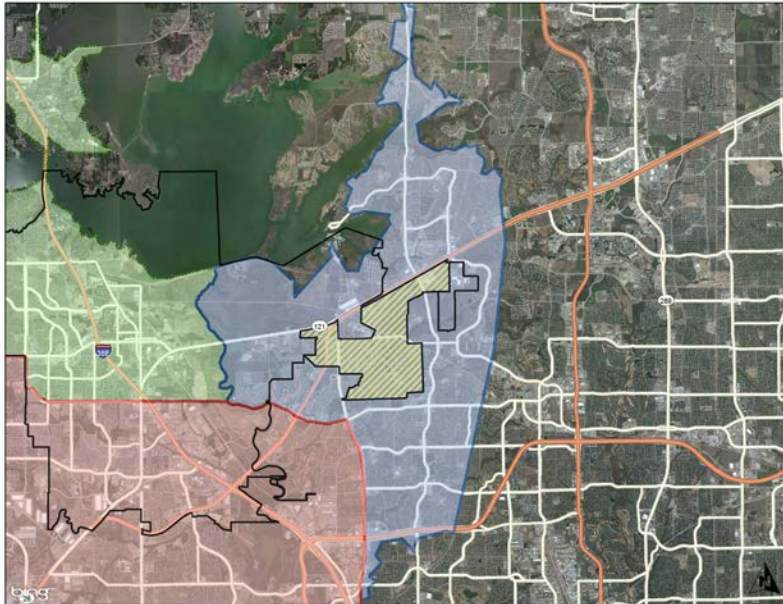
## East Trade Area Office Programming

The East office trade area, like the Southwest office trade area, is smaller than the overall sector because of the strong markets in Plano business parks and Legacy Town Center. Existing East trade area office product can absorb an additional 456 employees. 10 year projections indicate 3,141 white collar employees added, requiring a total of just over 600,000 SF of combined large and small office space (25% and 50% of that total captured, respectively).

New office construction would likely locate around SH-121, within both the primary City of Lewisville boundary and Lewisville's ETJ Castle Hills. 10 year office programming potential sits at 7.41 acres for the East trade area, however the development allowed by the City in Castle Hills far exceeds this amount, indicated by -113.36 acres at the base of the table.

The Castle Hills master plan includes 3,000,000 SF of office space, with over 1,000,000 SF expected in the proposed Bridges at the Realm.

**Map 8: East Office Trade Area**



**Table 9: East Trade Area Office Analysis**

East Trade Area Office Supply of Jobs	
<b>2013 Built Office Supply Factors</b>	
Total Existing Employees in Trade Area	23,254 employees
Existing White Collar Employees in Trade Area (46.1%) <sup>1</sup>	10,643 employees
Estimated Occupied Office Space (Using 220 sf / employee)	2,341,504 SF
2013 March Delta Transwestern Vacancy Report <sup>2</sup>	13.7% vacancy
Total Office Space	2,713,215 SF
Absorption Required to Reach 90% Occupancy	100,389 SF
Additional White Collar Employees Required to fill 90% Occupancy	456 employees
<b>East Trade Area Office Demand</b>	
NCTCOG Forecasted Total Job Growth (to 2023)	7,107 employees
NCTCOG Forecasted White Collar Job Growth (to 2023)	3,141 employees
<b>I. Potential Job Growth - Large Office</b>	
Potential Large Office Job Growth (88.7%)	2,786 employees
Post-Absorption Potential in New Large Office Space	2,330 employees
Trade Area Large Office Potential (220 SF per employee)	512,619 SF
Percent of Total Captured in New Development	25 %
Lewisville East Large Office SF Programming	128,155 SF
<b>II. Potential Job Growth - Small Office</b>	
Potential Small Office Job Growth (11.3%)	355 employees
Trade Area Small Office Potential (250 SF / employee)	88,744 SF
Percent of Total Captured in New Development	50 %
Lewisville East Small Office SF Programming	44,372 SF
<b>Total Combined Large &amp; Small Tenant 10 Year Office Programming</b>	<b>172,527 SF</b>
<b>Castle Hills Office Space Allowance</b>	<b>3,000,000 SF</b>
<b>Land Required for 4-Story +/- 100,000 SF Office Buildings<sup>3</sup></b>	<b>120.77 acres</b>
<b>Land Required for 4-Story +/- 100,000 SF Office Buildings<sup>4</sup></b>	<b>-113 acres</b>

1 - White Collar Percentage taken from City of Lewisville

2 - Vacancy Report includes percentages from Denton/Lewisville Area Report from Delta

3 - Calculated at 30 standard office buildings, surface parked at 4.5 spaces per 1,000 SF with 15% of lot landscaped

4 - Calculated w/ demand for 2 standard office buildings, surface parked at 4.5 spaces per 1,000 SF w/ 15% of lot landscaped



## Office Programming Summary

The following Table 10 compares Future Land Use opportunities for office with the anticipated demand in each trade area, by acre. “Greenfield” development refers to projects that may occur on vacant parcels, and “Redevelopment” opportunities refer to repositioning existing assets within the focus areas. The success of redevelopment opportunities is predicated on the viability of specific projects. Over a 10 year period, Catalyst estimates there is enough development opportunity within the commercial and mixed-use Future Land Use categories to satisfy office demand. For comparison purposes, the supply acreage was converted to square feet (SF) by utilizing a 0.25 floor-area-ratio (FAR).

**Table 10: Office Market Summary by Trade Area**

Lewisville Office Future Land Use Opportunity				
	Northwest	Southwest	East	Total
<b>Greenfield</b>				
Commercial - Greenfield	109 acres	91 acres	59 acres	259 acres
Mixed-Use - Greenfield	210 acres	125 acres	- acres	335 acres
Mixed-Use Transit Oriented Development - Greenfield	70 acres	- acres	- acres	70 acres
<b>Greenfield Opportunity</b>	<b>389 acres</b>	<b>216 acres</b>	<b>59 acres</b>	<b>664 acres</b>
<b>Redevelopment</b>				
Commercial - Redevelopment	- acres	- acres	- acres	- acres
Mixed-Use - Redevelopment	220 acres	63 acres	- acres	282 acres
Mixed-Use Transit Oriented - Redevelopment	359 acres	- acres	- acres	359 acres
<b>Redevelopment Opportunity</b>	<b>579 acres</b>	<b>63 acres</b>	<b>- acres</b>	<b>642 acres</b>
<b>Total Office Future Land Use Opportunity</b>	<b>968 acres</b>	<b>279 acres</b>	<b>59 acres</b>	<b>1,306 acres</b>
<b>Total Office SF Opportunity (0.25 FAR)</b>	<b>10,541,695 SF</b>	<b>3,034,534 SF</b>	<b>642,510 SF</b>	<b>14,218,739 SF</b>
Lewisville Trade Area 10 Year Demand - Anticipated Office Programming				
	Northwest	Southwest	East	Total
Large Office Demand	130,300 SF	232,815 SF	128,155 SF	491,270 SF
Small Office Demand	47,875 SF	93,570 SF	44,372 SF	185,817 SF
<b>Anticipated Total Office Demand</b>	<b>178,175 SF</b>	<b>326,385 SF</b>	<b>172,527 SF</b>	<b>677,087 SF</b>
<b>Land Required for 4-Story +/- 100,000 SF Office Buildings<sup>1</sup></b>	<b>7.65 acres</b>	<b>13.70 acres</b>	<b>-113 acres</b>	<b>-91.65 acres</b>
<b>Projected Development Resulting from Demand</b>	<b>7.65 acres</b>	<b>13.70 acres</b>	<b>7.41 acres</b>	<b>28.76 acres</b>

1 - Anticipated programming in the East trade area is 7.41 acres, less the acreage expected from the office development allowed in Castle Hills



## Retail Programming Potential

A thorough retail analysis is being performed by Catalyst Commercial and should be looked to for specific retail opportunities and economic development strategy. For the purposes of measuring the programming potential associated with the visioning process, a retail programming analysis has been performed based on the more targeted trade areas defined in this study. A retail sales leakage report has been calculated that identifies a person's retail dollars travelling outside that individual's primary trade area as a quantitative measure of the potential opportunity being lost to competing areas. The specific retail activities of interest are detailed in the Appendix, which includes a total retail store and acreage breakdown. In the Northwest and Southwest trade areas, there appears enough land designated for retail to absorb demand through both greenfield development and renovation of existing retail centers. In the East trade area, there appears to be more demand for retail than available supply. Please refer to the Appendix for comprehensive retail leakage reports.

**Table 11: Anticipated Ten Year Retail Demand**

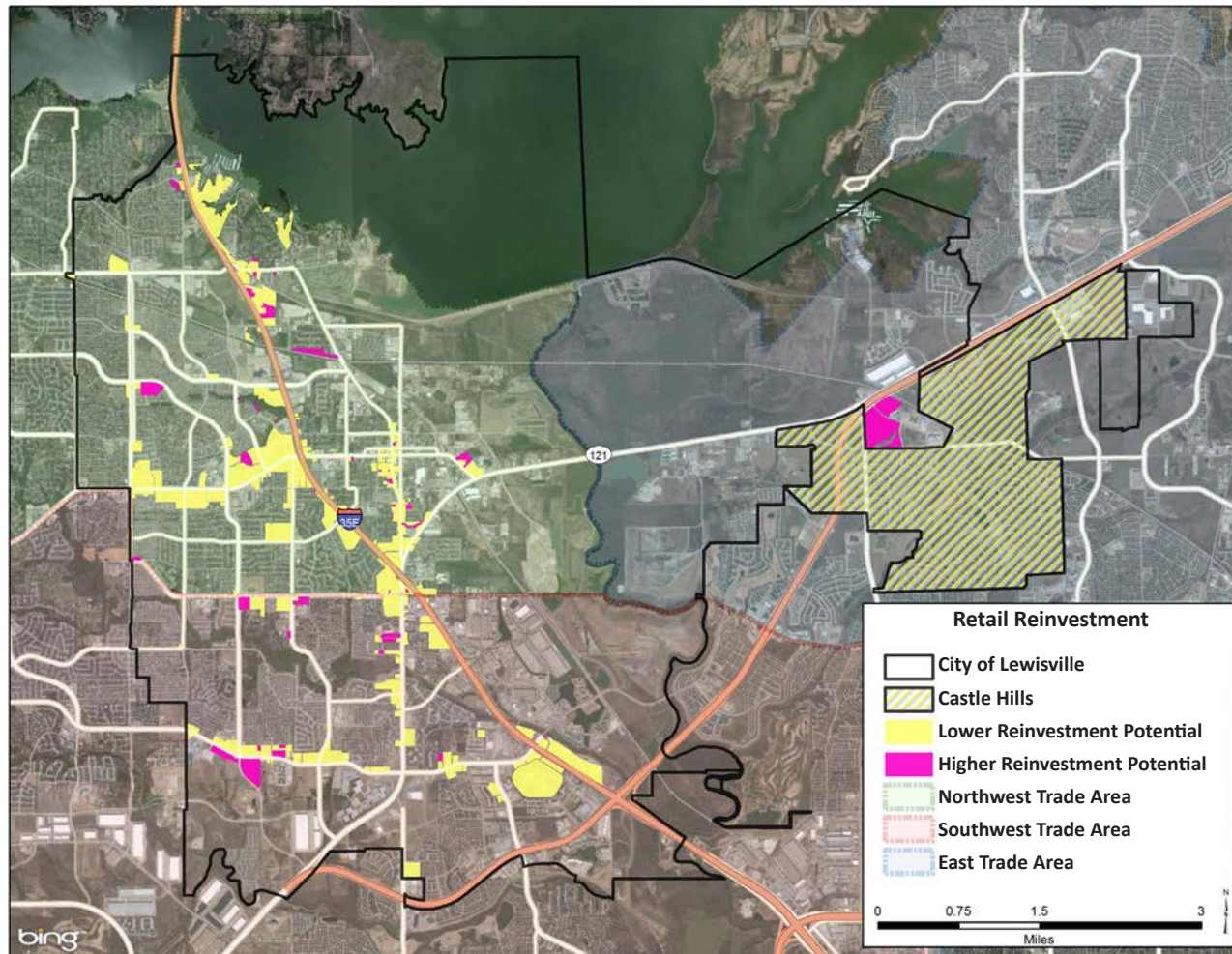
Lewisville Retail Opportunity	Northwest (75% Capture)	Southwest (40% Capture)	East (20% Capture)	Total
<b>Larger Format / Stand Alone Retail</b>				
Automobile Dealers		5 stores	9 stores	14 stores
Other Motor Vehicle Dealers	1 store	1 store	1 store	3 stores
Auto Parts, Accessories & Tire Stores	1 store		3 stores	4 stores
*Gasoline Stations	18 stores	17 stores	28 stores	63 stores
Bldg Material & Supplies Dealers			1 store	1 store
Lawn & Garden Equip & Supply	2 stores	1 store	2 stores	5 stores
Grocery Stores	1 store		3 stores	4 stores
Book, Periodical & Music Stores			1 store	1 stores
Other General Merchandise Stores			2 stores	2 stores
<b>Anticipated Larger Format Retail SF Opportunity</b>	<b>229,362 SF</b>	<b>139,439 SF</b>	<b>783,882 SF</b>	<b>1,152,683 SF</b>
	<b>23 stores</b>	<b>24 stores</b>	<b>50 stores</b>	<b>97 stores</b>
<b>Smaller Format / Infill Retail</b>	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>	<b>Total</b>
Beer, Wine & Liquor Stores		3 stores	1 store	4 stores
Clothing Stores			2 stores	2 stores
Jewelry, Luggage & Leather Goods			2 stores	2 stores
Florists	1 store		1 store	2 stores
Full-Service Restaurants	3 stores	3 stores	5 stores	11 stores
Limited-Service Eating Places	3 stores	2 stores	16 stores	21 stores
Drinking Places - Alcoholic Beverages		1 store		1 stores
<b>Anticipated Smaller Format SF Opportunity</b>	<b>33,357 SF</b>	<b>45,137 SF</b>	<b>42,582 SF</b>	<b>121,077 SF</b>
	<b>7 stores</b>	<b>9 stores</b>	<b>27 stores</b>	<b>43 stores</b>
<b>Anticipated Total Retail Opportunity</b>	<b>262,719 SF</b>	<b>184,576 SF</b>	<b>826,464 SF</b>	<b>1,273,760 SF</b>
	<b>30 stores</b>	<b>33 stores</b>	<b>77 stores</b>	<b>140 stores</b>

\*Gasoline Stations were given a 25% capture for NW and SW Trade Areas

## Retail Reinvestment Opportunity

The map below identifies retail reinvestment opportunities by trade area. The majority of commercial redevelopment opportunities exist along thoroughfares, and special attention should be paid to the potential along Main Street, west of I35, as well as Business 121. Redevelopment of existing retail presents significant opportunity for the City of Lewisville to improve their retail offerings by bringing stronger tenants into renovated spaces that improve the tax base. Incentives for this type of redevelopment, like a defined period of tax abatement or reduced impact fees, could strengthen the potential for this redevelopment to occur. The analytical methods used to determine lower and higher reinvestment potential is detailed in the methodology section of this document.

**Map 9: Retail Reinvestment**



Note: Reinvestment parcels should be analyzed in greater detail to determine their existing state of repair, occupancy, rent levels and overall assessed value. This analysis identifies well located, older product.

## Retail Programming Concept

The following analysis identifies retail opportunities in greenfield and redevelopment supply areas. Specific retail activities of interest are detailed, as well as the total retail store and acreage breakdown. In the Northwest and Southwest trade areas, it appears there is enough available land zoned for retail in order to absorb demand. In the East trade area, it appears there is more demand for retail than available supply. Analysis of the leakage report (please refer to Appendix for complete report) was conducted using square feet. In order to compare supply to demand, the retail supply acreage was converted to potential retail square feet, utilizing a 0.25 FAR.

**Table 12: Retail Programming Comparison**

<b>Lewisville Retail Opportunity</b>				
<b>Greenfield</b>	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>	<b>Total</b>
Retail - Greenfield	70 acres	5 acres	10 acres	85 acres
Mixed-Use - Greenfield	210 acres	125 acres	- acres	335 acres
Mixed-Use Transit Oriented Development - Greenfield	70 acres	- acres	- acres	70 acres
<b>Greenfield Opportunity</b>	<b>350 acres</b>	<b>130 acres</b>	<b>10 acres</b>	<b>490 acres</b>
<b>Redevelopment</b>	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>	<b>Total</b>
Retail - Redevelopment	- acres	- acres	- acres	- acres
Mixed-Use - Redevelopment	220 acres	63 acres	- acres	282 acres
Mixed-Use Transit Oriented - Redevelopment	359 acres	- acres	- acres	359 acres
<b>Redevelopment Opportunity</b>	<b>579 acres</b>	<b>63 acres</b>	<b>- acres</b>	<b>642 acres</b>
<b>Supply - Total Acreage</b>	<b>929 acres</b>	<b>192 acres</b>	<b>10 acres</b>	<b>1,131 acres</b>
<b>Potential Retail SF Supply (0.25 FAR)</b>	<b>10,114,916 SF</b>	<b>2,096,251 SF</b>	<b>109,880 SF</b>	<b>12,321,047 SF</b>

<b>10 Year Demand - Anticipated Retail</b>				
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>	<b>Total</b>
Anticipated Larger Format Retail SF Opportunity	229,362 SF	139,439 SF	783,882 SF	1,152,683 SF
Anticipated Smaller Format SF Opportunity	33,357 SF	45,137 SF	42,582 SF	121,077 SF
<b>Anticipated Total Retail Opportunity</b>	<b>262,719 SF</b>	<b>184,576 SF</b>	<b>826,464 SF</b>	<b>1,273,760 SF</b>

Note: These amounts reflect retail demand the forecasted population growth generates. Actual location of such demand will require a more detailed analysis of area supply and other real estate factors.

## Single Family Programming Factors

Household growth was measured to determine potential programming opportunities for new single family construction within the trade areas, as shown in Table 13. Single Family housing presents the largest land use programming opportunity based on population forecasts.

Redevelopment potential of existing single family homes was also measured utilizing Denton County Appraisal District data. For single family home lots below .5 acres, new home sale prices were compared with assessed values and the spread was evaluated. Properties with assessed values under 20% of new home sale prices were identified for reinvestment opportunity. On page 20, Map 10: Single Family Reinvestment Opportunity, highlights this analysis.

The demand for quality new single family housing and existing redevelopment potential identified should be met with appropriate planning measures from the City of Lewisville. These efforts would recognize the related potential for new office tenants and office space resulting from a strong supply of quality single family housing.

**Table 13: Single Family Household Demand Factors**

Lewisville Household Factors & Opportunity					
	Northwest	Southwest	East	Total	
2013 Total Households	32,744 HH	54,637 HH	66,351 HH	153,732 HH	
2013 Owner Occupied HH	22,134 HH	30,612 HH	34,800 HH	87,547 HH	
2013 Owner Occupied %	68%	56%	52%	57%	
Median Household Size	3.18	2.87	3.00		
	Northwest	Southwest	East	Total	
NCTCOG 2013 HH Population	86,504 people	136,433 people	154,830 people	377,766 people	
NCTCOG Projected 2023 HH Population	96,383 people	154,160 people	174,793 people	425,336 people	
10 Year Projected HH Pop Growth	9,880 people	17,727 people	19,964 people	47,571 people	
<b>10 Year Projected Single Family HH Growth <sup>1</sup></b>	<b>2,102 HH</b>	<b>3,455 HH</b>	<b>3,485 HH</b>	<b>9,042 HH</b>	
10 Year Single Family Household Capture %	10%	10%	10%		
<b>Anticipated Single Family HH Opportunity</b>	<b>210 HH</b>	<b>345 HH</b>	<b>348 HH</b>	<b>903 HH</b>	
Reinvestment Opportunity Analysis					
	Northwest	Southwest	East	Total	
Single Family Households Sampled	11,920 HH	6,057 HH	620 HH	18,597 HH	
<b>Lower Reinvestment Opportunity</b>	<b>10,519 HH</b>	<b>5,776 HH</b>	<b>424 HH</b>	<b>16,719 HH</b>	
<b>Higher Reinvestment Opportunity</b>	<b>1,401 HH</b>	<b>281 HH</b>	<b>196 HH</b>	<b>1,878 HH</b>	
<i>Higher Reinvestment Percentage</i>	<i>12%</i>	<i>5%</i>	<i>32%</i>	<i>10%</i>	
10 Year Reinvestment Capture %	10%	10%	80%		
<b>Anticipated Reinvestment HH Opportunity</b>	<b>140 HH</b>	<b>28 HH</b>	<b>157 HH</b>	<b>325 HH</b>	
<b>Anticipated Total Single Family Opportunity</b>	<b>350 HH</b>	<b>373 HH</b>	<b>505 HH</b>	<b>1,228 HH</b>	

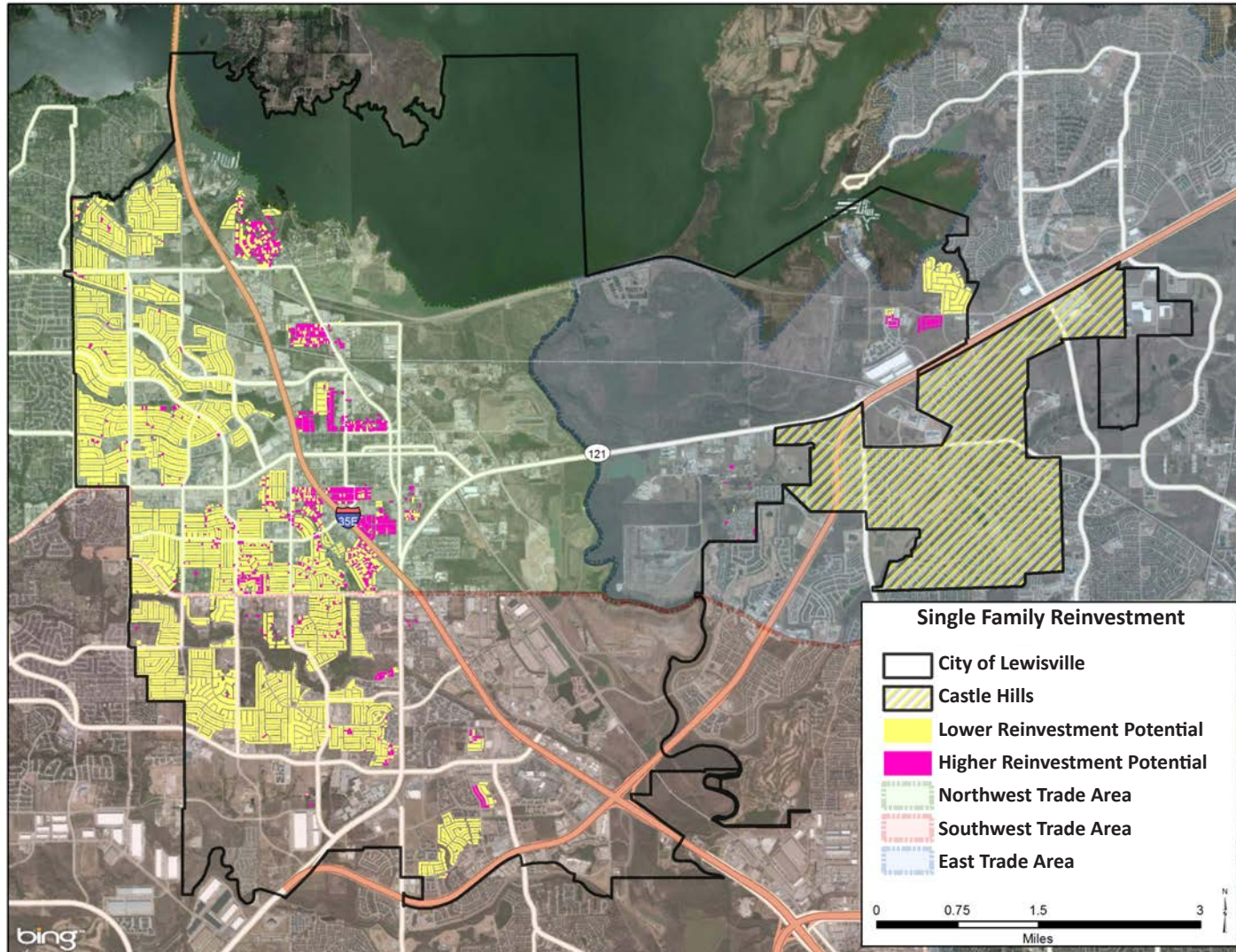
<sup>1</sup> - HH Growth Calculated Using Median HH Size multiplied by owner occupied percentage for each trade area



## Single Family Reinvestment Opportunity

The map below shows single family housing reinvestment opportunities by trade area. The majority of single family households are west of I-35, however higher reinvestment opportunity is concentrated east of I-35, in close proximity to the redevelopment focus areas identified on page 6. Incentive programs sponsored by the City could stimulate redevelopment of this single family housing and encourage renewal in the City's priority redevelopment areas.

**Map 10: Single Family Reinvestment**



## Single Family Programming Summary

The single family residential supply analyzes both greenfield and redevelopment opportunities. The Southwest trade area has the greatest opportunity, with 140 acres of developable land and 59 acres designated in Future Land Use high density areas. The 10 year demand side of single family analyzes the total household opportunity and reinvestment opportunity. The comparison was made using households, rather than an acreage total, because of the Single Family Reinvestment factor previously detailed on page 19. The market reflects adequate supply of single family opportunity to meet demand in the Northwest and Southwest trade areas, but limited available supply in the East trade area (outside of Castle Hills).

**Table 14: Single Family Summary**

<b>Lewisville Single Family Residential Opportunity</b>				
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>	<b>Total</b>
<b>Greenfield</b>				
Low Density Single Family Residential - Greenfield	112 acres	81 acres	27 acres	220 acres
High Density Single Family Residential - Greenfield	- acres	59 acres	- acres	59 acres
<b>Greenfield Opportunity</b>	<b>112 acres</b>	<b>140 acres</b>	<b>27 acres</b>	<b>279 acres</b>
<b>Redevelopment</b>				
Low Density Single Family Residential - Redevelopment	14 acres	- acres	- acres	14 acres
High Density Single Family Residential - Redevelopment	- acres	- acres	- acres	- acres
<b>Redevelopment Opportunity</b>	<b>14 acres</b>	<b>- acres</b>	<b>- acres</b>	<b>14 acres</b>
<b>Supply - Total Acreage</b>	<b>126 acres</b>	<b>140 acres</b>	<b>27 acres</b>	<b>293 acres</b>
<b>Anticipated Households (3 DU / Acre)</b>	<b>377 HH</b>	<b>419 HH</b>	<b>82 HH</b>	<b>878 HH</b>
<b>10 Year Demand - Anticipated Single Family</b>				
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>	<b>Total</b>
Single Family Household Opportunity	210 HH	345 HH	348 HH	903 HH
Single Family Reinvestment Opportunity	140 HH	28 HH	157 HH	325 HH
<b>Anticipated Total Single Family Opportunity</b>	<b>350 HH</b>	<b>373 HH</b>	<b>505 HH</b>	<b>1,228 HH</b>

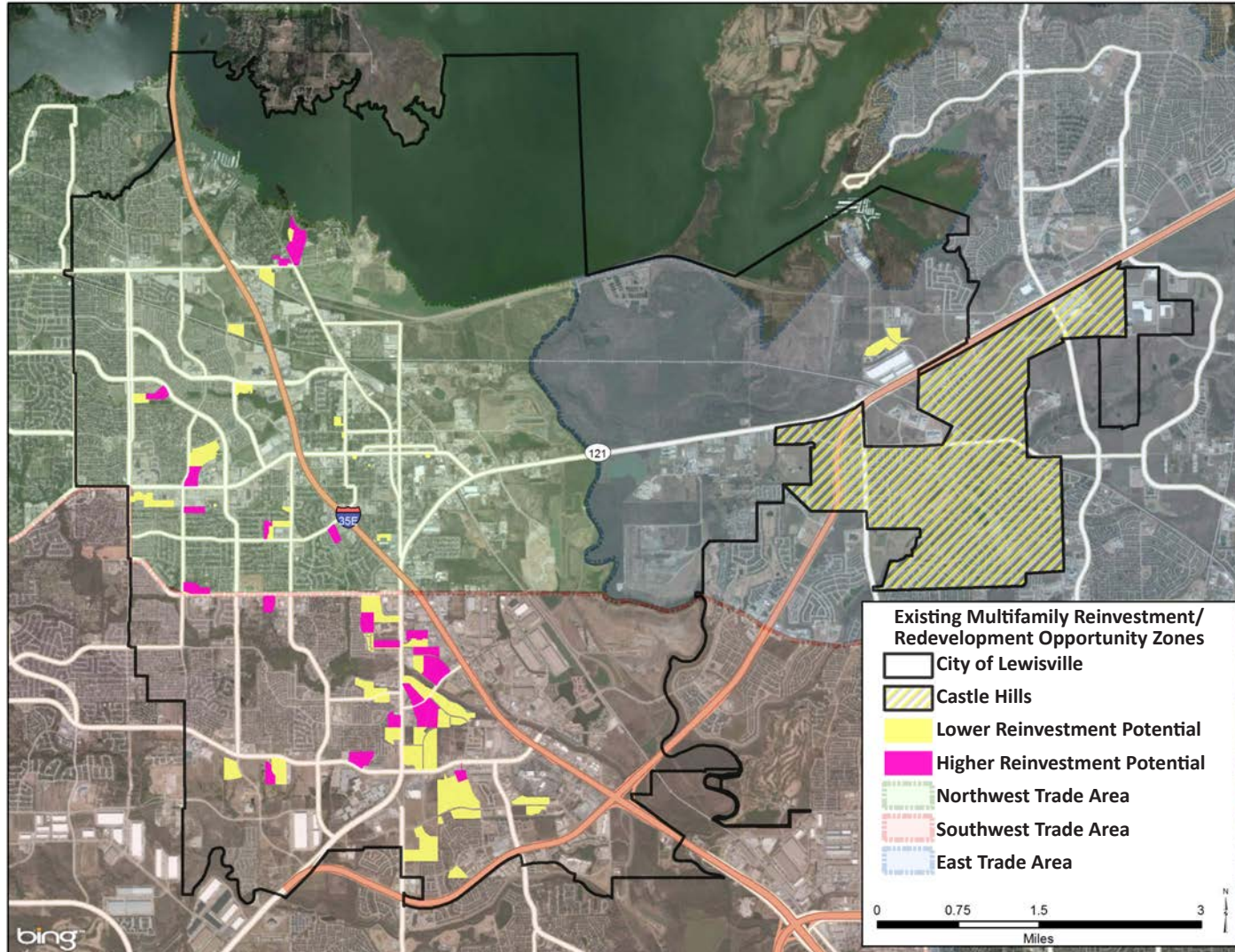
Note: These amounts reflect housing demand the forecasted population growth generates. Actual location of such demand will require a more detailed analysis of area supply and other real estate factors.



## Existing Multifamily Reinvestment/Redevelopment Opportunity Zones

The map below identifies existing multifamily properties and corresponding reinvestment opportunities by trade area. The majority of these existing multifamily opportunities are west of I-35. The reinvestment opportunities reflect a series of analytical steps, outlined in the methodology section of this document.

**Map 11: Existing Multifamily Reinvestment Opportunities**



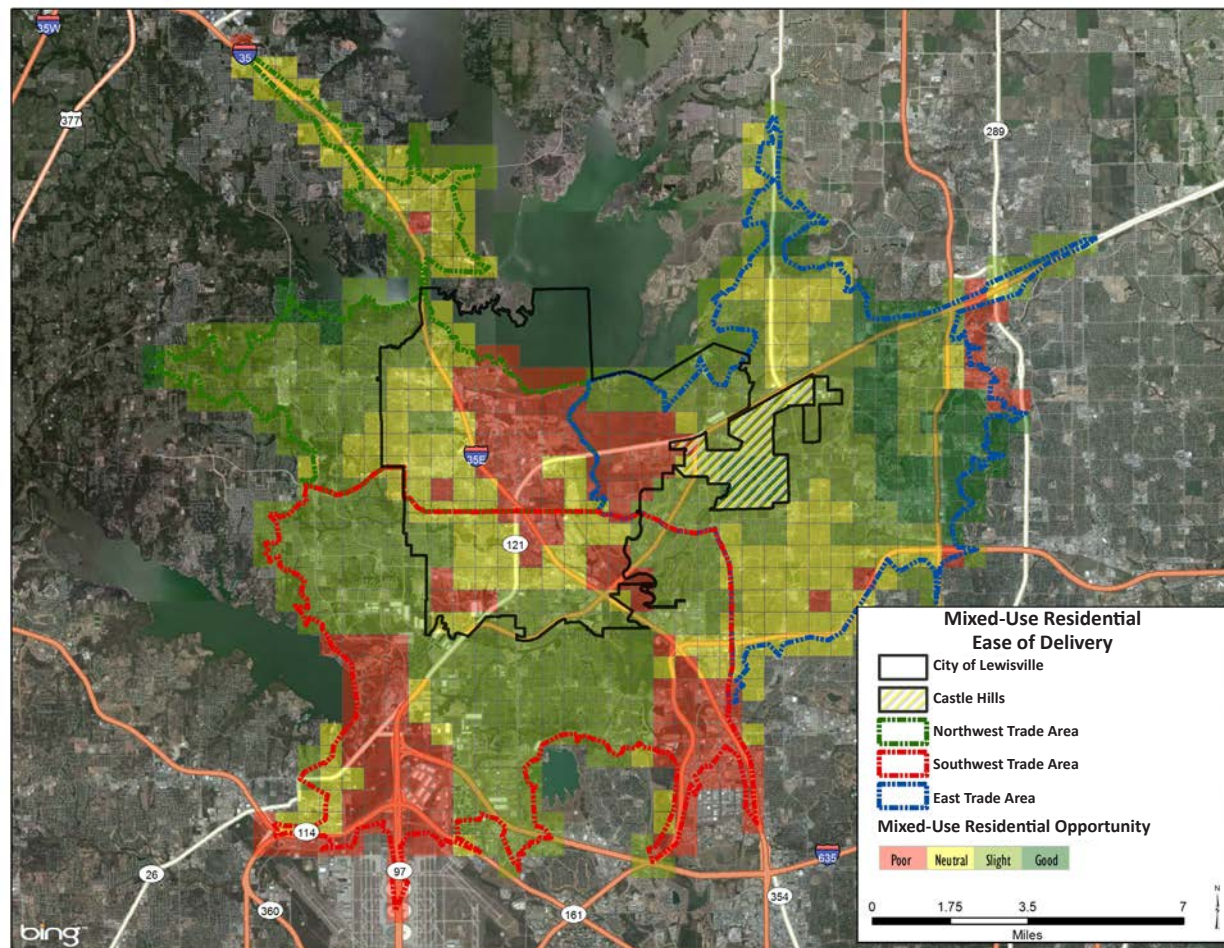
Note: Parcels marked with reinvestment potential should be analyzed in greater detail to determine their existing state of repair, occupancy, rent levels, and over assessed value. This analysis identifies well located, older product.

## Mixed-Use Residential Programming (Ease of Delivery Analysis)

The ease of delivery analysis creates a market lens to look at market rate mixed-use residential delivery. The primary question is whether a potential householder would be a renter or a home owner. Factors evaluated include: qualified salaries that can support new mixed-use residential construction rates, and annual income, derived from home value in a given census tract. If the annual income required to purchase a new home is greater than average salaries in the area, there is greater potential for a householder to be a renter rather than a home owner.

This analysis also identifies areas with higher home values as locations where renters might want to move; higher home values typically reflect a neighborhood with desirable amenities. Areas with neutral and poor mixed-use residential opportunities are not precluded from this higher-density residential investment, but such new development must be positioned quite carefully to overcome more stringent underwriting standards.

**Map 12: Mixed-Use Residential Ease Of Delivery**





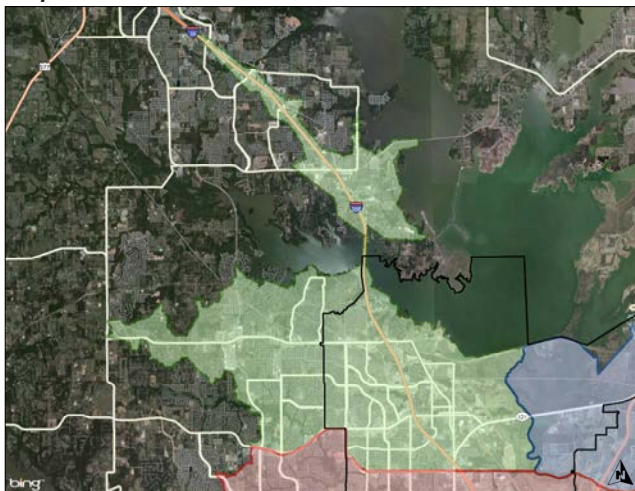
## Northwest Trade Area Mixed-Use Residential Programming Potential

Mixed-Use Residential land use analysis for each trade area was calculated by applying existing trade area factors to NCTCOG household population projections. 10 year household growth projections were used to forecast a total number of households; this was derived by evaluating median household occupancy rates, renter occupancy percentages, a market delivery discount, and a capture rate.

The 10 year mixed-use residential growth total for the Northwest trade area was projected at 549 households. Applying an average density of 28 dwelling units per acre indicates this demand would require 20 acres.

549 mixed-use residential households may be delivered in two, 4 year phases to allow for market stabilization.

**Map 13: Northwest Mixed-Use Residential Trade Area**



**Table 15: Northwest Mixed-Use Residential Factors**

Northwest Trade Area Renter Occupied Household Factors		
Total Existing Households in Trade Area	32,744	HH
Occupied Households	31,550	HH
Total Households Occupied %	96.35	%
Renter Occupied Households	9,416	HH
Renter Occupied Percentage	29.85	%
Vacant Households	1,194	HH
Vacant Households for Rent	602	HH
Vacant Households as % of Rental Households	6.01	%
Mixed-Use Residential Programming		
NCTCOG Forecasted Total Household Population Growth to 2023	9,880	people
2013 Median Household Occupancy	3.18	per HH
Forecasted Total Household Growth to 2023	3,110	HH
Forecasted Renter Occupied Household Growth to 2023	928	HH
Market Delivery Discount <sup>1</sup>	78.86	%
Capture Rate	75.00	%
<b>Forecasted 10 Year Mixed-Use Residential Growth</b>	<b>549</b>	<b>HH</b>
<b>Total 10 Year Mixed-Use Residential Programming - 28 Dwelling Units per Acre</b>	<b>20</b>	<b>acres</b>

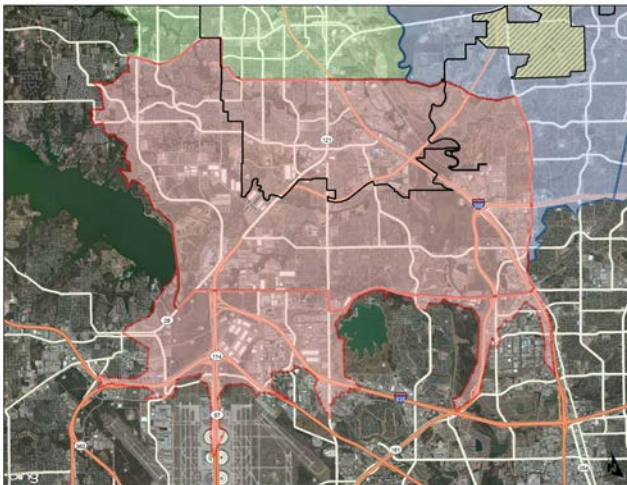
<sup>1</sup> - Market Rate Lens recognizes areas where perspective tenants would rather rent than buy

## Southwest Trade Area Mixed-Use Residential Programming Potential

The 10 year mixed-use residential growth total for the Southwest trade area was calculated at 738 households, and at 28 units per acre, that would require approximately 26 acres. These units might be delivered in three, 200 to 250 unit phases; each phase taking four years to fully stabilize.

The trade area for the Southwest sector, shown in Map 14 below, is larger than the Northwest, with employment opportunities towards DFW International Airport. The 40% capture rate used in Table 16 reflects potentially desirable locations close to DFW International Airport.

**Map 14: Southwest Mixed-Use Residential Trade Area**



**Table 16: Southwest Mixed-Use Residential Factors**

Southwest Trade Area Renter Occupied Household Factors		
Total Existing Households in Trade Area	54,637	HH
Occupied Households	52,492	HH
Total Households Occupied %	96.07	%
Renter Occupied Households	21,879	HH
Renter Occupied Percentage	41.68	%
Vacant Households	2,145	HH
Vacant Households for Rent	1,431	HH
Vacant Households as % of Rental Households	6.14	%
Mixed-Use Residential Programming		
NCTCOG Forecasted Total Household Population Growth to 2023	17,727	people
2013 Median Household Occupancy	2.87	per HH
Forecasted Total Household Growth to 2023	6,166	HH
Forecasted Renter Occupied Household Growth to 2023	2,570	HH
Market Delivery Discount <sup>1</sup>	71.77	%
Capture Rate	40.00	%
<b>Forecasted 10 Year Mixed-Use Residential Growth</b>	<b>738</b>	<b>HH</b>
<b>Total 10 Year Mixed-Use Residential Programming - 28 Dwelling Units per Acre</b>	<b>26</b>	<b>acres</b>

1 - Market Rate Lens recognizes areas where perspective tenants would rather rent than buy

## East Trade Area Mixed-Use Residential Programming Potential

The 10 year mixed-use residential growth total for the East trade area was calculated at 632 households. With 28 units per acre, approximately 23 acres would be required, however, planned development in Castle Hills and other pipeline projects are included in the analysis to show that existing allowed uses exceed demand in the 10 year period studied.

The East trade area has limited potential resulting from units allowed in Castle Hills and other pipeline projects covering roughly 254 acres. With another 241 acres designated for higher density residential development east of Castle Hills, the balance of opportunity in Lewisville outside of Castle Hills nets at roughly 10 acres. The number of units currently allowed in the East trade area occupies roughly 495 acres, far exceeding 10 year demand of 632 units at 23 acres.

Map 15: East Mixed-Use Residential Trade Area

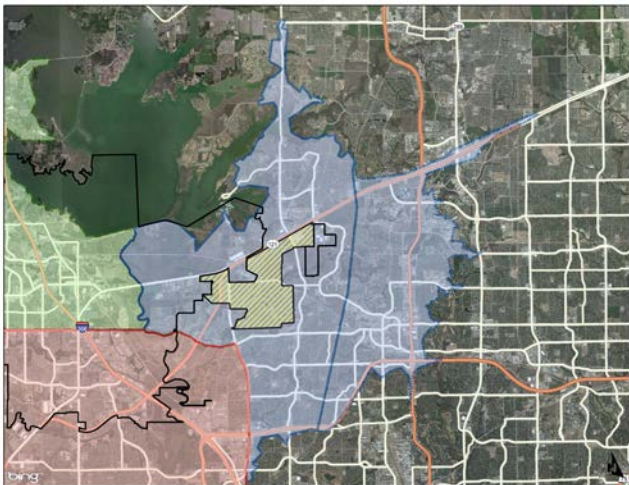


Table 17: East Mixed-Use Residential Factors

East Trade Area Renter Occupied Household Factors		
Total Existing Households in Trade Area	66,351	HH
Occupied Households	62,489	HH
Total Households Occupied %	94.18	%
Renter Occupied Households	27,688	HH
Renter Occupied Percentage	44.31	%
Vacant Households	3,862	HH
Vacant Households for Rent	2,615	HH
Vacant Households as % of Rental Households	8.6	%
Mixed-Use Residential Programming		
NCTCOG Forecasted Total Household Population Growth to 2023	19,964	people
2013 Median Household Occupancy	3.00	per HH
Forecasted Total Household Growth to 2023	6,644	HH
Forecasted Renter Occupied Household Growth to 2023	2,944	HH
Market Delivery Discount <sup>1</sup>	85.92	%
Capture Rate	25.00	%
<b>Forecasted 10 Year Mixed-Use Residential Growth</b>	<b>632</b>	<b>HH</b>
Castle Hills Multifamily Unit Allowance	4,500	units
Austin Ranch Multifamily Unit Allowance	2,800	units
Trinsic (Parker/121) Multifamily Unit Allowance	316	units
Acreage required to meet 30 Dwelling Units per Acre Allowance	254	acres
<b>Total 10 Year Mixed-Use Residential Programming - 28 Dwelling Units per Acre</b>	<b>-231</b>	<b>acres</b>

1 - Market Rate Lens recognizes areas where perspective tenants would rather rent than buy

Note: -231 acres, shown in bolded red, suggests the excess land use designated for new multifamily (exceeds demand)

## Mixed-Use Residential Programming Potential Summary

NCTCOG projects household population to increase by 47,571 people across all trade areas by 2023. There is enough greenfield and redevelopment opportunities available to meet the 10 year mixed-use residential demand across all trade areas. The East trade area has limited potential resulting from units allowed in Castle Hills and other pipeline projects covering roughly 254 acres, and 241 acres designated for higher density residential development east of Castle Hills. It should be noted that net potential in all trade areas is less than supply, with mixed-use residential land exceeding 10 year demand projections.

**Table 18: Mixed-Use Residential Programming Summary**

Trade Area Supply				
	Northwest	Southwest	East	Total
<b>Greenfield</b>				
Mixed-Use Residential - Greenfield	53 acres	63 acres	10 acres	126 acres
<b>Greenfield Opportunity</b>	<b>53 acres</b>	<b>63 acres</b>	<b>10 acres</b>	<b>126 acres</b>
<b>Redevelopment</b>				
Mixed-Use Residential - Redevelopment	97 acres	- acres	- acres	97 acres
<b>Redevelopment Opportunity</b>	<b>97 acres</b>	<b>- acres</b>	<b>- acres</b>	<b>97 acres</b>
<b>Supply - Total Acreage</b>	<b>150 acres</b>	<b>63 acres</b>	<b>10 acres</b>	<b>223 acres</b>
10 Year Demand - Anticipated Mixed-Use Residential Programming				
	Northwest	Southwest	East	Total
NCTCOG Forecasted Total Household Population Growth (to 2023)	9,880 people	17,727 people	19,964 people	47,571 people
2013 Median Household Occupancy	3.18 per HH	2.87 per HH	3.00 per HH	
Renter Occupied Percentage	29.85 %	41.68 %	44.31 %	
Market Delivery Discount	78.86 %	71.77 %	85.92 %	
Capture Rate	75.00 %	40.00 %	25.00 %	
Forecasted Total Household Growth (to 2023)	3,110 HHs	6,166 HHs	6,644 HHs	15,920 HHs
Forecasted 10 Year Renter Occupied Household Growth	549 HHs	738 HHs	632 HHs	1,919 HHs
<b>Anticipated Total Mixed-Use Residential Opportunity (28 DU / acre)</b>	<b>20 acres</b>	<b>26 acres</b>	<b>23 acres</b>	<b>69 acres</b>



## Total Potential Programming Summary

Table 19: Summary below shows the total opportunity within the City of Lewisville for each programming use, compared with the demand for the program as identified through data evaluation. An important consideration is that mixed-use allows for commercial, office, retail, and (higher-density) residential uses.

**Table 19: Summary**

Future Land Use Supply / Demand Analysis			
	Northwest	Southwest	East
Single Family Supply (High & Low Density)	126 acres	140 acres	27 acres
Single Family HH Supply (3 DU / acre)	377 HH	419 HH	82 HH
<b>Single Family HH Demand</b>	<b>350 HH</b>	<b>373 HH</b>	<b>505 HH</b>
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>
Mixed-Use Residential Supply <sup>1</sup>	150 acres	63 acres	10 acres
Mixed-Use Residential HH Demand	549 HH	738 HH	632 HH
<b>Mixed-Use Residential Demand (28 DU / acre)</b>	<b>20 acres</b>	<b>26 acres</b>	<b>23 acres</b>
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>
<i>Mixed-Use Supply</i>	430 acres	188 acres	- acres
<i>Mixed-Use Transit Oriented Development Supply</i>	429 acres	- acres	- acres
<i>Total Non-Designated Residential Mixed-Use Supply</i>	859 acres	188 acres	- acres
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>
Retail Supply	70 acres	5 acres	10 acres
Mixed-Use Supply	859 acres	188 acres	- acres
Total Potential Retail Supply	929 acres	193 acres	10 acres
Retail Supply SF (0.25 FAR)	10,116,810 SF	2,101,770 SF	108,900 SF
<b>Retail Demand SF</b>	<b>262,719 SF</b>	<b>184,576 SF</b>	<b>862,464 SF</b>
	<b>Northwest</b>	<b>Southwest</b>	<b>East</b>
Office Supply	109 acres	91 acres	59 acres
Mixed-Use Supply	859 acres	188 acres	- acres
Total Potential Office Supply	968 acres	279 acres	59 acres
Office Supply SF (0.25 FAR)	10,541,520 SF	3,038,310 SF	642,510 SF
<b>Office Demand (220 SF / Employee)</b>	<b>178,175 SF</b>	<b>326,385 SF</b>	<b>172,527 SF</b>
<b>Projected Office Development Resulting from Demand</b>	<b>7.65 acres</b>	<b>13.70 acres</b>	<b>7.41 acres</b>

1 - Mixed-Use Residential Supply in the East trade reflects the net of +23 acres of demand, +241 acres of supply in the trade area east of Castle Hills, -254 acres of supply allowed in pipeline (Castle Hills, etc.)

2 - Office Supply in the East trade area reflects the net of +7.41 acres of demand, +172 acres of supply in the trade area, -120.77 acres of supply allowed in Castle Hills

# Appendix

# 10 Year Northwest Retail Leakage Report

The categories with borders indicate large format / stand-alone retail. The shaded categories indicate smaller format / in-fill retail.

Industry Group	2010 Demand (Retail Potential)	Demand PerCapita	2023 Demand (Retail Potential)	2010 Supply (Retail Sales)	2010 Retail Gap	2023 Retail Gap	Avg Sales/sf	2013 sf Area	2023 sf Area	2013 Capture	2023 Capture	Average Store Size	2013 Stores	2023 Stores
Motor Vehicle & Parts Dealers	\$241,130,841	\$2,788	\$268,671,084	\$486,078,362	(\$244,947,521)	(\$217,407,278)								
Automobile Dealers	\$206,165,689	\$2,383	\$229,712,462	\$428,283,069	(\$222,117,380)	(\$198,570,607)	\$350	(634,621)	(567,345)	sf (475,966)	(425,508)	sf 20,000	sf 0	0
Other Motor Vehicle Dealers	\$19,300,720	\$223	\$21,505,110	\$43,768,687	(\$24,467,967)	(\$22,263,577)	\$250	(97,872)	(89,054)	sf (73,404)	(66,791)	sf 5,000	sf 0	1
Auto Parts, Accessories & Tire Stores	\$15,664,432	\$181	\$17,453,512	\$14,026,606	\$1,637,826	\$3,426,906	\$189	8,666	18,132	sf 6,499	13,599	sf 9,000	sf 0	1
Gasoline Stations	\$157,437,543	\$1,820	\$175,418,935	\$109,115,982	\$48,321,561	\$66,302,953	\$1,896	25,486	\$34,970	sf 6,372	8,742	sf 1,000	sf 6	8
Furniture & Home Furnishings Stores	\$25,070,397	\$290	\$27,933,759	\$18,428,061	\$6,642,336	\$9,505,698								
Furniture Stores	\$16,613,282	\$192	\$18,510,732	\$9,094,435	\$7,518,847	\$9,416,297	\$825	9,114	11,414	sf 6,835	8,560	sf 12,000	sf 0	0
Home Furnishings Stores	\$8,457,115	\$98	\$9,423,026	\$9,333,626	(\$876,511)	\$89,400	\$325	(2,697)	275	sf (2,023)	206	sf 12,000	sf 0	0
Bldg Materials, Garden Equip. & Supply	\$43,434,501	\$502	\$48,395,280	\$56,664,520	(\$13,230,019)	(\$8,269,240)								
Bldg Material & Supplies Dealers	\$40,034,298	\$463	\$44,606,730	\$56,129,317	(\$16,095,019)	(\$11,522,587)	\$122	(131,926)	(94,447)	sf (98,945)	(70,836)	sf 50,000	sf 0	0
Lawn & Garden Equip & Supply	\$3,400,204	\$39	\$3,788,551	\$535,202	\$2,865,002	\$3,253,349	\$122	23,484	26,667	sf 17,613	20,000	sf 5,000	sf 3	4
Food & Beverage Stores	\$184,299,976	\$2,131	\$205,349,403	\$162,715,549	\$21,584,427	\$42,633,854								
Grocery Stores	\$174,852,668	\$2,021	\$194,823,091	\$150,980,468	\$23,872,200	\$43,842,623	\$200	119,361	219,213	sf 89,521	164,410	sf 80,000	sf 1	2
Specialty Food Stores	\$2,607,804	\$30	\$2,905,649	\$2,124,918	\$482,886	\$780,731	\$200	2,414	3,904	sf 1,811	2,928	sf 35,000	sf 0	0
Beer, Wine & Liquor Stores	\$6,839,505	\$79	\$7,620,664	\$9,610,163	(\$2,770,658)	(\$1,989,499)	\$443	(6,254)	(4,491)	sf (4,691)	(3,368)	sf 3,500	sf 0	0
Health & Personal Care Stores	\$23,659,749	\$274	\$26,361,997	\$25,924,382	(\$2,264,633)	\$437,615	\$372	(6,088)	1,176	sf (4,566)	882	sf 1,500	sf 0	0
Clothing & Clothing Accessories Stores	\$33,387,253	\$386	\$37,200,507	\$53,253,188	(\$19,865,935)	(\$16,052,681)								
Clothing Stores	\$28,027,156	\$324	\$31,228,218	\$43,092,308	(\$15,065,152)	(\$11,864,090)	\$383	(39,335)	(30,977)	sf (29,501)	(23,233)	sf 3,500	sf 0	0
Shoe Stores	\$2,503,431	\$29	\$2,789,355	\$3,195,963	(\$692,532)	(\$406,608)	\$342	(2,025)	(1,189)	sf (1,519)	(892)	sf 2,500	sf 0	0
Jewelry, Luggage & Leather Goods	\$2,856,667	\$33	\$3,182,935	\$6,964,917	(\$4,108,250)	(\$3,781,982)	\$372	(11,044)	(10,167)	sf (8,283)	(7,625)	sf 1,000	sf 0	0
Sporting Goods, Hobby, Book & Music	\$13,333,708	\$154	\$14,856,589	\$11,992,588	\$1,341,120	\$2,864,001								
Sporting Goods/ Hobby/ Musical Instr	\$9,196,845	\$106	\$10,247,243	\$10,114,355	(\$917,510)	\$132,888	\$213	(4,308)	624	sf (3,231)	468	sf 15,000	sf 0	0
Book, Periodical & Music Stores	\$4,136,863	\$48	\$4,609,346	\$1,878,233	\$2,258,630	\$2,731,113	\$200	11,293	13,656	sf 8,470	10,242	sf 8,000	sf 1	1
General Merchandise Stores	\$171,679,630	\$1,985	\$191,287,651	\$230,251,580	(\$58,571,950)	(\$38,963,929)								
Department Stores Excl, Leased Depts	\$84,162,335	\$973	\$93,774,756	\$118,054,201	(\$33,891,866)	(\$24,279,445)	\$297	(114,114)	(81,749)	sf (85,586)	(61,312)	sf 70,000	sf 0	0
Other General Merchandise Stores	\$87,517,295	\$1,012	\$97,512,895	\$112,197,379	(\$24,680,084)	(\$14,684,484)	\$280	(88,143)	(52,445)	sf (66,107)	(39,333)	sf 25,000	sf 0	0
Miscellaneous Store Retailers	\$30,701,257	\$355	\$34,207,735	\$45,470,688	(\$14,769,431)	(\$11,262,953)								
Florists	\$1,113,654	\$13	\$1,240,848	\$911,509	\$202,145	\$329,339	\$194	1,042	1,698	sf 781	1,273	sf 1,000	sf 0	1
Office Supplies, Stationery & Gift Stores	\$3,430,770	\$40	\$3,822,608	\$10,388,210	(\$6,957,440)	(\$6,565,602)	\$188	(37,008)	(34,923)	sf (27,756)	(26,193)	sf 10,000	sf 0	0
Used Merchandise Stores	\$855,398	\$10	\$953,095	\$920,623	(\$65,225)	\$32,472	\$118	(553)	275	sf (415)	206	sf 9,000	sf 0	0
Other Miscellaneous Store Retailers	\$4,806,565	\$56	\$5,355,537	\$7,818,082	(\$3,011,517)	(\$2,462,545)	\$188	(16,019)	(13,099)	sf (12,014)	(9,824)	sf 9,000	sf 0	0
Electronics & Appliance Stores	\$20,494,870	\$237	\$22,835,648	\$25,432,264	(\$4,937,394)	(\$2,596,616)	\$281	(17,571)	(9,241)	sf (13,178)	(6,930)	sf 15,000	sf 0	0
Nonstore Retailers	\$67,219,505	\$777	\$74,896,837	\$8,817,660	\$58,401,845	\$66,079,177								
Electronic Shopping & Mail-Order Houses	\$63,683,575	\$736	\$70,957,058	\$3,528,467	\$60,155,108	\$67,428,591								
Vending Machine Operators	\$759,373	\$9	\$846,103	\$344,411	\$414,962	\$501,692								
Direct Selling Establishments	\$2,776,557	\$32	\$3,093,676	\$4,944,783	(\$2,168,226)	(\$1,851,107)								
Food Services & Drinking Places	\$169,126,790	\$1,955	\$188,443,244	\$162,891,445	\$6,235,345	\$25,551,799								
Full-Service Restaurants	\$66,236,230	\$766	\$73,801,259	\$59,841,400	\$6,394,830	\$13,959,859	\$575	11,121	24,278	sf 8,341	18,209	sf 5,500	sf 1	3
Limited-Service Eating Places	\$92,169,241	\$1,065	\$102,696,153	\$94,900,202	(\$2,730,961)	\$7,795,951	\$450	(6,069)	17,324	sf (4,552)	12,993	sf 3,500	sf 0	3
Special Food Services	\$7,565,214	\$87	\$8,429,259	\$3,485,643	\$4,079,571	\$4,943,616	\$388	10,514	12,741	sf 7,886	9,556	sf 2,000	sf 3	4
Drinking Places - Alcoholic Beverages	\$3,156,104	\$36	\$3,516,572	\$4,664,200	(\$1,508,096)	(\$1,147,628)	\$500	(3,016)	(2,295)	sf (2,262)	(1,721)	sf 2,000	sf 0	0

# 10 Year Southwest Retail Leakage Report

The categories with borders indicate large format / stand-alone retail. The shaded categories indicate smaller format / in-fill retail.

Industry Group	2010 Demand (Retail Potential)	Demand PerCapita	2023 Demand (Retail Potential)	2010 Supply (Retail Sales)	2010 Retail Gap	2023 Retail Gap	Avg Sales/sf	2013 sf Area	2023 sf Area	2013 Capture	2023 Capture	Average Store Size	2013 Stores	2023 Stores
Motor Vehicle & Parts Dealers	\$429,552,558	\$3,148	\$485,365,207	\$417,802,095	\$11,750,463	\$67,563,112								
Automobile Dealers	\$368,256,600	\$2,699	\$416,104,939	\$323,592,436	\$44,664,164	\$92,512,503	\$350	127,612	264,321	51,045	105,729	20,000	2	5
Other Motor Vehicle Dealers	\$32,687,805	\$240	\$36,934,999	\$58,022,258	(\$25,334,453)	(\$21,087,259)	\$250	(101,338)	(84,349)	(40,535)	(33,740)	5,000	0	1
Auto Parts, Accessories & Tire Stores	\$28,608,153	\$210	\$32,325,269	\$36,187,401	(\$7,579,248)	(\$3,862,132)	\$189	(40,102)	(\$20,435)	(16,041)	(8,174)	9,000	0	0
Gasoline Stations	\$276,024,275	\$2,023	\$311,888,678	\$179,863,068	\$96,161,207	\$132,025,610	1896	50,718	69,634	12,679	17,408	1,000	\$12	\$17
Furniture & Home Furnishings Stores	\$52,705,600	\$386	\$59,553,747	\$145,630,182	(\$92,924,582)	(\$86,076,435)								
Furniture Stores	\$33,856,442	\$248	\$38,255,479	\$121,270,092	(\$87,413,650)	(\$83,014,613)	\$825	(105,956)	(100,624)	(42,382)	(40,250)	12,000	0	0
Home Furnishings Stores	\$18,849,158	\$138	\$21,298,268	\$24,360,090	(\$5,510,932)	(\$3,061,822)	325	(16,957)	(9,421)	(6,783)	(3,768)	12,000	\$0	\$0
Bldg Materials, Garden Equip. & Supply	\$73,171,158	\$536	\$82,678,437	\$85,720,753	(\$12,549,595)	(\$3,042,316)								
Bldg Material & Supplies Dealers	\$67,616,569	\$496	\$76,402,129	\$82,047,971	(\$14,431,402)	(\$5,645,842)	\$122	(118,290)	(46,277)	(47,316)	(18,511)	50,000	0	0
Lawn & Garden Equip & Supply	\$5,554,590	\$41	\$6,276,309	\$3,672,782	\$1,881,808	\$2,603,527	122	15,425	21,340	6,170	8,536	5,000	\$1	\$1
Food & Beverage Stores	\$326,821,553	\$2,395	\$369,286,151	\$378,330,546	(\$51,508,993)	(\$9,044,395)								
Grocery Stores	\$306,202,202	\$2,244	\$345,987,685	\$357,144,681	(\$50,942,479)	(\$11,156,996)	\$200	(254,712)	(55,785)	(101,885)	(22,314)	80,000	0	0
Specialty Food Stores	\$6,739,558	\$49	\$7,615,243	\$18,100,963	(\$11,361,405)	(\$10,485,720)	\$200	(56,807)	(52,429)	(22,723)	(20,971)	35,000	0	0
Beer, Wine & Liquor Stores	\$13,879,792	\$102	\$15,683,222	\$3,084,902	\$10,794,890	\$12,598,320	\$443	24,368	28,439	9,747	11,375	3,500	2	3
Health & Personal Care Stores	\$47,868,070	\$351	\$54,087,667	\$73,790,829	(\$25,922,759)	(\$19,703,162)	\$372	(69,685)	(52,965)	(27,874)	(21,186)	1,500	0	0
Clothing & Clothing Accessories Stores	\$68,832,158	\$505	\$77,775,662	\$148,961,242	(\$80,129,084)	(\$71,185,580)								
Clothing Stores	\$55,490,698	\$407	\$62,700,719	\$124,220,452	(\$68,729,754)	(\$61,519,733)	\$383	(179,451)	(160,626)	(71,780)	(64,250)	3,500	0	0
Shoe Stores	\$6,142,056	\$45	\$6,940,106	\$13,350,741	(\$7,208,685)	(\$6,410,635)	\$342	(21,078)	(18,745)	(8,431)	(7,498)	2,500	0	0
Jewelry, Luggage & Leather Goods	\$7,199,404	\$53	\$8,134,837	\$11,390,049	(\$4,190,645)	(\$3,255,212)	372	(11,265)	(8,751)	(4,506)	(3,500)	1,000	\$0	\$0
Sporting Goods, Hobby, Book & Music	\$25,781,263	\$189	\$29,131,076	\$36,619,260	(\$10,837,997)	(\$7,488,184)								
Sporting Goods/ Hobby/ Musical Instr	\$16,964,868	\$124	\$19,169,148	\$26,737,770	(\$9,772,902)	(\$7,568,622)	\$213	(45,882)	(35,533)	(18,353)	(14,213)	15,000	0	0
Book, Periodical & Music Stores	\$8,816,395	\$65	\$9,961,927	\$9,881,490	(\$1,065,095)	\$80,437	200	(5,325)	402	(2,130)	161	8,000	\$0	\$0
General Merchandise Stores	\$281,879,351	\$2,066	\$318,504,516	\$344,805,376	(\$62,926,025)	(\$26,300,860)								
Department Stores Excl. Leased Depts	\$126,666,127	\$928	\$143,124,118	\$141,061,647	(\$14,395,520)	\$2,062,471	\$297	(48,470)	6,944	(19,388)	2,778	70,000	0	0
Other General Merchandise Stores	\$155,213,223	\$1,138	\$175,380,397	\$203,743,729	(\$48,530,506)	(\$28,363,332)	280	(173,323)	(101,298)	(69,329)	(40,519)	25,000	\$0	\$0
Miscellaneous Store Retailers	\$71,107,081	\$521	\$80,346,171	\$166,213,993	(\$95,106,912)	(\$85,867,822)								
Florists	\$2,576,599	\$19	\$2,911,382	\$2,714,904	(\$138,305)	\$196,478	\$194	(713)	1,013	(285)	405	1,000	0	0
Office Supplies, Stationery & Gift Stores	\$7,705,820	\$56	\$8,707,053	\$20,303,355	(\$12,597,535)	(\$11,596,302)	\$188	(67,008)	(61,682)	(26,803)	(24,673)	10,000	0	0
Used Merchandise Stores	\$2,097,498	\$15	\$2,370,030	\$945,946	\$1,151,552	\$1,424,084	\$118	9,759	12,069	3,904	4,827	9,000	0	0
Other Miscellaneous Store Retailers	\$10,058,817	\$74	\$11,365,780	\$17,752,553	(\$7,693,736)	(\$6,386,773)	\$188	(40,924)	(33,972)	(16,370)	(13,589)	9,000	0	0
Electronics & Appliance Stores	\$48,668,347	\$357	\$54,991,926	\$124,497,235	(\$75,828,888)	(\$69,505,309)	281	(269,854)	(247,350)	(107,941)	(98,940)	15,000	\$0	\$0
Nonstore Retailers	\$90,487,480	\$663	\$102,244,705	\$145,772,653	(\$55,285,173)	(\$43,527,948)								
Electronic Shopping & Mail-Order Houses	\$80,852,156	\$593	\$91,357,443	\$123,678,627	(\$42,826,471)	(\$32,321,184)								
Vending Machine Operators	\$2,785,594	\$20	\$3,147,532	\$687,614	\$2,097,980	\$2,459,918								
Direct Selling Establishments	\$6,849,729	\$50	\$7,739,728	\$21,406,412	(\$14,556,683)	(\$13,666,684)								
Food Services & Drinking Places	\$303,464,588	\$2,224	\$342,894,367	\$298,957,686	\$4,506,902	\$43,936,681								
Full-Service Restaurants	\$121,647,607	\$892	\$137,453,531	\$107,868,700	\$13,778,907	\$29,584,831	\$575	23,963	51,452	9,585	20,581	5,500	1	3
Limited-Service Eating Places	\$156,734,181	\$1,149	\$177,098,976	\$168,975,554	(\$12,241,373)	\$8,123,422	\$450	(27,203)	18,052	(10,881)	7,221	3,500	0	2
Special Food Services	\$17,937,895	\$131	\$20,268,603	\$17,790,120	\$147,775	\$2,478,483	\$388	381	6,388	152	2,555	2,000	0	1
Drinking Places - Alcoholic Beverages	\$7,144,904	\$52	\$8,073,256	\$4,323,312	\$2,821,592	\$3,749,944	\$500	5,643	7,500	2,257	3,000	2,000	1	1



# 10 Year East Retail Leakage Report

The categories with borders indicate large format / stand-alone retail. The shaded categories indicate smaller format / in-fill retail.

Industry Group	2010 Demand (Retail Potential)	Demand PerCapita	2023 Demand (Retail Potential)	2010 Supply (Retail Sales)	2010 Retail Gap	2023 Retail Gap	Avg Sales/sf	2013 sf Area	2023 sf Area	2013 Capture	2023 Capture	Average Store Size	2013 Stores	2023 Stores
Motor Vehicle & Parts Dealers	\$542,181,775	\$3,502	\$612,091,013	\$200,621,186	\$341,560,589	\$411,469,827								
Automobile Dealers	\$467,359,318	\$3,019	\$527,620,904	\$191,172,649	\$276,186,669	\$336,448,255	\$350	789,105	961,281	157,821	192,256	20,000	7	9
Other Motor Vehicle Dealers	\$42,592,968	\$275	\$48,084,930	\$2,410,465	\$40,182,503	\$45,674,465	\$250	160,730	182,698	32,146	36,540	5,000	6	1
Auto Parts, Accessories & Tire Stores	\$32,229,490	\$208	\$36,385,179	\$7,038,072	\$25,191,418	\$29,347,107	\$189	133,288	\$155,276	26,658	31,055	9,000	2	3
Gasoline Stations	\$353,404,151	\$2,283	\$398,972,291	\$127,375,932	\$226,028,219	\$271,596,359	1896	119,213	143,247	23,843	28,649	1,000	\$23	\$28
Furniture & Home Furnishings Stores	\$63,653,122	\$411	\$71,860,593	\$27,902,202	\$35,750,920	\$43,958,391								
Furniture Stores	\$43,062,127	\$278	\$48,614,583	\$14,476,884	\$28,585,243	\$34,137,699	\$825	34,649	41,379	6,930	8,276	12,000	0	0
Home Furnishings Stores	\$20,590,995	\$133	\$23,246,010	\$13,425,318	\$7,165,677	\$9,820,692	325	22,048	30,218	4,410	6,044	12,000	\$0	\$0
Bldg Materials, Garden Equip. & Supply	\$94,980,034	\$613	\$107,226,816	\$55,685,318	\$39,294,716	\$51,541,498								
Bldg Material & Supplies Dealers	\$87,856,725	\$567	\$99,185,023	\$54,921,686	\$32,935,039	\$44,263,337	\$122	269,959	362,814	53,992	72,563	50,000	1	1
Lawn & Garden Equip & Supply	\$7,123,309	\$46	\$8,041,793	\$763,632	\$6,359,677	\$7,278,161	122	52,129	59,657	10,426	11,931	5,000	\$2	\$2
Food & Beverage Stores	\$411,299,261	\$2,656	\$464,332,430	\$183,700,373	\$227,598,888	\$280,632,057								
Grocery Stores	\$389,400,530	\$2,515	\$439,610,064	\$174,845,299	\$214,555,231	\$264,764,765	\$200	1,072,776	1,323,824	214,555	264,765	80,000	2	3
Specialty Food Stores	\$6,840,473	\$44	\$7,722,488	\$4,002,019	\$2,838,454	\$3,720,469	\$200	14,192	18,602	2,838	3,720	35,000	0	0
Beer, Wine & Liquor Stores	\$15,058,258	\$97	\$16,999,879	\$4,853,055	\$10,205,203	\$12,146,824	\$443	23,037	27,419	4,607	5,484	3,500	1	1
Health & Personal Care Stores	\$56,497,269	\$365	\$63,782,060	\$45,164,760	\$11,332,509	\$18,617,300	\$372	30,464	50,047	6,093	10,009	1,500	0	0
Clothing & Clothing Accessories Stores	\$82,056,823	\$530	\$92,637,278	\$67,508,246	\$14,548,577	\$25,129,032								
Clothing Stores	\$67,126,849	\$434	\$75,782,225	\$56,615,986	\$10,510,863	\$19,166,239	\$383	27,444	50,042	5,489	10,008	3,500	1	2
Shoe Stores	\$6,881,854	\$44	\$7,769,204	\$6,357,120	\$524,734	\$1,412,084	\$342	1,534	4,129	307	826	2,500	0	0
Jewelry, Luggage & Leather Goods	\$8,048,119	\$52	\$9,085,848	\$4,535,140	\$3,512,979	\$4,550,708	372	9,443	12,233	1,889	2,447	1,000	\$1	\$2
Sporting Goods, Hobby, Book & Music	\$30,674,527	\$198	\$34,629,719	\$10,150,689	\$20,523,838	\$24,479,030								
Sporting Goods/ Hobby/ Musical Instr	\$20,648,149	\$133	\$23,310,534	\$9,397,022	\$11,251,127	\$13,913,512	\$213	52,822	65,322	10,564	13,064	15,000	0	0
Book, Periodical & Music Stores	\$10,026,378	\$65	\$11,319,185	\$753,668	\$9,272,710	\$10,565,517	200	46,364	52,828	9,273	10,566	8,000	\$1	\$1
General Merchandise Stores	\$389,007,943	\$2,512	\$439,166,857	\$301,409,776	\$87,598,167	\$137,757,081								
Department Stores Excl. Leased Depts	\$176,650,661	\$1,141	\$199,428,101	\$139,573,875	\$37,076,786	\$59,854,226	\$297	124,838	201,529	24,968	40,306	70,000	0	0
Other General Merchandise Stores	\$212,357,282	\$1,372	\$239,738,755	\$161,835,901	\$50,521,381	\$77,902,854	280	180,434	278,224	36,087	55,645	25,000	\$1	\$2
Miscellaneous Store Retailers	\$83,061,612	\$536	\$93,771,625	\$159,116,058	(\$76,054,446)	(\$65,344,433)								
Florists	\$2,499,232	\$16	\$2,821,484	\$1,378,039	\$1,121,193	\$1,443,445	\$194	5,779	7,440	1,156	1,488	1,000	1	1
Office Supplies, Stationery & Gift Stores	\$8,908,677	\$58	\$10,057,367	\$4,960,868	\$3,947,809	\$5,096,499	\$188	20,999	27,109	4,200	5,422	10,000	0	0
Used Merchandise Stores	\$2,065,138	\$13	\$2,331,418	\$513,681	\$1,551,457	\$1,817,737	\$118	13,148	15,405	2,630	3,081	9,000	0	0
Other Miscellaneous Store Retailers	\$12,152,246	\$78	\$13,719,164	\$14,895,519	(\$2,743,273)	(\$1,176,355)	\$188	(14,592)	(6,257)	(2,918)	(1,251)	9,000	0	0
Electronics & Appliance Stores	\$57,436,319	\$371	\$64,842,192	\$137,367,951	(\$79,931,632)	(\$72,525,759)	281	(284,454)	(258,099)	(56,891)	(51,620)	15,000	\$0	\$0
Nonstore Retailers	\$114,700,176	\$741	\$129,489,684	\$130,784,791	(\$16,084,615)	(\$1,295,107)								
Electronic Shopping & Mail-Order Houses	\$107,202,289	\$692	\$121,025,015	\$126,915,552	(\$19,713,263)	(\$5,890,537)								
Vending Machine Operators	\$1,532,369	\$10	\$1,729,954	\$531,161	\$1,001,208	\$1,198,793								
Direct Selling Establishments	\$5,965,518	\$39	\$6,734,715	\$3,338,078	\$2,627,440	\$3,396,637								
Food Services & Drinking Places	\$384,404,918	\$2,483	\$433,970,315	\$204,879,101	\$179,525,817	\$229,091,214								
Full-Service Restaurants	\$152,591,017	\$986	\$172,266,193	\$89,306,271	\$63,284,746	\$82,959,922	\$575	110,060	144,278	22,012	28,856	5,500	4	5
Limited-Service Eating Places	\$206,648,483	\$1,335	\$233,293,860	\$103,068,673	\$103,579,810	\$130,225,187	\$450	230,177	289,389	46,035	57,878	3,500	13	16
Special Food Services	\$18,745,241	\$121	\$21,162,263	\$6,785,985	\$11,959,256	\$14,376,278	\$388	30,823	37,052	6,165	7,410	2,000	3	3
Drinking Places - Alcoholic Beverages	\$6,420,177	\$41	\$7,247,998	\$5,718,172	\$702,005	\$1,529,826	\$500	1,404	3,060	281	612	2,000	0	0

## Methodology

### I. Summary of Methodology

The market assessment and programming concept utilizes a market-based approach in which the demographics and forecasted growth projections are measured for customized trade areas centered on the northwest, southwest, and eastern sections of the City of Lewisville, Texas. Each trade area boundary extends beyond Lewisville city limits and is based on a combination of factors including drive time, geographic features, and market influences. The demand calculations for office, retail, single family, and multifamily land uses reflect potential demand, and any development of these uses is dependent on availability of supply, and policy decisions guided by City of Lewisville determined priorities.

### II. Demand Methodology

Demand in the three trade areas is calculated by looking at demographic projections and factors that pertain to each specific land use.

#### A. Office Land Use

1. The following data points were collected to measure office land use demand:
  - a. Employment Growth (Source: NCTCOG)
  - b. Current Vacancy Rates (Source: Delta Associates)
  - c. White Collar Employment Percentage (Source EASI Analytics)
  - d. Office Type: Loft v. Traditional (Source: EASI Analytics)
2. Potential absorption was measured by comparing vacancy rates with the number of white collar employees in the trade area.
3. Ten year employment projections were measured for each trade area.
4. After reconciling potential absorption, new office-oriented employment growth was calculated by applying the white collar job percentage to projected growth.
5. Traditional and Loft Office percentages were applied with Employee / SF factors to determine total Office SF Demand.
6. A capture rate, determined by trade area and office product, was applied to calculate total demand

#### B. Retail Land Use

1. The following data points were collected to measure retail land use demand:
  - a. Population Growth (Source: NCTCOG)
  - b. Retail Leakage Report (Source: ESRI Business Analyst)

## Methodology

2. Retail categories were separated into large format and small format establishments.
3. Ten year population projections were measured for each trade area.
4. Existing and projected population totals were applied to the leakage report to determine potential SF in each category.
5. Number of stores was calculated by applying SF / Retail designations.
6. Capture rates, determined by trade area, were applied to retail SF in each category.

### C. Single Family Land Use

1. The following data points are collected to measure single family land use demand:
  - a. Population Growth (Source: NCTCOG)
  - b. Median Household Occupancy (Source: EASI Analytics)
  - c. Owner Occupied Rates (Source: EASI Analytics)
2. Ten year population projections were measured for each trade area.
3. Median household occupancy and owner occupied percentage was applied to the ten year household projection to determine single family demand.
4. Capture rates, determined by trade area, were applied to single family demand.
5. Reinvestment Opportunity homes were added to the total demand (see single family supply methodology).

### D. Multifamily Land Use

1. The following data points were collected to measure multifamily land use demand:
  - a. Population Growth (Source: NCTCOG)
  - b. Median Household Occupancy (Source: EASI Analytics)
  - c. Renter Occupied Rates (Source: EASI Analytics)
2. Ten year population projections were measured for each trade area.

## Methodology

3. Median occupancy and renter occupied percentage was applied to the ten year household projection to determine multifamily demand.
4. A multifamily market lens factor (see market lens methodology) was applied to the multifamily demand.
5. Capture rates, determined by trade area, were applied to single family demand.

### III. Demand Methodology

New development / greenfield and redevelopment opportunities were analyzed for each trade area to determine available supply by land use category.

#### A. New Development / Greenfield Steps

1. The City of Lewisville provided a Current Land Use GIS shapefile with a number of land use designations. A new shapefile was created that contained only Vacant Land Use portions of the city.
2. The FEMA Q3 100 year Floodplain GIS shapefile was overlaid on the new vacant land use shapefile, and where the two shapefiles intersected, the areas were erased.
3. The Future Land Use designations, created by Stakeholders during the visioning process, were digitally converted into a GIS shapefile. This new shapefile was overlaid onto the new Vacant Land Use file (with 100 year floodplain erased), and the Future Land Use designation was appended to the vacant land use file.
4. The resulting shapefile created has parcels categorized by Future Land Use, after reconciling by vacant land use (as provided by the city) and the 100 year floodplain.

#### B. Redevelopment Steps

1. The visioning process identified four Focus Areas for redevelopment: Northern Gateway / Lake District, Old Town / “Market & Mill” District, Business 121 / I35 Intersection District, and Southern Gateway District. These four focus areas were drawn in GIS and digitally converted into a shapefile.
2. The Current Land Use GIS shapefile, provided by the city, was overlaid on these four focus areas and every land use except vacant was selected. This method prevents “double counting.”
3. The FEMA Q3 100 year Floodplain GIS shapefile was overlaid on the focus areas and where the floodplain intersected the Focus Areas, the areas were erased.



## Methodology

4. The Future Land Use shapefile was overlaid onto the Focus Area, and appended to the Focus Area parcels.
5. The resulting shapefile created has parcels within each of the four Focus Areas (not including vacant land) that was reconciled with the 100 year floodplain and categorized by Future Land Use.

Note: The East Trade Area, with boundaries determined through Catalyst’s own internal analysis, has no redevelopment opportunity; all four Focus Areas created by Stakeholders during the visioning process fall within the Northwest and Southwest Trade Areas.

### C. Commercial Reinvestment Opportunity Analysis

Additional analysis was conducted to consider reinvestment opportunity for commercial properties:

1. Denton County Appraisal District data was scrubbed to select parcels zoned for “General Business” and “Local Commercial” categories.
2. Potential development acreage was calculated at 0.25 FAR, and any parcels that supported less than 1000 SF of commercial space was removed.
3. NOI was calculated using a \$5/SF rental rate, and \$15/SF tenant improvement rate that occurred once every two years for a ten year period.
4. A cap rate of 10% was used as a potential purchase price. This was compared with a potential for sale price equivalent to 115% of the Denton County Appraisal District assessed value. Any parcel with a purchase price greater than the acquisition price was considered as a higher reinvestment opportunity.

### D. Single Family Reinvestment Opportunity Analysis

Analysis was conducted to consider reinvestment opportunity in existing single family households outside of the four Focus Areas. The steps of that analysis are as follows:

1. Denton County Appraisal District data was scrubbed to select existing single family parcels smaller than 0.5 acres.
2. Only existing single family parcels outside of the four Focus Areas were selected.
3. The total appraised value (including land and structure) of existing single family parcels was compared with new home sales prices across the Lewisville single family market.

## Methodology

4. Evaluating total appraised value per square foot, existing single family parcel's value was characterized as a higher reinvestment opportunity if that total value was 20% or less than the total sales price of a comparable new home. If the existing single family parcel's total value was more than 20% of a comparable new home sales price, that existing single family parcel was categorized with lower reinvestment opportunity.

5. The parcels within the higher reinvestment opportunity were captured as potential redevelopment opportunity for single family homes.

### E. Multifamily Ease of Delivery Analysis

The ease of delivery analysis creates a market lens to look at market rate multifamily delivery. The primary question is whether a potential householder would be a renter or a home owner. Factors evaluated include: qualified salaries that can support new multifamily construction rates and annual income, derived from home value in a given census tract. If the annual income required to purchase a new home is greater than average salaries in the area, there is greater potential for a householder to be a renter rather than a home owner. This analysis also identifies areas with higher home values as locations where renters might want to move; higher home values typically reflect a neighborhood with desirable amenities. Areas with neutral and poor multifamily opportunities are not precluded from multifamily investment, but such new development must be positioned quite carefully to overcome more stringent underwriting standards.

#### Notes:

1: The "Lewisville Commons" area is primarily identified in this shapefile as Park, LF (Land fill), and PU (Public Use).

2: Erase is a GIS function that deletes parts of a shapefile that intersect with another shapefile.

### F. Multifamily Redevelopment Analysis

The following Parcels were analyzed:

1: All parcels within the "MF" category of the Land Use shapefile provided by the City of Lewisville.

2: Parcels have been reconciled with floodplain analysis.

#### Steps:

1: Using a 28 DU/acre density, all parcels were analyzed for their new development potential.

## Methodology

- 3: The potential for sale price of each parcel was determined to be Assessed Value + 15%.
- 4: An assumption is made that the redevelopers acquisition price is 40% of construction price per door (\$115,000/door).
- 5: All sites that have a lower “for-sale” price than an “acquisition” price is subject for redevelopment.

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City of Lewisville logo, City of Lewisville

Prepared by:



Contact:  
Catalyst Urban Development  
7001 Preston Rd.  
Ste. 500  
Dallas, TX 75206  
[www.catalysturban.com](http://www.catalysturban.com)



Contact:  
Freese & Nichols  
2711 North Haskell Ave.  
Ste. 330  
Dallas, TX 75204  
[www.freese.com](http://www.freese.com)

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