North Central Texas Council of Governments

DALLAS AREA RAPID TRANSIT SILVER LINE TRANSIT-ORIENTED DEVELOPMENT PARKING STUDY

April 2025



ACKNOWLEDGMENTS

Project Partners

North Central Texas Council of Governments (NCTCOG)

- Dallas Area Rapid Transit (DART)
- Town of Addison

City of Carrollton

- City of Dallas
- City of Plano
- City of Richardson

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AMLI (AMLI Addison) Avenue 5 (Aura One90) Balfour Beatty (Northside Buildings) Billingsley Company (Cypress Waters Properties) First Service Residential (Aventura Condominiums) Gaedeke Group (Millennium Tower) IMT Residential (IMT Prestonwood) Lincoln Property Company (Addison Circle Two & LYV Broadway) Mid-America Apartments (MAA Properties) Olympus Property (Lux on Main & Union at Carrollton Square) RPM Living (Morada Plano) Transwestern (CityLine One, Two, and Three) Willow Bridge (Junction 15) Windsor Communities (Windsor CityLine Apartments)

TABLE OF CONTENTS

Executive Summary	1
Introduction	4
Station Area Parking Analysis and Summary	8
Select Sites Analysis	14
Zoning Overview	47
Key Findings	55
Best Practice Parking Management Strategies	57
Silver Line TOD Parking Recommendations	69

APPENDIX A: Data Tables APPENDIX B: Property Survey APPENDIX C: District Summaries APPENDIX D: Site Summaries APPENDIX E: District Parking Requirements APPENDIX F: Expanded Best Practices Overview

EXECUTIVE SUMMARY

The DART Silver Line TOD Parking Study offers a new set of regional data, from Dallas Area Rapid Transit (DART)-served Transit-Oriented Developments (TODs), to inform future decisions about how parking is supplied, managed, and evaluated against alternative land uses to increase TOD investment and effectiveness in achieving growth and sustainability.

Excessive parking supply, whether provided to meet code requirements or perceived market demands, can create a cost barrier to TOD and reduce its potential transit ridership benefits. On-site parking constitutes a significant portion of overall development costs, typically ranging from 20% to over 30% in urbanized areas.¹ The guarantee of convenient on-site parking has also been consistently linked to increased reliance on driving and decreased use of transit, even in locations with accessible high-capacity transit.² This trend is further exacerbated if the cost of this parking is minimized³ or built into the cost of a development's housing or commercial-space costs.⁴

However, on-site parking remains a necessary amenity for most TOD investments, something that is particularly true for TOD in the DART Service Area. The data and analysis presented in this report is provided to help cities and developers better anticipate rates of parking generation for land uses developed on sites with walkable access to DART stations. It is based on field-collected supply and occupancy data from 34 private developments, five public parking districts, and selected on-street parking located within seven DART station areas. The central component of this report is a series of profiles from theses TODs and station areas, summarizing:

- On-site parking supplies, relative to code requirements;
- Parking demand patterns, from hourly measures completed in the first half of 2024;
- Parking pricing and other key management practices;
- Parking demand by land use type, DART ridership, and other measures;

Results provide localized measures of parking demand generated by common TOD land uses that can be used to inform both local development codes and developers' parking-need assumptions, leading to more "right sized" parking inventories at future TODs. The

^{1 &}lt;u>https://www.vtpi.org/park-hou.pdf</u> (page 30)

² Weinberger, R., Death by a thousand curb-cuts: Evidence on the effect of minimum parking requirements on the choice to drive. Transport Policy (2012), doi:10.1016/j.tranpol.2011.08.002 (page 8)

³ http://www.schallerconsult.com/pub/freeparking.htm

^{4 &}lt;u>https://mobilitylab.org/research-document/unbundling-parking-costs-is-a-top-way-to-promote-transportation-options/</u>

recommendations in this report are informed by a compilation of parking management best practices which can serve as a reference for strategies for aligning parking supply and management approaches to TOD objectives in the NCTCOG region.

Key Findings

This study identified four key findings, the supporting data for which will be outlined in the following sections. The four key findings are:

- 1. Parking Requirements Overestimate Need
- 2. Transit Proximity Alone May Not Reduce Parking Demand
- 3. Residents Use Free On-Street Parking Adjacent to Their Housing Complex
- 4. Residential Parking Sees Low Utilization Relative to Occupancy

These four key findings, paired with the overview of parking management best practices, help inform the recommendations found at the end of this report.

Recommendations

NCTCOG

- Conduct Annual Parking Utilization Studies
- Continue Developing TOD Parking Guidelines and Best Practices

Municipalities

- Reduce Parking Requirements in Transit-Oriented Areas
- Incorporate Non-Single Occupancy Vehicles (SOV) Incentives
- Enhance Multimodal Infrastructure
- Allow Off-Site Block-Face Parking to Meet Requirements
- Pursue Shared Parking for New Developments Adjacent to Overbuilt Sites
- Unbundle Parking Costs and Charge for On-Street Parking

Developers

- Use Data to Advocate for Lower Parking Ratios
- Identify Existing Excess Parking Supply and Pursue Shared Parking

Other TOD Stakeholders

- Promote Transit Ridership
- Support Policy Education and Outreach

Final Report

North Central Texas Council of Governments

Best Practice Parking Management Strategies

- Eliminate/Reduce Parking Requirements
- Parking Maximums
- Shared Parking Agreements
- Improve Mobility to Reduce Parking Demand
- Parking Management Districts
- Incentives for Public Parking
- Curb Space Management
- Parking Availability Platforms and Guidance Systems
- Fee-in-Lieu of Parking Options
- Crediting Off-Site Parking

INTRODUCTION

Study Background

In 2021, the Federal Transit Administration (FTA) awarded a planning grant to the North Central Texas Council of Governments (NCTCOG) to develop a Dallas Area Rapid Transit (DART) Silver Line Transit-Oriented Development (TOD) Corridor Plan. The goal of this plan is to increase potential Silver Line rail ridership through maximizing TOD opportunities and active transportation connections to stations within the corridor.

The Silver Line TOD Parking Study responds to this goal by analyzing the parking supply, management, and utilization conditions at TOD sites along the Silver Line and identifying standout practices as well as conditions that suggest opportunities for improvement. Study deliverables document measures of supply and occupancy and summarize parking requirements from 35 TODs, as well as on-street and off-street public parking facilities, spread across seven DART station areas, within six distinct cities, as shown in **Figure 1**.





Goals and Objectives

The intent of the Silver Line TOD Parking Study was to:

- Support development of a DART Silver Line TOD Corridor Plan with recommendations that focus on increasing potential Silver Line rail ridership;
- Understand parking trends in public and private parking facilities near future Silver Line stations;
- Produce findings based on parking use data collection; and
- Present recommendations for better parking management and policy at parking facilities along the corridor.

Approach and Methodology

Site Selection

The study area for the Silver Line TOD Parking Study consists of seven of the nine underconstruction DART Silver Line rail stations that have existing development: Addison, CityLine/Bush, Cypress Waters, Downtown Carrollton, Knoll Trail, 12th Street, and UT Dallas. These stations and their developed areas are in the cities of Dallas, Plano, Richardson, Carrollton, and Addison.

In collaboration with city governments and local stakeholders, NCTCOG identified the parking facilities (both private TOD sites and public off-street lots and on-street curb parking) that were analyzed in this study and secured access for data collection. Sites were selected for land uses that are estimated to represent ongoing or future development types and their proximity to the Silver Line rail stations. The studied sites are shown in **Figure 2** below and listed in **Appendix A**.



Figure 2 Studied Sites across the Silver Line Corridor

Parking Inventories and Occupancy Measures

Parking counts were completed within the private garages and surface lots for 28 multifamily and mixed-use sites and 10 off-street surface lots on Thursday, May 2 through Saturday, May 4, 2024. The garages and surface lots for four office properties were counted on Tuesday, April 30 through Thursday, May 2, 2024. Where on-street parking and public off-street parking were available, counts were completed by manual observation at 2-hour intervals on Thursday, May 2 through Saturday, May 4, 2024. Off-street parking utilization data for the majority of the private lots was collected via camera observation posted at entrance/exit points of each lot or garage in combination with initial walk-through manual counts providing continuous 72-hour parking utilization data.

Due to equipment failures, re-counts at four office and multifamily properties occurred Tuesday, May 14 through Saturday, May 18, 2024 and four re-counts on Tuesday, July 9 through Thursday, July 11, 2024. Data collection for the UT Dallas properties was completed on the original Thursday, May 2 through Saturday, May 4, 2024 dates because building occupancy in that station area is sensitive to college semester activity.

A single, baseline parking occupancy count was completed manually by a member of the project staff during the same 72-hour span, to ensure the accuracy of the camera-based counts. The baseline count was matched to the number of entrances and exits of traffic to formulate a demand profile across the full 72-hour period.

Property data such as building occupancy, number of bedrooms, and leasing rates were obtained via an initial survey of property managers and follow up emails with property representatives and city staff. The property survey can be found in **Appendix B**.

STATION AREA PARKING ANALYSIS AND SUMMARY

A summary profile was developed for each station area, based on collected data and site visits. These focus primarily on the scale and nature of on-site land uses, built parking supplies, zoning requirements and occupancy measures. Together, these profiles – which are available in **Appendix C** – provide an overview of how DART-based TODs have addressed parking, how markets have responded, and the implications for cities, developers, and TOD advocates across the DART service region. The data in this section summarizes key data points across the seven DART Silver Line corridor station areas. It should be noted that that when referring to "station areas" the date presented is not a comprehensive analysis of all parking but only reflects the sample in this study.

Key Parameters

Observed parking supply in the study sites across the DART Silver Line corridor is 27,351 spaces, made up of 24,960 off-street parking spaces (91%) and 2,391 on-street parking spaces (9%). The breakdown of parking spaces across each station area is shown in **Figure 3**.

	Total	On Stroot	Off-Street Spaces			
Station Area	Spaces	Spaces	Total Spaces	Private Spaces	Public Spaces	
Addison	5,962	514	5,448	5,019	429	
CityLine/Bush	8,348	224	8,124	7,685	439	
Cypress Waters	6,649	513	6,136	6,053	83	
Downtown Carrollton	2,559	488	2,071	1,451	620	
Knoll Trail	709	40	669	669	0	
12 th Street	810	144	666	524	142	
UT Dallas	2,314	468	1,846	1,652	194	
Total	27,351	2,391	24,960	23,053	1,907	

Figure 3 Observed Parking Supply in Study Sites across DART Silver Line Corridor Station Areas

Data Summary

Parking Demand by Land Use

Figure 4 shows the average utilization at peak by land use, for both weekdays and weekends, across all study sites. Sites with multiple land uses (16 of the 36 study sites or 44% of sites) are

grouped under the Mixed-Use category, given the parking data collection method used for this study captured occupancy for entire garages, surface lots and street segments, and does not differentiate between parking allocations by land use within them.

verage Parking Utilization on Weekend Peak

97%

59%

57%

i igui o i	Average i call Demand D		
La	and Use Category	Average Parking Utilization on Weekday Peak	Av
Office		39%	N/A

96%

61% 45%

Figure 4 Average Peak Demand by Land Use

Retail

Residential

Mixed-Use

On average, peak parking utilization is highest in retail-only developments. However, there are only two retail-only sites in the study – Rodeo Goat and Flying Fish and The Sound Restaurants – so this finding is not representative of overall retail parking demand given that most study area retail land uses are at mixed-use sites.

The average demand during peak utilization across residential-only sites in the study is 61% on weekdays and 59% on weekends. The highest peak parking utilization among residential-only developments corresponds to two of the residential-only sites with high occupancies: IMT Prestonwood in Knoll Trail and UT Dallas Northside Buildings 5,6,7 and 8.

Along the corridor, developments in which the primary land use is office space in the study have low weekday peak parking utilization, with an average peak of 39% and an average occupancy rate of 87%. The average expected peak utilization for sites in the study with a primary office land use would still be low if they were fully occupied – 47% utilization at 100% occupancy. Here, occupancy is measured as a percentage of office square feet leased during the study period.

Low parking utilization at offices is a trend that extends to mixed-used sites in the study. Mixeduse sites where the primary use is residential have an average weekday peak parking utilization of 66%. Mixed-use sites in the study where the primary use is office see an average peak of 33% utilization. Peak demand of each land use by station area is shown in **Figure 5**.

Station Area	Hotel	Mixed-Use	Office	Residential	Retail
Addison		70%	37%	44%	
CityLine/Bush	89%	26%		63%	
Cypress Waters		43%	42%	57%	96%
Downtown Carrollton		71%		86%	
Knoll Trail				83%	
12th Street		73%			
UT Dallas		54%		74%	

Figure 5 Weekday Average Peak Parking Utilization by Land Use and Station across Study Sites

Parking Demand Peaks

Figure 6 shows the peak parking utilization by station area across all private and public parking facilities in the study located both on-street and off-street. The study sites in the Knoll Trail and 12th Street station areas included only one and two parking facilities, respectively, so the peak parking results of those station areas should not be considered an aggregate of multiples sites.

Station Area	Peak Utilization	Peak Utilization Hour	Peak Utilization Day of Week
Addison	38%	10 AM	Weekday
CityLine/Bush	33%	10 AM	Weekday
Cypress Waters	31%	10 AM	Weekday
Downtown Carrollton	56%	8 AM	Weekend
Knoll Trail	84%	2 AM	Weekday
12 th Street	73%	8 PM	Weekend
UT Dallas	59%	12 AM	Weekday

Figure 6 Peak Parking Utilization by Station Area across Study Sites

Overall, the majority of station areas see peak parking during the weekday, while the Downtown Carrollton and 12th Street station areas see parking demand peak during the weekend, likely due to the high proportion of retail and dining land uses in those station areas. Peak utilization in the study sites within the Addison, CityLine/Bush, and Cypress Waters station areas are consistent with typical office-oriented land uses – morning to midday on weekdays – and coincide with the lowest peak parking demand rates along the corridor. This is indicative of an alignment between the office land use and a relatively lower peak parking demand.

Study sites within the UT Dallas and Knoll Trail both see their parking demand peak overnight, which aligns with residential land uses. The peak of the Downtown Carrollton and 12th Street station area study sites aligns with a mix of residential and retail land uses. **Figure 7** below

summarizes the peak for the study sites within each station area across both weekday and weekend data collection timeframes.

Station Area	Total Parking Spaces	Weekday Peak Occupancy	Weekday Peak Utilization	Weekday Peak Hour	Weekend Peak Occupancy	Weekend Peak Utilization	Weekend Peak Hour
Addison	5,962	2,286	38%	10 AM	1,538	26%	2 AM
CityLine/Bush	8,348	2,741	33%	10 AM	714	9%	12 AM
Cypress Waters	6,649	2,032	31%	10 AM	1,376	21%	8 AM
Downtown Carrollton	2,559	1,425	56%	12 AM	1,428	56%	8 AM
Knoll Trail	709	593	84%	2 AM	548	77%	2 AM
12 th Street	810	588	73%	12 AM	589	73%	8 PM
UT Dallas	2,314	1,357	59%	12 AM	1,346	58%	12 AM

Figure 7 Peak Parking Demand by Station Area Across Weekday and Weekend Timeframes

Land Use

Figure 8 summarizes the land uses analyzed for the study sites within each station area. Data was collected through a combination of property manager feedback, NCTCOG data, and City data.

Figure 8 Land Use Densities by Station Area

Station Area	Housing Units	Retail SF	Office SF
Addison	1,353	74,650	914,389
CityLine/Bush*	833	69,242	1,561,036
Cypress Waters	1,636	35,474	901,796
Downtown Carrollton	1,287	14,718	
Knoll Trail	438		
12 th Street	462	22,327	
UT Dallas	1,221	24,916	
Total	7,230	239,680	3,377,221

*Includes the Aloft Hotel, which includes 148 hotel rooms

Parking Demand by Current Transit Availability

Figure 9 shows on-street parking average peak utilization compared to transit ridership across station areas, as well as the DART bus and GoLink service available in each station area.

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Station Area	Parking Provided Over/Under Requirement	Peak Parking Utilization	Existing Rail	Existing DART Bus Routes and GoLink	Average Weekday Ridership (2024 fiscal year)
Addison	3%	38%, 10AM Weekday		22, 200, 202, 227, 229, 235, 236, 237, 238, 239, 240, Central Richardson GoLink	1,818
UT Dallas	-21%	59%, 12AM Weekday		883, 232	1,756
CityLine/Bush	25%	33%, 12PM Weekday	Red and Orange Lines	232, 245, 883, East Telecom GoLink	1,034
Downtown Carrollton	-3%	61%, 6PM Weekend	Green Line	229, Keller Springs GoLink	899
12 th Street	2%	73%, 8PM Weekend	Red and Orange Lines	N/A	713
Knoll Trail	18%	84%, 2AM Weekday		227, 237, 238	206
Cypress Waters	19%	36%, 10AM Weekday		Cypress Waters GoLink	

Figure 9 On-Street Parking Demand by Station Area, Sorted by DART Ridership

As shown in **Figure 9** above, there is not a direct correlation between the utilization of publicly available parking facilities and DART ridership in the studied sites. The station area with the highest ridership – Addison – and the one with the lowest ridership – Cypress Waters – see roughly the same peak parking utilization of 38% and 36% for the two station areas, respectively. Additionally, station areas with existing rail service fall in the middle of ridership, showing that areas with bus service but without rail service – like the Addison station area – can still encourage transit ridership. There is, however, greater bus route and GoLink availability and an overall higher transit ridership in many of the station areas without rail service.

While this study gathered parking utilization data, it only provides a cursory analysis of transit ridership. Many additional factors such as frequency of service, sidewalk connections, transit route connectivity, and more may influence travel and parking use. This short analysis did not find a clear relationship between the presence of various forms of transit and parking demand and more study is needed.

On-Street Parking Adjacent to Residential Sites

On-street parking adjacent to some residential sites in this study across the majority of station areas saw higher utilization than the station area as a whole, as well as peak times that align with typical residential parking behavior. A selection of these sites is shown in **Figure 30**, below.

Site	Station Area	Peak Garage Utilization	Peak Adjacent On-Street Utilization	Station Area On- Street Peak Utilization	
Aventura Condominiums	Addison	64%, 3AM	71%, 3AM	58%, 8PM	
Harper's at the Sound	Cupross Waters	67%, 12AM	92%, 12AM	710/ ODM	
Hasting's End	Cypress waters	30%, 3AM	90%, 12AM	/ 1 70, OMIVI	
Lux on Main	Downtown Carrollton	72%, 2AM	83%, 1AM	77%, 6PM	
Northside Building 5, 6, 7, 8	UT Dallas	85%, 11PM	84%, 11PM	68%, 12AM	

Figure 10 On-Street Parking Utilization at Select Residential Sites

High parking utilization in on-street parking spaces adjacent to residential sites in this study could suggest that residents would rather park in the free on-street parking rather than navigate within the site's garage. Often, the pedestrian path from on-street parking to the front door of a residential complex is more direct than from a parking space within a parking garage. Garage access may also be more time-consuming than simply parking in an on-street parking space. The incentive to park on-street is especially appealing when the street parking is free, as is the case in all of the selected sites in the study. Alternatively, the highly mixed-use nature of some of the future Silver Line station areas, especially those with residential complexes with ground floor retail, could see higher adjacent on-street parking demand simply from those accessing ground floor retail sites.

SELECT SITES ANALYSIS

Overview of Select Sites

Up to three private sites were selected from each station area to present a summary of private parking trends from each station area. Sites were chosen to represent a variety of land use combinations where available (i.e., single-use residential, single-use office, mixed use). **Appendix D** contains a full overview of every site in each station area.

Addison / Knoll Trail



Figure 11 Addison Parking Inventory



Figure 12 Knoll Trail Parking Inventory

The Addison station area includes ten private study sites that are a mix of resident-only, officeonly, and mixed-use land uses. The Knoll Trail station area only includes one analysis site. Residential is the primary land use across all study sites in both station areas, whether in a single-use or mixed-use development, followed by office and retail. **Figure 12** below shows the key land use parameters across the three selected sites in the Addison station area. The table includes the IMT Prestonwood site, which is located in the Knoll Trail station area, because of its proximity to Addison and because it was the only site analyzed in the Knoll Trail station area.

Site	Land Use			Land	d Use Den	Tenant Occupancy Rate			
	Primary	Secondary	Tertiary	Housing Units	Retail SF	Office SF	Housing	Commercial	
Aventura Condominiums	Residential			86	0	0	100%		
MAA Witt Place/ Morris Court	Residential	Office	Retail	307	12,976	3,660	93.5%	100%	
Millenium Tower	Office			0	0	357,102		77%	
IMT Prestonwood	Residential			438	0	0	100%		

Figure 13 Key Land Use Parameters Across Addison/Knoll Trail Selected Sites

Reflecting the overall characteristics of private sites within the station area, the land uses at the Addison and Knoll Trail selected study sites show residential land uses nearly fully occupied. In contrast, commercial land uses, particularly office land uses, are highly occupied but not to the same extent as the residential land uses.

	Parking Supply		١	Neekday		Weekend			
Site	Off- Street	Adjacent On- Street	Peak Observed Occupancy	PeakPeakFObservedUtilizationFOccupancyF		Peak Observed Occupancy		Peak Hour	
Aventura Condominiums	160	14	111	64%	3AM	105	60%	2AM	
MAA Witt Place/ Morris Court	365	24	321	83%	3AM	311	80%	6AM	
Millenium Tower	1,355	0	519	38%	1PM				
IMT Prestonwood	740	0	554	75%	2AM	549	74%	3AM	

Figure 14 Peak Parking Behavior at Addison/Knoll Trail Selected Sites

As shown in **Figure 13** above, the three sites in the Addison/Knoll Trail station areas with residential as the primary land use in this study see similar trends in contrast to the Millenium Tower office building. The three residential-dominant sites – Aventura Condominiums, MAA Witt Place/ Morris Court, and IMT Prestonwood – see their parking demand peak overnight, which is typical of residential land uses. Despite the residential sites having nearly full occupancy, as shown previously in **Figure 12**, their parking demand peaks at 64%, 83%, and

75% for Aventura Condominiums, MAA Witt Place/ Morris Court, and IMT Prestonwood, respectively. This indicates that these three sites may have an oversupply of parking.

Millenium Tower's parking demand peaks at 1PM, which is typical of office land uses in this study. Although this office site is not fully occupied, at 77% tenant occupancy, the parking demand peak of 38% is very low. At that demand rate, even if Millenium Tower saw a tenant occupancy of 100%, its parking demand would peak below 50%.

CityLine/Bush





Five private sites were analyzed in the CityLine/Bush station area. Three sample sites were selected for discussion here due to their representative nature of the station area at large. In the CityLine/Bush station area, office is the primary land use due to the large office towers at the mixed-use CityLine One and CityLine Two and Three sites. The residential Aura One90 and Windsor CityLine sites are both residential single-use sites studied within the CityLine/Bush station area. Aura One90 is located in Plano, north of President George Bush Turnpike, and Windsor CityLine is within the CityLine development in Richardson. All retail land uses analyzed are part of the CityLine One and CityLine Two and Three mixed-use sites. **Figure 15** identifies the key land use parameters across the three CityLine/Bush sample sites.

Land Use			La	and Use D	ensity	Tenant Occupancy Rate		
Site	Primary	Secondary	Housing Units	ng Retail s SF Office SF		Housing	Commercial	
Aura One90	Residential		386	0	0	96%		
CityLine One	Office	Retail	0	24,269	374,934		95%	
CityLine Two and Three	Office	Retail	0	44,973	1,186,102		95%	

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FIGURE IN	Key Land Use Parameters Across CityLine/Bush Selected Siles
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Both residential and commercial land uses in the CityLine/Bush station area selected sites see high tenant occupancy rates – at 96% and 95%, respectively. For Aura One90, a 96% housing occupancy rate would suggest that between 370 and 372 of its 386 units are leased.

	Parking Supply		١	Neekday		Weekend		
Site	Off- Street	Adjacent On- Street	Peak Observed Occupancy	Peak Utilization	Peak Hour	Peak Observed Occupancy	Peak Utilization	Peak Hour
Aura One90	507	0	315	62%	4AM	298	59%	4AM-5AM
CityLine One	1,328	25	211	16%	10AM			
CityLine Two and Three	5,785	58	2,160	37%	12PM			

Figure 17 Peak Parking Behavior at CityLine/Bush Selected Sites

As shown in **Figure 16**, above, Aura One90, sees a peak parking utilization of 62% at 4AM on weekdays despite its high tenant occupancy of 96%. Aura One90 also includes a number of individually leased garages on the ground floor of each building that may have facilitated some parking but due to their nature are difficult to collect data on and may also be used for storage and not parking. An image of these individually leased ground floor garages is provided in **Figure 17** below. As such, it is possible that the parking demand at Aura One90 is higher than what was counted during data collection, or that many residents were not present during data collection.



Figure 18 Individual Garage Example at Aura One90

Source: Google Street View

CityLine One and CityLine Two and Three saw very low weekday parking utilization of 16% and 37%, respectively. While these two properties have high tenant occupancy rates, the garage used by CityLine Two and Three has 41% more parking supply than what is required by code, while CityLine One sees a parking supply relatively equal to the code requirement (see **Figure 40**). Their primary office land use and low utilization rates could indicate that many employees at these sites have hybrid or work-from-home schedules, or a high use of the adjacent DART rail station by employees. The peak hour of parking utilization across the three sites followed standard trends of overnight peaks at residential sites and midday peaks at office-oriented sites.

Cypress Waters





Parking utilization was analyzed at ten total private sites in the Cypress Waters station area. The trends of parking and land use from three sites are summarized below. The area of Cypress Waters sampled is primarily made up of residential land uses, with large office land uses spread primarily across three sites. Of the residential study sites in the station area, most are multifamily complexes while some townhomes are also present.

5	5						
	Land	Lan	d Use Der	Tenant Oc	Tenant Occupancy Rate		
Site	Primary	Secondary	Housing Units	Retail SF	Office SF	Housing	Commercial
9797 Rombauer	Office		0	0	248,427		92%
Hasting's End	Residential		499	0	0	81%	
Office Building and Townhomes	Office	Residential	50	0	255,934	100%	92%

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Floure 20	Key Land Use Paran	neiers across Cybress waie	rs selected siles
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As shown in **Figure 19**, above, office space at the single-use 9797 Rombauer property and the mixed-use Office Building and Townhomes property saw the same tenant occupancy rate of 92%. Housing occupancy rates, however, differed between the Hasting's End multifamily complex and the townhomes in the Office Building and Townhomes site, at 81% and 100%, respectively.

	Parking Supply		Weekday			Weekend		
Site	Off- Street	Adjacent On- Street	Peak Observed Occupancy	Peak Utilization	Peak Hour	Peak Observed Occupancy	Peak Utilization	Peak Hour
9797 Rombauer	765	17	332	43%	11AM			
Hasting's End	794	31	246	30%	3AM	242	29%	3AM
Office Building and Townhomes	1,246	106	391	29%	1PM			

Figure 21 Peak Parking Behavior at Cypress Waters Selected Sites

Figure 20 above shows that parking utilization across the three sites saw peaks of lower than 50%, and in the case of Hasting's End and Office Building and Townhomes, under 30%. The low parking utilization at the two office-oriented sites could be attributed to work-from-home or hybrid employee schedules, but the low peak parking utilization of 30% at Hasting's End could suggest that fewer than half of its residents own vehicles. At 81% tenant occupancy, around 404 of its 499 housing units are leased. Because the Cypress Waters station area has no transit service aside from GoLink, this low parking utilization is unlikely to be attributed to high transit usage rates. Other unknown factors may also have caused the low parking use observed in May 2024 at Hasting's End.

Downtown Carrollton





Four private sites were studied in the Downtown Carrollton station area, three of which are summarized below. Residential is the primary land use among the sites analyzed – Switchyard is single-use residential with a surface parking lot, whereas LYV Broadway and Union at Carrollton Square are residential with ground floor retail and wrapped around parking garages.

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Site	Land	Lan	d Use Der	Tenant Oc	Tenant Occupancy Rate				
	Primary	Secondary	Housing Units	Retail SF	Office SF	Housing	Commercial		
Switchyard	Residential		234	0	0	94%			
LYV Broadway	Residential	Retail	390	6,048	0	96%	100%		
Union at Carrollton Square	Residential	Retail	311	4,611	0	94%	100%		

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Figure 22 shows that all of the commercial tenant spaces are occupied in LYV Broadway and Union at Carrollton Square, whereas the housing occupancy ranges between 94% and 96% across the three sites. These housing occupancy rates would suggest that 220 of the housing units in Switchyard are occupied, 375 units are occupied in LYV Broadway, and 293 units are occupied in Union at Carrollton Square.

	Parking Supply		Weekday			Weekend		
Site	Off- Street	Adjacent On- Street	Peak Observed Occupancy	Peak Utilization	Peak Hour	Peak Observed Occupancy	Peak Utilization	Peak Hour
Switchyard	235	19	218	86%	2AM	218	86%	2AM
LYV Broadway	457	102	414	74%	2AM	413	74%	2AM
Union at Carrollton Square	473	104	404	70%	9PM	415	72%	2AM

Figure 24 Peak Parking Behavior at Downtown Carrollton Selected Sites

As shown in **Figure 23**, parking utilization at the three sites is high compared to most residential-oriented sites in other Silver Line corridor station areas. At Switchyard, the peak utilization is identical during both weekday and weekend analysis timeframes at 86%. A peak parking occupancy of 218 spaces aligns closely with the presumed 220 occupied housing units at Switchyard, indicating that there is an average of close to one vehicle per housing unit.

At Union at Carrollton Square, the peak observed occupancy 415 suggests that visitors to the ground floor and nearby retail locations use the garage. The relatively early weekday peak parking hour of 9PM at Union at Carrollton Square indicates that the public parking in that garage is used during the weekday and overnight on weekends. Peak occupancy at the garage surpasses the number of housing units, likely reflecting a vehicle-per-household rate of more

than one. At LYV Broadway, all retail visitors must park on-street or in adjacent surface lots, which likely explains its peak demand timeframes that align with those of typical residential complexes.

As noted previously, many residents in the Downtown Carrollton station area likely park on the street adjacent to the residential sites as indicated by the high block-face parking utilization compared to the station area as a whole, so some of the residential demand may not be captured in these garage counts. Additionally, there are many retail establishments in the immediate area which are likely served by on-street parking and the many public parking surface lots nearby, which could explain the high demand for on-street parking. Please refer to the **Downtown Carrollton Walkable District** section of the report for addition discussion on the study area.

12th Street





Only two private sites were analyzed within the 12th Street station area, both of which are summarized below. Both sites have primarily residential land uses with ground floor retail.

		5						
	Land	Lan	d Use Den	Tenant Occupancy Rate				
	Site	Primary	Secondary	Housing Units	Retail SF	Office SF	Housing	Commercial
	Morada Plano	Residential	Retail	183	12,702	0	97%	83%
	Junction 15	Residential	Retail	275	9,625	0	94%	68%

Figure 26	Key Land Use Parameters Across 12 th Street Selected Sites
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Figure 25 shows that both 12th Street station area sites see high tenant occupancy rates within their housing complexes, with 97% of the 183 housing units occupied in Morada Plano and 94% of the 275 housing units occupied in Junction 15. The ground floor retail in both complexes see comparatively lower occupancy rates, with only 83% and 68% of the retail uses occupied by tenants in Morada Plano and Junction 15, respectively.

	Parking Supply		Weekday			Weekend		
Site	Off- Street	Adjacent On- Street	Peak Observed Occupancy	Peak Utilization	Peak Hour	Peak Observed Occupancy	Peak Utilization	Peak Hour
Morada Plano	333	13	213	62%	10PM	237	67%	7PM
Junction 15	333	17	311	92%	4AM	306	92%	4AM

Figure 27 Peak Parking Behavior at 12th Street Selected Sites

Approximately 35% (120 spaces) of Morada Plano's parking supply is intended for public retail use in the ground floor of the site and in the surrounding station area. Due to the large share of retail-oriented parking supply at Morada Plano, the peak occurs during the weekend rather than during the week, and the peak hour occurs earlier than a typical residential site, occurring between 7PM and 9PM. **Figure 26**, above, shows that peak utilization is low across both weekday and weekend timeframes, indicating that car ownership may be low at this site.

Comparatively, Junction 15, with its lower share of retail-oriented parking supply (approximately 9% of the total supply), sees its peak hour occur overnight, which is typical of residential land uses.

UT Dallas



Figure 28 UT Dallas Parking Inventory

The UT Dallas station area is a primarily residential station area that serves the University of Texas at Dallas and sees a high student tenant population. The Northside development has several phases, some of which are recent construction. The station area contains 16 total residential buildings, three garages, and seven surface lots. Three sites are summarized below.

Site	Land	Lan	d Use Der	Tenant Occupancy Rate			
	Primary	Secondary	Housing Units	Retail SF	Office SF	Housing	Commercial
Northside Building 1	Residential	Retail	150	16,635	0	94%	90%
Northside Buildings 5 through 8	Residential		140	0	0	96%	
Northside Buildings 13 through 16	Residential	Retail	387	6,600	0	94%	0%

Figure 29	Key Land Use Parameters Acro	ss UT Dallas Selected Sites
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As shown in **Figure 28**, tenant occupancy is high across the board at the Northside development, with between 94% and 96% occupancy in the selected sites. As mentioned, some commercial tenants associated with later phases of the Northside development (building 13) have not been occupied by new tenants yet – however, tenant occupancy in the commercial buildings associated with the first phase (Building 1) are 90% occupied.

Figure 30 Peak Parking Behavior at UT Dallas Selected Sites

	Parking Supply		Weekday			Weekend		
Site	Off- Street	Adjacent On- Street	Peak Observed Occupancy	Peak Utilization	Peak Hour	Peak Observed Occupancy	Peak Utilization	Peak Hour
Northside Building 1	396	46	263	60%	11PM	251	57%	10PM
Northside Buildings 5 through 8	169	103	228	84%	11PM	212	78%	12AM
Northside Buildings 13 through 16	462	185	345	53%	2AM	152	24%	12AM

Figure 29, above, shows that peak utilization differs between Northside buildings, with a weekday peak of 84% utilization in the surface lot associated with buildings 5 through 8, and a weekday peak of 60% utilization in the garage associated with building 1. This discrepancy could indicate a preference for surface lot use over garage use, as a discrepancy this large is unlikely due to a difference in car ownership for adjacent properties. Generally, university students tend to have lower car ownership than working adults. This is evidenced by the fact that the Northside development was built with a lower parking supply than required by code

(see **Figure 44**), and that the parking surfaces associated with the Northside development see much lower than full utilization. Overall public and on-street utilization peaks in this station area overnight, suggesting that many residents may prefer to use on-street parking.

WALKABLE DISTRICTS

Five walkable districts within the seven Silver Line Corridor station areas were studied. These are areas with dedicated public parking intended to be shared by multiple retail land uses in a walkable environment. NCTCOG considers walkable districts to be those where most of their buildings, sidewalks, and streets are designed for the safety, comfort, and convenience of pedestrian travel. They contain a mix of connected land uses including commercial and residential uses with typically more density than the average North Texas neighborhood.

While some walkable districts make up most of the station area (e.g., CityLine), most represent just a subset. The following walkable districts were analyzed for their parking use trends:

- The Sound at Cypress Waters
- Downtown Carrollton
- Addison Circle
- UTD Northside
- CityLine

Figure 31, below, highlights the percentage of parking spaces in this study reserved for the land uses in each station area where there is a walkable district. Many of the land uses in each station area have reserved parking aligned to each land use, but parking spaces identified as "Public" refers to both off-street public parking intended for retail use as well as public on-street parking. Some of the parking spaces in the mixed-use garages may also be open to public use, but use breakdowns were not available for all parking facilities.



Figure 31 Parking Space Percentage by Land Use per Station Area

Figure 25 below shows the total parking supply per land use by station area. As in **Figure 24**, "Public" refers to both on-street and off-street public parking.



Figure 32 Parking Spaces by Land Use per Station Area



The Sound at Cypress Waters Walkable District

The eastern portion of the Cypress Waters station area sees a majority multifamily residential land use with two retail sites. East of Rombauer Road, six multifamily residential complexes were analyzed: Bleecker Street at the Sound, Byron Bay at the Sound, Harper's at the Sound, Hasting's End, Office Building and Townhomes, and The Wharf at the Sound. The only ground floor retail present in these multifamily buildings exists at The Wharf at the Sound, but only consists of a small 300 SF retail space. Two nearby surface lots supporting retail sites were also analyzed: the Rodeo Goat and Flying Fish restaurants and The Sound Restaurants.


Figure 33 Weekday Entries at The Wharf at the Sound





While the Rodeo Goat, Flying Fish, and The Sound restaurants have a dedicated surface parking lots, the garage at the Wharf at the Sound is the only nearby garage to have any public parking supply intended for use at the nearby retail sites, with 83 spaces dedicated to district retail use. The Wharf garage has two entry points: one for multifamily residents and one for retail use. As shown in **Figure 33** and **34** above, multifamily entries follow a typical residential demand pattern – with peaks occurring around lunchtime and in the early evening during weekdays and during the evening on weekends. As shown in the same figures, retail entries occur throughout the day but peak in the late afternoon/early evening on weekdays and in the later evening on weekends, which is typical of restaurant demand patterns. Some vehicles appeared to enter the parking garage via the retail entry point after hours, suggesting that some residents may be using the retail entry point to access the residential land use.

•	51		0			
Site	Parking	Week	day Peak	Weekend Peak		
one	Supply	Demand	Utilization	Demand	Utilization	
The Wharf at the Sound & District Retail Parking	480 spaces (170 public)*	214 spaces	55%, 3AM	211 spaces	54%, 4AM	
Rodeo Goat & Flying Fish	44 spaces	42 spaces	94%, 12PM	41 spaces	92%, 6PM	
The Sound Restaurants	56 spaces	54 spaces	96%, 6PM	56 spaces	100%, 6PM-8PM	
On-Street Parking	513 spaces	303 spaces	59%, 6PM	365 spaces	71%, 8PM	

Figure 35 Peak Demand Trends at Cypress Waters Retail Parking Facilities

*Includes block-face on-street parking

Data identifying land use-specific utilization within the garage of The Wharf at the Sound was not available, but as shown in **Figure 35**, the peak utilization at that site occurs overnight, in line with typical demand patterns for residential land uses. The surface parking lot at the Rodeo Goat and Flying Fish restaurants sees a nearly fully utilized parking facility at its weekday and weekend peaks, with 94% utilization at 12PM on weekdays and 92% utilization at 6PM on weekdays and 100% utilization from 6PM-8PM on weekends. While these surface lots see high utilization, the retail spaces in The Wharf at the Sound see comparatively low utilization, suggesting that non-adjacent garage parking is a less attractive option. Additionally, on-street parking is available on many streets near the retail areas of Cypress Waters and is likely perceived as easier to access and navigate than the garage option.

Parking utilization in this walkable district tends to be high at the retail land uses and in adjacent on-street parking, and relatively low in the residential and mixed-use oriented parking facilities. Despite the mixed-use nature of the district, parking supply is more appropriately right-sized for retail and dining land uses.



Downtown Carrollton Walkable District

The Downtown Carrollton walkable district within the Downtown Carrollton station area is primarily made up of multifamily residential complexes with ground floor retail. Analyzed public parking is abundant in this walkable district, with nearly 43% of the station area's 2,584 parking spaces available to the public. Public parking in the Downtown Carrollton district was analyzed via nine surface parking lots, two garages with a small section of dedicated public parking, as well as public on-street parking. Use trends for the nine public lots and on-street parking are summarized below in **Figure 36**.

Cite	Parking Weel		lay Peak	Weekend Peak	
Site	Supply	Demand	Utilization	Demand	Utilization
Night weekend lot	56 spaces	28 spaces	50%, 6PM	40 spaces	71%, 6PM
Fire Dept. Lot	51 spaces	19 spaces	37%, 12PM	26 spaces	51%, 6PM
1200 Broadway Lot	16 spaces	14 spaces	88%, 6PM	10 spaces	63%, 6PM
1212 Broadway Lot	32 spaces	14 spaces	44%, 6PM	17 spaces	53%, 2PM, 6PM
Van Hyundai North Lot	59 spaces	12 spaces	20%, 12PM	35 spaces	59%, 6PM
1300 Broadway Lot	62 spaces	60 spaces	97%, 6PM	62 spaces	100%, 6PM
Van Hyundai South Lot	151 spaces	35 spaces	23%, 10PM	67 spaces	44%, 6PM
1439 Elm St Lot	32 spaces	20 spaces	63%, 8AM	26 spaces	81%, 6PM
1038 Elm St Lot	15 spaces	13 spaces	87%, 2PM	15 spaces	100%, 6PM
Public Lot Parking Overall	474 spaces	183 spaces	39%, 6PM	298 spaces	63%, 6PM
On-Street Parking	488 spaces	356 spaces	73%, 6PM	376 spaces	77%, 6PM

Figure 36 Downtown Carrollton Walkable District Public Lot and On-Street Use Trends

As shown in **Figure 36**, many public surface lots and on-street parking see common peaks: midday or early evening on weekdays, and a consistent 6PM weekend peak almost across the board. As many of the retail locations in the Downtown Carrollton walkable district are dining establishments, these peaks align with lunchtime, happy hour, or dinner timeframes. Peak utilization is not consistent – with some lots seeing nearly full utilization while others peak at less than half full.

Two multifamily residential complexes with ground floor retail in the Downtown Carrollton walkable district contain a dedicated portion of public parking. While utilization data of this public parking was not collected separately from total use, the use trends of each garage as a whole is summarized below in **Figure 37**.

	Residential Commercia	Commercial	Parking	Weekday Peak		Weekend Peak	
Site Occup Ra	Occupancy Rate	Occupancy Rate	Supply	Demand	Utilization	Demand	Utilization
Lux on Main	95%	100%	457 spaces (72 public)*	345 spaces	69%, 2AM	327 spaces	65%, 2AM
Union at Carrollton Square	94%	100%	473 spaces (225 public)*	404 spaces	70%, 9PM	415 spaces	72%, 2AM

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*Includes block-face on-street parking

As shown in **Figure 37**, the Lux on Main residential complex sees its peak parking demand timeframe occurring overnight, which is typical for residential land uses. The relatively small supply of public parking in this complex appears to have not impacted on the overall peak. At the Union at Carrollton Square complex, however, the weekday peak occurs at 9PM, which could be a result of those using the public parking supply in that garage. The public parking supply in the Union at Carrollton Square garage makes up a much larger portion than that of the public parking supply at the Lux on Main garage, which could explain its influence on the peak weekday timeframe. In general, as demonstrated by the public surface lot peak parking demand values in **Figure 36**, it could be possible that drivers prioritize parking in the available spaces within the surface lots or street parking than the available spaces within the garages, as driver behavior tends to prefer surface lots or street parking to garages when choosing between the two.

The generally low utilization of public surface parking in the Downtown Carrollton walkable district suggests that the parking supply needed to serve the district's retail and dining land uses is adequate. Any future development process should take the abundance of available parking into account when planning any new parking structures. Reducing the parking supply in a new adjacent development and making use of existing parking facilities would help even out the demand for parking in this district.

Addison Circle Walkable District



The sites studied in the Addison Circle walkable district within the Addison station area are primarily mixed-use developments with ground floor retail, with single-use developments making up a smaller portion of the district. Public parking was studied through 514 of the district's on-street parking spaces and additional 429 public spaces found in four garages that support a mix of uses. Use trends for these facilities are found in **Figure 38**, below.

5			•	5			
	Retail	Commercial	Parking	Weekda	ay Peak	Weekend Peak	
Site	Square Footage	Occupancy Rate	Supply	Demand	Utilization	Demand	Utilization
Paschal Place Public Parking			212 spaces	180 spaces	85%, 3AM	147 spaces	69%, 3AM
MAA Robertson Place/The McKamy	16,761	82%	508 spaces (107 public)*	361 spaces	71%, 3AM	315 spaces	62%, 4AM
MAA Noell House/The Julian	20,499	83%	345 spaces (145 public)*	aces blic)* 304 spaces 88%, 10PM 300 spaces		300 spaces	87%, 9PM
MAA Witt Place/Morris Court	12,976	100%	389 spaces (83 public)*	321 spaces	83%, 3AM	311 spaces	80%, 6AM
On-Street Parking			514 spaces	275 spaces	54%, 5PM	297 paces	58%, 9PM

Figure 38 Addison Circle Private Sites with Public Parking Use Trends

*Includes block-face on-street parking

Use trends at the Paschal Place parking garage, the MAA Robertson Place/The McKamy garage, and the MAA Witt Place/Morris Court garage see peak parking demand occur overnight on weekdays and between overnight and early morning on weekends. These garages are shared by residents and the public, with the majority of the parking supply reserved for residents and their visitors. The peak parking demand for these sites follows a typical residential parking peak.

The other two sites analyzed in **Figure 38**, MAA Noell House/The Julian and the district's onstreet parking, show a peak parking demand occurring in the early to late evening between the weekday and weekend analysis periods. This earlier peak could be explained by the large proportion of public to private parking spaces in MAA Noell House/The Julian: 42% of its parking spaces are public. On-street parking, while having a lower overall utilization compared to the garages with a mix of public and private spaces, sees a peak in line with typical dining land uses – 5PM during weekdays and 9PM during weekends.

The general availability of on-street parking, despite relatively high utilization of private offstreet parking reserved for residential uses, suggests that demand for public parking is far below existing capacity. Any future development in the Addison Circle walkable district should take into consideration the location and availability of on-street public parking.

UTD Northside Walkable District

The UTD Northside walkable district is found within the UT Dallas station area and is made up of multifamily residential complexes with and without ground floor retail. The district contains the various UTD Northside buildings – all part of one development with a majority student resident population.

The facilities in this station area consist of four surface lots and six garages that are reserved for residents and their visitors. The only public parking available in this station area is found in three retail-oriented surface lots and 468 spaces of on-street parking. **Figure 39** below details the use trends for the station area's public parking supply.

	Retail Tenant		Parking	Weekday Peak		Weekend Peak	
Site	Square Footage	Occupancy Rate	Supply	Demand	Utilization	Demand	Utilization
Northside Building 1 Retail Lot	14,023	90%	57 spaces	57 spaces	100%, 6PM	57 spaces	100%, 10PM
Northside Buildings 2, 3, 4 Retail Lot	4,293	100%	137 spaces	70 spaces	51%, 6PM	80 spaces	58%, 8PM- 10PM
On-Street Parking			468 spaces	317 spaces	68%, 8PM	316 spaces	68%, 10PM

Figure 39	UI Dallas Walkable District Public Lot and On-Street Use Trends

Use trends in the UTD Northside district's public parking follow a consistent pattern: weekday peak parking demand falls between the 6PM-8PM timeframe, and weekend peak parking demand occurs between 8PM and 10PM.

As shown in **Figure 39**, the retail lot associated with Building 1 of the Northside development is fully utilized at its weekday and weekend peaks despite a 90% retail tenant occupancy rate during the data collection timeframe. Overall, there is more retail square footage in Building 1, but much fewer parking spaces than in the retail lot associated with Buildings 2 through 4, which is the likely explanation for the high relative utilization of the Building 1 lot. Many retailers in this walkable district are open late – including the Northside Drafthouse, open until 12AM, and Insomnia Cookies, open until 1AM – which could explain the late weekend peak.

The relative low on-street parking utilization suggests that demand for public parking is low enough that there is enough on-street capacity to support existing land uses. The district's location adjacent to UT Dallas could incentivize drivers to park in the walkable district and walk to the university. Parking management tools such as time-limited parking could help combat this behavior.



CityLine Walkable District

The CityLine walkable district that was analyzed within the CityLine/Bush station is a mixed-use development. As shown in the map above, this study collected data at a single-use multifamily residential complex, a single-use hotel, and two large mixed-use developments comprised of office and ground floor retail. One additional single-use residential complex, Aura One90, was included in the CityLine analysis due to proximity but is not part of the CityLine development. Other locations within this walkable district did not have their parking facilities analyzed. Public parking studied in this walkable district exists as on-street parking and as retail reserved parking in the mixed-use CityLine One and CityLine Two and Three garages. **Figure 40** below

summarizes the overall use trends of these parking facilities; the data analysis did not include separate use trends for each land use.

011	Retail	Commercial	Parking	Weekd	lay Peak	Weekend Peak**	
Site	Square Footage	Occupancy Rate	Supply	Demand	Utilization	Demand	Utilization
CityLine One	24,269	95%	1,353 spaces (116 public)*	211 spaces	16%, 10AM		
CityLine Two and Three	44,973	95%	5,843 spaces (406 public)*	2,160 spaces	37%, 12PM		
On-Street Parking			224 spaces	193 spaces	86%, 6PM	189 spaces	84%, 8PM

Figure 40 CityLine Private Sites with Public Parking Use Trends

*Includes block-face on-street parking

**Data was not collected over the weekend at office-dominant sites due to the anticipated low demand

At both CityLine garages in this study, the public parking intended for retail use makes up a small portion of the overall parking supply. Therefore, it is not expected that the utilization of that retail parking supply would greatly impact the overall peak timeframe for each garage. The midmorning peak parking demand timeframe in each garage aligns with that of a typical parking facility supporting an office land use. In general, parking demand is very low in these two garages, which could be influenced by the hybrid or work from home policies that many office buildings have supported since the COVID-19 pandemic. Additionally, the low office parking demand could be related to the existing CityLine/Bush DART high-capacity rail station, which is just adjacent to the CityLine One and CityLine Two and Three office buildings and serves the Red and Orange Lines. There is comfortable and direct pedestrian access between the station and office buildings.

The use trend of on-street parking paints a clearer picture of how retail visitors are parking within the analyzed sites in the CityLine walkable district. Weekday and weekend see high peaks of 86% and 84%, respectively, and the peak timeframes of between 6PM and 8PM align with those of typical dining land uses. The dominant tenant type across the retail spaces in this walkable district was dining during the data collection period.

On-street parking demand that was studied in this walkable district is relatively high, but shared garages with public parking spaces see low utilization rates. While this study did not examine the parking utilization of the retail parking in garages specifically, this trend could show a general preference for on-street parking over garage parking to access retail land uses.

Considering the amount of underutilized parking in garages serving mixed-use properties, any expansion of public parking supply in this walkable district should begin within these garages before any new structures are built. The walkable nature of the pedestrian plaza along State Street in front of the CityLine Two and Three buildings, as shown in **Figure 41** could be a contributing factor for the preference of on-street parking to garage parking.



Figure 41 Pedestrian Plaza outside CityLine Two and Three

Source: Google StreetView

ZONING OVERVIEW

Baseline parking requirements for the study sites were determined by the zoning codes of six different municipalities and ten distinct sets of station area-specific parking standards, as shown in **Figure 42**. A table listing the parking requirements associated with each TOD site can be found in **Appendix E**.

City	Station	Defining Code of Ordinance/Station Area Code for Parking Standards	No. of Sites
Addison	Addison	Addison, TX Code of Ordinances, UC Urban Center District Regulations	8
Carrollton	Downtown Carrollton	Carrollton Comprehensive Zoning Ordinance, (DTC) Downtown Transit Center District Regulations	4
Dallas	Cypress Waters	Planned Development District 741, Mixed Use Development	10
Dallas	Knoll Trail	Dallas City Code, SEC 51A-13.402 Required Parking, WMU and WR District Required Spaces	1
Richardson	UT Dallas	Northside at UTD Planned Development District (Ord. 4053)	2
Richardson	UT Dallas	UT Dallas TOD Planned Development District (Ord. 4192)	4
Plano	CityLine/Bush	PD-491-CC and Plano Zoning Ordinance	1
Plano	12th Street	BG, Downtown Business/Government District	2
Richardson	CityLine/Bush	City of Richardson Comprehensive Zoning Ordinance	1
Richardson	CityLine/Bush	Caruth Properties Transit Oriented Development Code - PD 4028, TOD Core	3

Figure 42 Parking Standar	ds
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Parking Standards and Requirements

Minimum parking requirements for commercial and residential uses vary across the 10 sets of parking standards. **Figure 43** shows the average parking requirement by land use.

	Average Derking Dequirement	Range of Parking Requirements			
	Average Parking Requirement	Minimum	Maximum		
1K SF of Retail/Dining	3.65	3.33	4.44		
1K SF of Office	3.26	2.00	4.44		
Studio Unit	1.17	1.00	1.50		
1-Bedroom Unit	1.17	1.00	1.50		
2-Bedroom Unit	1.62	1.25	2.00		
3-Bedroom Unit	1.96	1.25	3.00		

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FIGURE 43	Parking Reg	iniremenis:	nv L	ana	ISA
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Most of the study sites are required to provide between 3.33 and 4 parking spaces per 1,000 square feet of retail or dining. Two outliers, which were not included in Retail/Dining calculations above, are the Dallas City Code and Plano Zoning Ordinance, both of which require ten spaces for every 1,000 square feet of floor area for restaurants and cafeterias.

The Carrollton Comprehensive Zoning Ordinance (DTC) Downtown Transit Center District Regulations has the lowest parking requirement for general office use, 2 spaces per 1,000 square feet. The remaining parking standards require at least 3 spaces per 1,000 square feet. Planned Development District 4053, which regulates part of the Northside Development at UT Dallas, requires the most spaces (4.44 per 1,000 square feet). However, it is worth noting that the UT Dallas Northside sites studied do not have office space.

Among residential land uses, 3-bedroom units have the biggest range in parking requirements. For sites in Downtown Carrollton, Cypress Waters, and the CityLine/Bush properties in Richardson, parking requirements are the same regardless of unit size. Sites in these locations are required to provide 1.5 spaces or less for a 3-bedroom unit. On the other hand, UT Dallas Northside requires one parking space per bedroom, putting it at the higher end of the requirement range.

Provided vs. Required Parking

Figure 44 compares the amount of off-street parking provided in a site to the baseline amount required by their regulating parking standards. 14 of the sites studied provide less parking than required by their regulating parking standards, while 19 provide more parking than is required. Roughly 19 % of study sites with complete land use data have a parking supply that is within 5% of the calculated required supply (7 sites).

Site	Station	On-Site Parking Spaces	Baseline Parking Requirement	Provided Spaces vs. Baseline Requirement
Junction 15**	12 th Street	350	350	0%
Morada Plano**	12 th Street	346	329	5%
Addison Circle One/MAA Cotton Lofts	Addison	1,345	1,224	10%
Addison Circle Two	Addison	707	699	1%
AMLI Addison	Addison	519	446	16%
Aventura Condominiums	Addison	160	167	-10%
MAA Noell House /The Julian	Addison	273	292	-7%
MAA Robertson Place/The McKamy	Addison	486	631	-23%
MAA Witt Place/Morris Court	Addison	365	413	-12%
Millennium Tower	Addison	1,355	1,189	14%
Aloft Hotel	CityLine/Bush	55	185	-70%
Aura One90	CityLine/Bush	507	453*	12%
CityLine One	CityLine/Bush	1,328	1,330	0%
CityLine Two and CityLine Three	CityLine/Bush	5,785	4,100	41%
Windsor CityLine	CityLine/Bush	449	449	0%
3401/3501 Olympus	Cypress Waters	1,600	1,191	34%
9797 Rombauer	Cypress Waters	765	745	3%
Bleecker Street at the Sound	Cypress Waters	412	315	31%
Byron Bay at the Sound	Cypress Waters	401	341	18%
Harper's at The Sound	Cypress Waters	425	354	20%
Hastings End	Cypress Waters	794	649	22%
Office Building and Townhomes	Cypress Waters	1,246	833	50%
Rodeo Goat & Flying Fish	Cypress Waters	44	44	0%
The Sound Restaurants	Cypress Waters	56	118	-53%
The Wharf at the Sound Residential	Cypress Waters	310	386	-20%
Lux on Main	Downtown Carrollton	432	453	-5%
LYV Broadway	Downtown Carrollton	457	504	-9%
Switchyard	Downtown Carrollton	235	292	-20%
Union at Carrollton Square	Downtown Carrollton	473	402*	18%
IMT Prestonwood	Knoll Trail	669	565	18%
Northside Building 1	UT Dallas	396	390	2%
Northside Building 2,3,4	UT Dallas	317	286	11%
Northside Building 5,6,7,8	UT Dallas	169	332	-49%
Northside Building 9	UT Dallas	360	331	9%
Northside Plus Building 10,11,12	UT Dallas	142	370	-62%

Figure 44 On-Site Parking Compared to Baseline Parking Requirements

Site	Station	On-Site Parking Spaces	Baseline Parking Requirement	Provided Spaces vs. Baseline Requirement
Northside Plus Building 13,14,15,16	UT Dallas	462	641	-28%

*Bedroom breakdown data was not provided for the properties with an asterisk, so a Silver Line corridor average breakdown of 10% studio, 60% 1BR, 25% 2BR, and 5% 3BR+ was used.

** Additional public parking was required as part of a development agreement.

Provided vs. Required Parking by Station Area

The sites with a high parking "deficit" are in station areas where parking is shared, as is the case at the UT Dallas Northside site, or in station areas with station area-wide public parking, like Cypress Waters. Most of the sites that supply more than the "over-supply average" are in Cypress Waters, including 3401/3501 Olympus, Office Buildings and Townhomes, and Bleecker Street at the Sound. The Office Building and Townhomes development, an office building with 50 townhomes in the Cypress Waters station area, has the highest over-supply, with 50% more parking spaces than required. In general, sites with office space tend to provide more parking than required. **Figure 45** summarizes the provided and required parking by station area.

Station Area	Sites with Equal or Fewer Spaces than Required	Average "under supply"	Sites with More Spaces than Required	Average "over supply"
DART Silver Line Corridor	17	-22%	19	18%
12th Street	1	0%	1	5%
Addison	4	-13%	4	10%
CityLine/Bush	3	-23%	2	27%
Cypress Waters	3	-24%	7	25%
Downtown Carrollton	3	-11%	1	18%
Knoll Trail	0	N/A	1	18%
UT Dallas	3	-46%	2	7%

Figure 45 Provided vs Required Parking by Station Area

Figure 46, below, shows the provided parking ratio by land use type in each station area compared to the parking requirement for the same land use type in each station area. Parking ratios highlighted in red were higher than the code requirement, those highlighted in green were within the required parking ratio range or below it, and those highlighted in gray were not applicable due to a lack of analyzed land use within each station area.

The observed retail and dining land uses located within mixed-use developments saw a consistent oversupply of off-street parking across every station area, and the total supply may

be even higher when considering on-street parking availability. Residential parking supply of studied sites was generally within the required range or below it, aside from in the Cypress Waters station area where the amount provided was slightly higher than the requirement. The office parking supply in studied sites was lower than the requirement in two out of the three station areas analyzed – Addison and Cypress Waters – and higher than the requirement in the CityLine/Bush station area. The Aloft Hotel in the CityLine/Bush station area, the only hotel within this study, provided far less parking than required, at 0.37 spaces per key compared to the requirement of 1.25 spaces per key.

	Average Provided Parking Ratio			Required Parking Ratio			
Station Area	Residential (per unit)	Retail/Dining (per 1,000 SF)	Office (per 1,000 SF)	Residential (per unit)	Retail/Dining (per 1,000 SF)	Office (per 1,000 SF)	
Addison	1.96 spaces	5.75 spaces	2.91 spaces	1 to 2 spaces	4 spaces	3.33 spaces	
CityLine/ Bush*	1.32 spaces	6.34 spaces	4.28 spaces	1.5 spaces	3.33 spaces	3.33 spaces	
Cypress Waters	1.43 spaces	5.12 spaces	2.5 spaces	1.3 spaces	4 spaces	3 spaces	
Downtown Carrollton	1.13 spaces	9.92 spaces	N/A	1.25 spaces	2.86 to 4 spaces	2 spaces	
Knoll Trail	1.53 spaces	N/A	N/A	1.15 to 2 spaces	4 to 10 spaces	2 to 6 spaces	
12 th Street	1.14 spaces	6.22 spaces	N/A	1 to 2 spaces	3.33 spaces	3.33 spaces	
UT Dallas	1.35 spaces	7.79 spaces	N/A	1 to 3 spaces	3.33 to 4.44 spaces	3.33 to 4.44 spaces	

Figure 46	Provided vs Required Parking Ratio by Station Area
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*Aloft Hotel provides a parking ratio of 0.37 spaces per key compared to the requirement of 1.25 spaces per key

Provided vs. Required Parking by Development Type

As shown in **Figure 47**, single-use developments in this study tend to have a parking supply most closely aligned with minimum requirements, or below the minimum requirements in terms of retail-only sites. However, supplies at dual-use projects in this study show the greatest tendency to significantly exceed minimum parking requirements. This suggests that, while zoning-code requirements may recognize the potential efficiencies of shared parking, developers and/or their lenders and advisors may see more value in oversupplying parking

rather than relying on shared-parking efficiencies and operational complexities to reduce supplies.

Land Use	Provided Parking Spaces	Required Parking Spaces	% Over/Under Supply
Multifamily/Office	2,639	2,024	41%
Office/Retail	7,113	5,430	31%
Office	2,827	2,633	7%
Multifamily/Retail	3,084	3,059	1%
Multifamily	6,018	5,954	-1%
Multifamily/Retail/Office	2,196	2,268	-3%
Retail-only	100	162	-38%
Hotel	55	185	-70%

Figure 47 Provided vs Required Parking Spaces by Land Use

Peak Parking Ratio Estimate based on Occupancy Rate

Figure 41, below, shows the peak parking ratio estimate for each of the single-use sites in the study for which tenant occupancy rate was available. This measure uses the peak observed parking demand and the reported tenant occupancy rate to project the peak demand and therefore peak parking ratio assuming 100% tenant occupancy.

As shown below, the majority of sites see a peak parking ratio estimate below or equal to the built parking ratio. Only the three single-use Northside buildings in the UT Dallas station area saw a higher peak parking ratio estimate than built parking ratio – as the Northside development largely built a parking supply below minimum parking requirements. Three sites – AMLI Addison and Addison Circle Two in the Addison station area, and Hasting's End in the Cypress Waters station area, have a parking supply more than twice the peak parking ratio estimate.

Site	Station Area	Peak Parking Demand	Tenant Occupancy Rate	Total Units or SF/1000	Built Parking Ratio	Peak Parking Ratio Estimate
Aventura Condominiu ms	Addison	111	100%	86	1.76	1.29
AMLI Addison	Addison	133	97%	349	1.49	0.39

Figure 48	Peak Parking Ratio	Estimate of Single-Use Sites
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Site	Station Area	Peak Parking Demand	Tenant Occupancy Rate	Total Units or SF/1000	Built Parking Ratio	Peak Parking Ratio Estimate
Addison Circle Two	Addison	270	80%	210	3.37	1.61
Millennium Tower	Addison	519	77%	357.1	3.79	1.89
Aura One90	CityLine/ Bush	315	96%	386	1.31	0.85
Windsor CityLine*	CityLine/ Bush	304	%	299	1.50	
9797 Rombauer	Cypress Waters	332	92%	248.4	1.73	1.45
Bleecker Street at the Sound	Cypress Waters	316	81%	242	1.70	1.61
Byron Bay at the Sound	Cypress Waters	322	81%	262	1.53	1.52
Harper's at The Sound	Cypress Waters	335	81%	272	1.56	1.52
Hastings End	Cypress Waters	246	81%	499	1.59	0.61
Rodeo Goat & Flying Fish	Cypress Waters	42	100%	11.1	3.98	3.80
The Sound Restaurants	Cypress Waters	56	100%	24.4	2.29	2.29
Switchyard	Downtown Carrollton	218	94%	234	1.00	0.99
IMT Prestonwoo d	Knoll Trail	554	100%	438	1.53	1.26
Northside Building 5, 6, 7, 8	UT Dallas	228	94%	140	1.21	1.73
Northside Building 9	UT Dallas	358	94%	135	2.67	2.82

Final Report

North Central Texas Council of Governments

Site	Station Area	Peak Parking Demand	Tenant Occupancy Rate	Total Units or SF/1000	Built Parking Ratio	Peak Parking Ratio Estimate
Northside Plus Building 10, 11, 12	UT Dallas	221	94%	246	0.58	0.96

*Tenant occupancy data for Windsor CityLine was not available

KEY FINDINGS

The following key findings highlight key trends and inefficiencies in parking management and development practices along the DART Silver Line corridor.

1. Parking Requirements Overestimate Need

Municipal parking requirements for the study sites across the DART Silver Line corridor consistently overestimate the actual demand for parking spaces, leading to unnecessary infrastructure and higher development costs. Approximately 51% of developments provided more parking than required by code, oversupplying by an average of 19%. This trend occurred across land uses and station areas. For example, the AMLI Addison site, a nearly fully leased residential site within the Addison station area, supplied 16% more parking than required by baseline zoning codes while utilization peaked at just 45%. Similarly, the Office Building and Townhomes site in Cypress Waters oversupplied parking by 50%, yet peak utilization remained below 30%.

This oversupply is particularly common in single-use office developments and mixed-use developments in this study that have office as the primary land use. Since the COVID-19 pandemic, many offices offer a hybrid work schedule or work-from-home policies that result in parking demand that is much lower than pre-pandemic conditions. Office-oriented developments across the corridor oversupplied parking beyond the parking requirement by an average of 20%, while sites like 9797 Rombauer in Cypress Waters and CityLine One in CityLine/Bush saw peak weekday parking utilization of 43% and 16%, respectively.

Aligning parking supply with anticipated demand can be difficult to predict, but station areas with access to high-capacity transit stations should provide fewer parking spaces than those that do not. This, in combination with other efforts can incentivize transit use and to reserve space for density and other TOD-supportive goals.

2. Transit Proximity Alone May Not Reduce Parking Demand

This study has not shown an anticipated correlation between parking demand and ridership throughout the TODs in the future Silver Line corridor, and more study is needed to identify the cause. The station areas with high DART bus or rail ridership did not see lower parking demand than those with low ridership, and parking utilization rates in station areas with access to existing DART Rail such as Downtown Carrollton and CityLine/Bush remain comparable to or higher than areas without rail access. For example, as shown in **Figure 9**, the Downtown Carrollton station area exhibited a peak parking utilization of 61%, while Cypress Waters, the lone station area without any DART Rail or bus service, reported a parking utilization peak rate of 36%.

There are multiple factors that inform the relationship between parking demand and transit ridership, many of which fall outside of the scope of this study. While this study does not suggest that transit proximity is the primary – or sole – influence on parking demand, data collected in this study has shown that the availability of nearby transit alone may not reduce parking demand.

Complementary measures, such as shared parking, enhanced first- and last-mile connectivity, and transit incentives for employees and residents, are critical to encouraging behavior change. Without such policies, the convenience and affordability of free or subsidized parking will continue to undermine transit ridership and the overall effectiveness of TOD investments.

3. Residents Use Free Parking Adjacent to Their Housing Complex

Some residents use free, adjacent street parking even when on-site parking is provided, particularly in station areas with residential land uses like Addison, Cypress Waters, Downtown Carrollton, and UT Dallas. In Cypress Waters, data collection at developments such as Harper's at the Sound and Hasting's End showed high residential parking demand on block-face adjacent streets, while peak on-site parking utilization remained below capacity. This behavior is likely driven by the convenience of on-street parking over garage parking.

This trend highlights inefficiencies in parking infrastructure, as the presence of free adjacent parking reduces the utility of costly on-site facilities. It may also exacerbate congestion on local streets, creating potential conflicts in a pedestrian-heavy environment, and limiting access for visitors and reducing the availability of curb space for other users, such as delivery vehicles and retail visitors.

Given the interest in adjacent on-street parking for residential users, city parking policy could be amended to allow on-street parking to count towards residential parking minimums, which could help reduce the cost of a new parking structure or allow developers to reinvest that capital into multimodal programs and infrastructure.

4. Residential Parking Sees Low Utilization Relative to Occupancy

Many residential developments overestimate tenant parking needs, leading to underutilized facilities. Parking in residential developments across the corridor averaged low peak utilization across both weekdays and weekends, even in areas with high tenant occupancy rates. For example, as shown in **Figure 12**, Aura One90 in CityLine/Bush reported 96% tenant occupancy but only 62% parking utilization during peak hours. The potential causes for this trend are varied, including a temporary lack of resident presence, a preference for parking off-site, data errors, or any other external influencing factor. A limitation of point-in-time data collection is that it cannot explain ongoing trends on its own.

BEST PRACTICE PARKING MANAGEMENT STRATEGIES

Parking Management Strategies Overview

Parking management for the Silver Line's TOD areas will benefit from a variety of strategies rather than a singular fix. The strategies listed in this section were chosen to meet the specific needs and challenges identified in the Silver Line Parking Study as well as from national best practices, and are ordered by most impactful to least impactful. It is organized to serve as a guide for the development of innovative parking approaches for both existing and future TODs along the Silver Line corridor. These parking management strategies focus on opportunities to address the most pressing and consistent challenges found along the Silver Line TOD areas including:

- Half of TOD development sites provide more parking than is required by code and oversupply parking by an average of 19%.
- Developers have significantly overparked TOD projects along the Silver Line corridors, with peak-hour occupancy measuring lower than 60% at four out of the seven TODs and an average for all station areas at 69%.
- Incentivizing walkable and vibrant TOD communities by right-sizing the amount of parking in TOD areas with existing and future rail.

A brief overview of the strategies will be presented here with more information on each in **Appendix F**.

Parking Strategy Organization

Strategic Category

For each strategy, the following are identified to note when the strategy is most applicable and who would need to spearhead the effort:

- **Future** The strategy applies to new development and often a part of the zoning approval process
- Existing The strategy can be applied to existing development
- **Public** The strategy needs local government to lead implementation
- **Private** The strategy needs private development owners, property managers, and developers to lead implementation

Description of Strategy

This section includes a brief narrative description of the strategy.

Key Benefits

Outlines key benefits garnered in places the strategy has been applied.

TOD Parking Objectives Supported

Four objectives for Silver Line TOD Parking strategies are described below. The objectives most directly supported by each strategy are noted and given a level of effectiveness rating from 1-3, with 3 designating highly effective and 1 being the least effective.

- **Reduce Demand** Reduce the generation of parking demand at TODs, to minimize future supply needs, or to free up capacity in existing parking facilities.
- **Increase Efficiency** Optimize the value of TOD parking infrastructure, by avoiding excess parking at new TODs, and making use of excess capacity at existing TODs.
- **Shared Parking** Increase the share of TOD parking supplies that are managed as a shared/public resource.
- **Improved Mobility** Support opportunities to increase use of non-driving mobility options, particularly but not limited to transit.

Eliminate/Reduce Parking Requirements

Strategic Category:

- Future
- Public

Description of Strategy

Minimum parking requirements are ordinances in a municipality's code that mandate developers and property owners build a minimum number of parking spaces, usually determined by a ratio applied to the property's square footage, according to its use. This often forces developers to allocate space and expenses for parking spaces they may not need. Reducing and/or eliminating parking requirements revises the language of the ordinance to change this requirement.

Key Benefits

- Facilitates TOD that optimizes tax-generating land-use densities and benefits from walkable/transit-focused urban design that furthers transit ridership and mode-shift objectives
- Allows developers to build less parking which gives them greater flexibility in designing and programming their projects
- Increases the potential density of mixed-use developments

- Reduce demand (3)
- Increase efficiency (3)

Parking Maximums

Strategic Category

- Future
- Public

Description of Strategy

Parking maximums establish a maximum number of parking spaces a development is allowed to build on its property. The conditions of these maximums are detailed in a municipality's code of ordinances and can be applied either to select uses or across a station area or municipality. The City of Pittsburgh, PA allows for parking maximums to be "soft" in that developers can exceed the maximum only if they provide an offset like fund additional active transportation or supply affordable housing – a similar model pursued by cities the North Central Texas region could help better manage supply requirements related to new parking.

Key Benefits

- Maximums establish a guardrail against overbuilding parking in a specific area.
- Maximums promote shared parking supplies by restricting the number of spaces at a single development.
- Emphasizes the expectation of reduced parking needs in TOD areas
- Reduces housing costs by capping the potential cost of excess parking, which developers often offset via high housing prices/lease-rates

- Reduce demand (3)
- Increase efficiency (3)

Shared Parking Agreements

Strategic Category

- Existing
- Future
- Public
- Private

Description of Strategy

A shared parking agreement is an arrangement between two or more parties detailing each party's access to a common parking supply. Shared parking agreements are usually made between entities with parking demands that peak at different times, complimenting each other's lower demand with their own higher demand. Such agreements customarily detail who is involved in the agreement, the length of the agreement, and days and times each party has the right to use the parking supply.

Key Benefits

- The utilization of parking supplies is maximized throughout the day by collocating parking supply for land uses with different demand peaks (e.g., residential and office).
- Developments will not need to shoulder the expenses of a dedicated parking supply, especially if it will be mainly used only part of the day.

- Increase efficiency (3)
- Shared parking (3)

Improve Mobility to Reduce Parking Demand

Strategic Category

- Existing
- Future
- Public
- Private

Description of Strategy

TOD-project tenants are more likely than those farther away from transit to use transit, pedestrian, bicycle, and other non-driving transportation modes. Developments that incorporate facilities and amenities that support biking and walking and highlight the proximity and accessibility of nearby transit services are well positioned to attract tenants while also reducing the demand for parking.

Facilities such as continuous bike lanes and sidewalks on adjacent streets, in-building bicycle parking, lockers and showers for non-resident tenants who bike, and in-unit bike storage options all increase the likelihood that tenants will select non-driving travel modes and increase the value of new developments. Property management approaches can also further enhance TOD connections to transit by promoting access to transit (and the travel benefits it offers) and ensuring that on-site parking amenities do not put transit at a significant cost/convenience disadvantage in the competition for tenants' travel decisions.

Key Benefits

- Increased mobility across modes creates more opportunities for trips for individuals with different transportation needs.
- Improved mobility options makes other non-driving modes more appealing, lightening parking demand and traffic congestion.
- Reduced parking demand lessens the importance of providing parking on-site at a development, allowing for more space for other uses.

TOD Parking Objectives Supported

Reduce demand (3)

Improved mobility (3)

Parking Management Districts

Strategic Category

- Existing
- Public

Description of Strategy

A parking management district is a defined geographic area that may include a variety of land uses which may require a higher level of management of shared parking facilities and use of parking meters to achieve transportation goals. Often these come in the form of a Parking Benefit District (PBD) were the funds from meters are used to re-invest into improvement projects to manage the district's traffic flow and travel demand. Districts may include uses such as commercial, residential, retail, entertainment, educational, and medical amongst several others.

Key Benefits

- Higher traffic areas can self-fund special improvements they need and other sources are not asked to cover the cost.
- Growth of an area is self-driving, as more use of the district's meters allows for more improvements of the district's features.

- Increase efficiency (2)
- Shared parking (2)
- Improved mobility (2)

Incentives for Public Parking

Strategic Category

- Future
- Public
- Private

Description of Strategy

The most common form of a shared public parking incentive is to reduce a project's minimum parking requirement if it can demonstrate that diverse land-uses and shared-parking management will provide supply efficiencies. Developers can be incentivized to incorporate public parking into their development with certain allowances on their project, such as increased building density, reduced setbacks, expedited permitting process, and more beyond what is established by code. This encourages developers to provide a public benefit to their project in exchange for added revenue opportunity or procedural convenience. Cities can also use public-private partnerships to implement shared public parking.

Key Benefits

- Prevent oversupply of parking by ensuring that all spaces are able to be used at different times of day
- Ensure that shared parking is provided in all new developments
- Make the best possible use of a limited parking supply
- Work in concert with broader parking maximums to facilitate dense, mixed-use TOD
- Create opportunities for public-private partnerships related to parking

- Increase efficiency (1)
- Shared parking (2)

Curb Space Management

Strategic Category

- Existing
- Public

Description of Strategy

Managing curb parking is necessary to address numerous parking issues. On-street parking is typically the first choice of those visiting street-level commercial uses -- and the foremost/only supply of public parking in many Silver Line TOD station areas. Where drivers know curbside parking is free and unrestricted, residents and area employees can take over these spaces, leaving visitors to circle in search of spaces and congest traffic. Effective pricing and/or regulation of these spaces incentivizes all long-term parkers to use off-street spaces, freeing up curb spaces for visitors. Having an effective curb space management program in place can bolster developers' confidence that their visitors will have available on-street parking, reducing the need for them to increase on-street parking for these drivers.

As more varied uses for this space – passenger loading, bike/bus lanes, bike parking, shared bike/scooter zones, parklets, and curb extensions – have emerged and gained in popularity, management of this space has become more intentional, active, and innovative – with an increasing focus on optimizing the unique value that these spaces provide in terms of access and mobility.

Key Benefits

- Rules regarding use of the curb are more clearly defined, reducing the number of violations by users
- Buffers pedestrian/sidewalk areas from traffic in adjacent travel lanes
- Extends pedestrian/sidewalk areas, where curb-extensions and parklets are incorporated
- Improves the functionality of transit, cycling, shared-mobility services, and other travel modes that can reduce off-street parking needs and activity area streets, sidewalks, and public spaces

- Increase efficiency (3)
- Improved mobility (3)

Parking Availability Platforms and Guidance Systems

Strategic Category

- Existing
- Future
- Public
- Private

Description of Strategy

Several technology platforms can monitor the occupancy of parking supplies in real time or within an estimated range, allowing property owners to share that information with their tenants and customers. By seeing parking occupancies in real time, users can streamline the parking experience by going directly to a facility where they know a spot to be available. Some platforms provide this information on an even more granular level by sharing occupancy by floor in a facility or by space. This ranges from dynamic on-site displays, typically at garage entrances to websites and mobile applications with live information.

Key Benefits

- Tenants and customers save time while looking for a spot, returning that time to use of the property.
- Service issues are relieved, and property owners reduce the issues they have to address.
- Property owners are given a clearer idea of the utilization of their parking facilities, allowing them to make strategic decisions regarding the parking they provide.

- Increase efficiency (3)
- Shared parking (2)

Fee-in-Lieu of Parking Options

Strategic Category

- Future
- Public

Description of Strategy

A fee-in-lieu of parking is a common development-code strategy to give developers the option to pay a fee, into a fund to be used to develop public parking and/or other mobility investments, rather than providing parking on-site. The fee is typically multiplied by the number of required spaces the developer chooses not to provide. This benefits developers by allowing them to build less parking and make the most of their properties. As such, it can be particularly useful for those developing on infill sites, or any parcel with a small, buildable site. This can facilitate the development of dense, mixed-use environments, in providing developers with an option to maximize the land-use density on their sites, while also creating a funding for the development and maintenance of centralized parking and mobility infrastructure.

Key Benefits

- Space is more efficiently distributed in business districts, where a single shared supply serves the tenants and customers of several developments.
- Developments pay a one-time fee to support the construction of the shared structure, but do not bear the long-term responsibility

- Increase efficiency (3)
- Shared parking (2)
- Improved mobility (2)

Crediting Off-Site Parking

Strategic Category

- Future
- Public

Description of Strategy

Crediting off-site parking allows off-site parking spaces to credit towards a development's minimum parking requirements. This can allow more density on a site that would have been difficult to develop if parking was required onsite. Off-site parking usually includes third-party parking garages, surface lots, or on-street parking.

Key Benefits

- Developers will not have to allocate expenses towards building, maintaining, and operating their own parking supply. This can lower the barrier costs for small businesses.
- Prevents oversupply of new parking
- Allows developers to maximize the land-use densities of their sites
- Concentrates area parking supplies in fewer, larger, more efficiently designed and managed facilities

- Increase efficiency (3)
- Shared parking (3)

SILVER LINE TOD PARKING RECOMMENDATIONS

NCTCOG: Providing Regional Leadership and Support

The North Central Texas Council of Governments (NCTCOG) serves as a regional leader in promoting coordinated transit and development policies. For the DART Silver Line corridor, NCTCOG is uniquely positioned to provide technical expertise, collect and analyze data, and disseminate best practices. Through its leadership, the organization can align municipalities and developers with regional TOD goals, ensuring efficient land use and transportation investments.

Conduct Annual Parking Utilization Studies

NCTCOG should partner with municipalities to standardize annual parking counts at TODs along the Silver Line. These studies will track trends in parking demand across land uses and station areas. For example, the study revealed office developments in Cypress Waters were over-supplied by up to 50% while underutilized at peak. These insights will help municipalities revise parking policies and guide developers in right-sizing parking supply. Logistics and funding are the primary barriers to this effort.

Most impactful in: All station areas

Continue Developing TOD Parking Guidelines and Best Practices

Continue refining the TOD parking toolbox to serve as a reference for municipalities and developers. The toolbox should be updated regularly to outline new strategies as they occur in new contexts. Highlight successful local and national case studies on topics of importance to regional stakeholders.

Most impactful in: All station areas
Municipalities: Setting the Policy Framework

Local governments are instrumental in shaping zoning and development standards that align with transit-oriented development principles. Through progressive parking policies and investments in infrastructure, municipalities can drive the success of TODs by reducing car dependency, improving connectivity, and encouraging mixed-use, walkable environments.

Reduce Parking Requirements in Transit-Oriented Areas

Revise zoning codes to reduce or eliminate parking minimums in station areas with proximity to high-capacity transit, especially in areas where demand is consistently lower than supply. Office developments across the corridor average low peak utilization despite being over-supplied. Cities should tailor requirements to observed utilization rates and support this with shared parking agreements to meet any residual demand.

Most impactful in: Station areas with low parking demand, like UT Dallas, Cypress Waters, and CityLine/Bush

Incorporate Non-Single Occupancy Vehicles (SOV) Incentives

Create non-SOV incentives for new developments that are near high-capacity transit, such as subsidized transit passes for employees and residents, parking cash-out programs where parking is free, and unbundled parking costs where parking is paid. Cities like Austin, Texas have created a strong precedent for this, where certain programs are required in developments near transit stations. The findings indicate that in areas with existing transit service along the future Silver Line corridor, employees, residents, and visitors continue to choose driving and parking over transit – suggesting that further incentives may be needed to encourage mode shift.

Most impactful in: Office and multifamily dominant stations areas like CityLine/Bush, Cypress Waters, and Addison

Enhance Multimodal Infrastructure

Invest in pedestrian and bicycle networks that improve connectivity between TODs and transit stations. Follow the recommendations for sidewalk improvements in <u>NCTCOG Silver</u> <u>Line Study Routes-to-Rail Stations final report</u>. Secure bike storage, real-time transit information, and safe pedestrian pathways can reduce car dependency and complement transit use, particularly in areas with high transit availability but low ridership.

Most impactful in: All station areas

Allow Off-Site Block-Face Parking to Meet Requirements

Permit on-street parking adjacent to developments to count toward residential parking requirements. Data in this study shows robust use of on-street parking, presumably by residents with lower use of the off-street parking resulting in unused off-street spaces. This strategy can reduce the need for large on-site facilities while managing demand through residential permits or time limits.

Most impactful in: Station areas with mixed-use developments with ground floor retail like Addison, Downtown Carrollton, and 12th Street

Pursue Shared Parking for New Developments Adjacent to Overbuilt Sites

Encourage collaboration with neighboring developments to implement shared parking agreements, particularly for mixed-use projects. This approach maximizes efficiency, reduces redundant infrastructure, and aligns with the best practice of optimizing underutilized parking assets.

Most impactful in: Station areas with an abundance of parking like Cypress Waters

Unbundle Parking Costs and Charge for On-Street Parking

Setting a requirement at the municipal level to separate parking fees from residential and commercial leases, allowing tenants to pay only for the spaces they use, would help support reduced parking requirements. This strategy must be paired with implementing paid parking on block-face on-street parking, especially when land uses like retail, whose visitors tend to prefer street parking, are nearby. Paid on-street parking must also involve an enforcement apparatus, so this recommendation is most applicable after exhausting other options.

Most impactful in: Station areas with high presence of multifamily and on-street parking like Downtown Carrollton and Cypress Waters

Developers: Implementing TOD-Aligned Practices

Developers are central to the success of TODs, balancing market demands with public policy goals. By adopting innovative parking strategies and transit-supportive designs, developers can enhance the attractiveness and sustainability of their projects while reducing costs.

Use Data to Advocate for Lower Parking Ratios

Often, lenders are the stakeholder group who need to be convinced that a lower parking ratio can work with a new development. Leverage parking utilization data to secure financing for developments with reduced parking supply. For instance, the study's findings on underutilized office parking can demonstrate to lenders that reduced ratios are viable without sacrificing tenant satisfaction.

Most impactful in: All station areas

Incorporate Transit-Supportive Amenities

Design developments with features that encourage transit use, such as secure bike storage, real-time transit schedules, and pedestrian-friendly access to transit stations. These elements are particularly valuable in areas like UT Dallas, where student tenants may rely heavily on alternative modes of transportation.

Most impactful in: Station areas with low DART ridership like Knoll Trail, Cypress Waters, and Downtown Carrollton

Identify Existing Excess Parking Supply and Pursue Shared Parking

As shown throughout this report, parking supply is abundant across the Silver Line corridor. Developers of new projects adjacent to existing developments with overbuilt parking supply should work with cities and neighboring developments to make the best use of underused parking facilities, especially when adjacent land uses have complementary peak parking timeframes.

Most impactful in: Station areas with an abundance of parking like Cypress Waters

Other TOD Stakeholders: Supporting Long-Term Success

Transit agencies, community groups, and advocacy organizations play a critical role in fostering TOD adoption and ensuring policies meet community needs. By promoting transit use and collaborating on innovative parking solutions, these stakeholders can advance the region's transit and sustainability goals.

Promote Transit Ridership Incentives

Work with businesses and municipalities to offer subsidized transit passes or free trials for new residents and employees in TODs. Particularly at mixed-use developments, hiring a fulltime mobility coordinator, or bringing mobility coordination tasks under an existing staff member, can help convey commute information to employees and residents who may not otherwise be exposed to transit options through DART.

Most impactful in: Station areas with low DART ridership like Knoll Trail, Cypress Waters, and Downtown Carrollton

Support Policy Education and Outreach

Host community workshops to educate the public on the benefits of TOD-friendly parking policies, such as unbundled parking and reduced minimums, as well as the benefits of taking transit regularly. Building public understanding and support could help make it easier for municipalities to implement reforms. Support the collection of parking use data but volunteering for counts and sharing with relevant properties.

Most impactful in: All station areas