



Summary of North Texas Local Parking Studies

January 2021



Contents

Introduction	3
Plano – Downtown Parking Study (2016)	4
Dallas - Preston Center Parking Study Memo (2016)	5
DART Red and Blue Lines TOD Parking Study (2019).....	7
Fort Worth - Magnolia Village Parking Circulation Study (2019).....	8
Granite Properties Dallas, Plano, Addison Office Parking (2019)	10
McKinney Historic Town Center Parking Study Update (2019)	11
Mansfield Downtown Development Strategies (2020)	13
Downtown Decatur Parking Inventory and Analysis (2019)	14
Arlington Parking Needs Analysis Technical Memorandum (2019)	16
Grapevine Dallas Road Transit District Parking Study (2019)	17
Dallas Midtown Autonomous Transportation System and Shared Parking Feasibility Study (2019).....	19
Summary	20

Introduction

The goal of this summary is to advance a shared understanding of parking issues and insights from walkable places in the North Texas region to better coordinate approaches to smarter parking policies. This document summarizes the findings and recommendations of 11 local parking study documents collected by North Central Texas Council of Governments (NCTCOG) and accessible at www.NCTCOG.org/Parking. The summarized local parking studies represent a diverse sample of parking analyses in the Dallas-Fort Worth region, from district-scale to single development-scale. Some studies examined both off-street and on-street parking supply, and some focused on only one of the two.

While every community in North Texas has unique character and context, there are common lessons learned and insights gained such as the major finding that parking is generally oversupplied relative to demand and users tend to prefer on-street parking spaces nearer to destinations. The most recurring recommended parking management strategies are shared parking and wayfinding. This document provides examples of each of the above in a concise manner as a resource for planning and transportation professionals as well as interested public and private stakeholders.

Plano – Downtown Parking Study (2016)

The City of Plano has a historic mixed-use downtown area served by a Dallas Area Rapid Transit (DART) light-rail station and conducted a parking study to evaluate its current parking supply, demand, and future downtown parking needs. Retaining the historic buildings, accommodating redevelopment opportunities, and fostering a safe pedestrian-friendly environment were motivations for their understanding more options for better parking policy across the entire 18 block downtown.

Findings

A parking utilization study on an approximate total of 3,959 spaces was conducted. Weekday (Thursday) parking occupancy rates did not indicate a shortage of parking with peak demand at approximately 2,027 occupied spaces, or 51% of the overall supply. Public off-street spaces were occupied at a slightly higher percentage than the other land uses. Peak parking weekend (Saturday) demand was observed around 8:00 p.m. with approximately 1,292 occupied spaces, or 33% of the overall supply. Again, the public spaces were occupied at higher percentage rate than private spaces. Parking occupancy was not evenly distributed with the central street (15th street) and its adjacent blocks being most occupied during the week and weekend. Vehicle turnover was studied on two central streets and found that average duration of stay was 2.4 hours.

Parking demand 10 years in the future was estimated for downtown and found to have a small deficit of 32 spaces. Site specific strategies for dealing with special events parking demand are also discussed.

Recommendations

To help facilitate future demand a series of parking management and policy updates are recommended covering the following topics:

- Shared parking – evaluate public and private lots around downtown and possibility for sharing
- New garages/structured parking – evaluate locations of possible new garages
- Restriping – new paint to existing facilities to maximize space usage
- Wayfinding and Signage – implement a comprehensive signage program to maximize customer awareness and consistency
- Improve Walkability – a safer and more appealing streetscape can help visitors/patrons of downtown better use lots and shared parking located further away from destinations
- Zoning code updates – specific recommendations on restaurant parking ratios, shared parking calculation, and dimensions of parking spaces
- Transit-Oriented Development – continue supporting this development pattern for downtown Plano
- Valet Parking – recommendations for introducing this as a new service to Downtown Plano as a district
- Bicycle Racks – can help facilitate bike trips in place of car trips, links are provided to similar programs in other cities
- Parking Enforcement – modernize the city’s handwritten system to be digital to improve turnover enforcement
- Marketing and Website – create a downtown parking page that helps visitors plan their trip

Dallas – Preston Center Parking Study Memo (2016)

Preston Center is a dense mixed-use office and retail center in Dallas adjacent to University Park which features an older two-level parking structure in its central area. The community and city would like to transform the parking garage into something more functional and visually appealing. To evaluate options for this, the parking supply and utilization was evaluated.

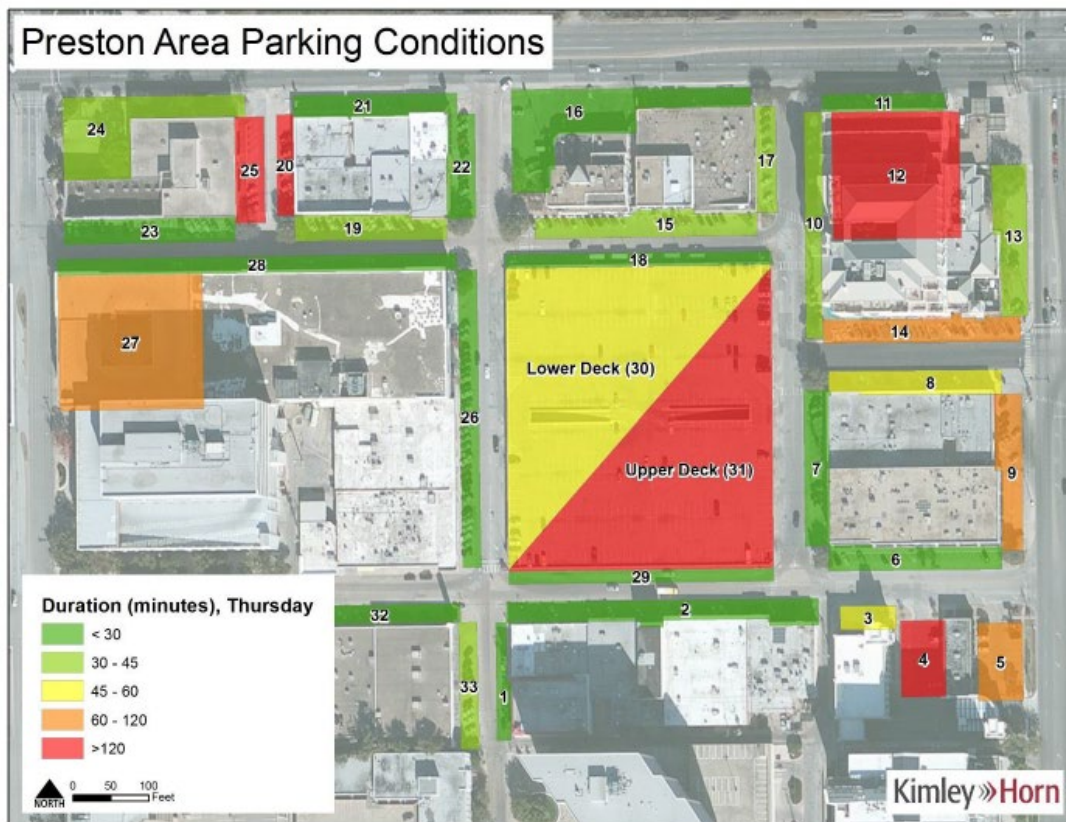
Findings

At the time of study there are 1,922 parking spaces publicly available (not reserved) in the district. Tuesday through Friday had a maximum peak parking occupancy around 70% around 12:00 p.m. to 1:00 p.m. for the district. Facilities closer to the center of the district, such as the older two-level parking garage, tended to have higher utilization than facilities on the periphery of the study area.

Users of garages and the older two-level central parking garage had the longest average parking duration around two hours. Surface lots had slightly shorter durations with a peak of 100 minutes on Wednesday. On-street parking had the shortest duration with turnover occurring on average every 40 minutes.

Figure 1.1 Parking Duration by Facility on a Thursday

Source: Preston Center Parking Study Memo



Recommendations

Considering that new development may expand demand beyond the currently adequate supply, the following recommendations are provided:

- Wayfinding and signage could be used to better distribute users to underutilized facilities on the periphery of the district
- Shared use agreements could help access the existing supply currently in underutilized reserved and private lots
- Enforcement of parking restrictions is recommended to enhance the turn-over of high demand facilities and encourage employees to park in the desired locations

DART Red and Blue Lines TOD Parking Study (2019)

As part of a Federal Transit Administration (FTA) TOD Planning Pilot Grant, private automobile parking utilization, policy, and management practices were observed at existing transit-oriented developments along 28 DART Red Line and Blue Line stations. The intent of this report is to provide recommendations supporting transit-appropriate parking ratios and other parking management best practices for TODs.

Findings

Most TODs were found to be significantly overparked with 13 of the 16 examined sites never reaching beyond 80% utilization during peak periods. Nearly all TODs provided more parking than was required with parking supply at 10 of the 16 sites exceeding the city code requirements by at least 10%. Residential parking occupancy at two affordable housing developments peaked at 50% occupancy compared to market rate residential TODs closer to 90%.

Shared parking was shown to be possible at the five mixed-use developments studied based on available spaces. Additionally, shared-parking model outputs most consistently accurately predicted supply needs for 10 of the 16 sites. However, the study found there was little shared parking beyond development boundaries.

Compared to DART's \$96 monthly transit pass, most parking at the 16 study TODs was free of charge, despite most of it being in costly garage structures, which may financially incentivize commuters and visitors to drive cars over taking transit.

Recommendations

The DART Red and Blue Lines TOD Parking Study generated a TOD Parking Toolbox to serve as a North Texas community guide to innovative parking strategies in future and existing TOD districts:

- Improve mobility options to reduce parking – developments incorporate facilities and amenities that support biking, walking, and highlight proximity to transit
- Unbundled parking costs – make parking an optional, fee-based amenity
- Fee-in-lieu of parking – developers pay a fee into a fund towards public parking rather than provide on-site parking
- Density-bonus incentives – higher density developments directly support TOD parking objectives
- Public-private partnerships – privately owned buildings that incorporate public parking facilities
- Future re-use parking – build spaces at existing high demand levels to eventually be repurposed
- Curb space management – high-convenience on-street parking designated for visitors
- Parking availability platforms – sharing information increases effectiveness of shared parking
- Crediting off-site parking – developer meets parking minimums via access to off-site parking
- Monetizing excess capacity – revenue-generation from excess spaces
- Parking maximums – set a cap on the number of parking spaces provided per development
- Reduce parking minimums – transportation supply context drives changes in parking ratios
- Parking management districts – managing a collective pool of public spaces increases effectiveness of existing parking supply
- Code incentives for public parking – reduce parking minimums, promote shared parking
- Shared parking agreements – arranged between land uses with different peak demand times

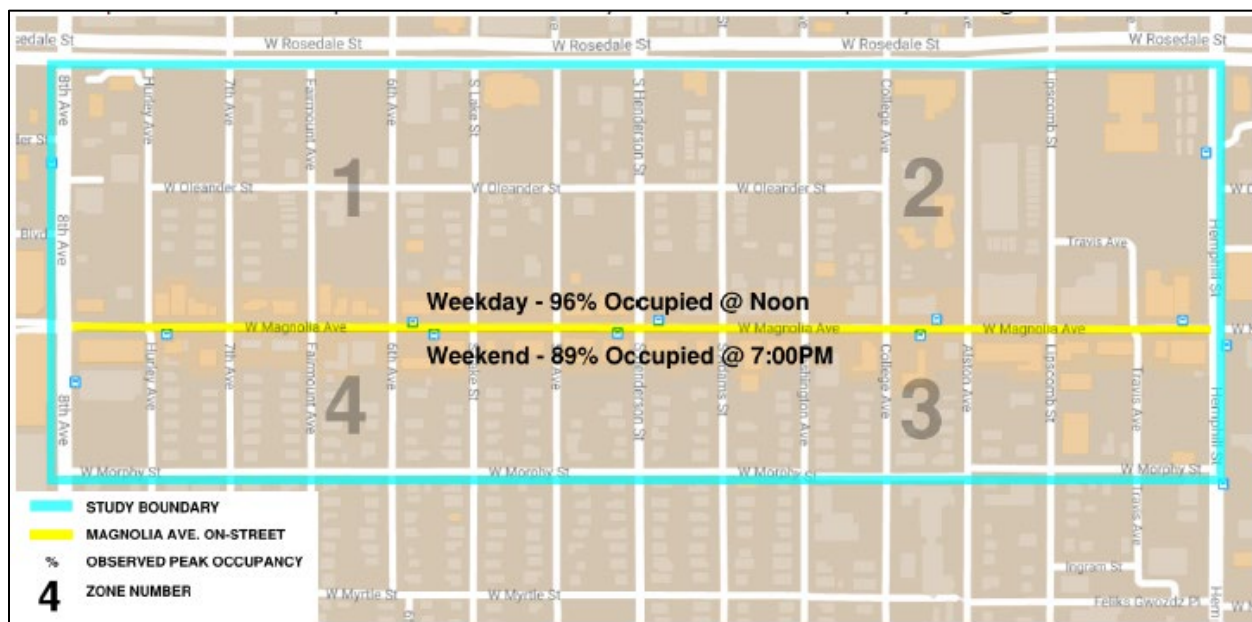
Fort Worth – Magnolia Village Parking Circulation Study (2019)

Magnolia Village is a historic, mixed-use, walkable area in Near Southside neighborhood of Fort Worth experiencing continued economic expansion and revitalization. The neighborhood is made up of residential properties to the South (zones 3 & 4 in **Figure 2.1**) and commercial properties to the north of Magnolia Avenue (zones 1 & 2 in **Figure 2.1**). As Magnolia Village continues to grow, both commercial and residential demand for limited on-street parking can be expected to increase. An analysis was needed of how best to maximize utilization of existing spaces and improve residents' and patrons' parking experiences.

Findings

Figure 2.1 Magnolia Avenue on-street parking occupancy rate.

Source: *Magnolia Village Parking Circulation Study*



Magnolia Village has a total inventory of 519 commercial on-street parking spaces and 480 residential on-street parking spaces. Residential parking demand patterns show higher demand during the early morning and after 4:00 p.m., peaking at 60-75% occupancy. Commercial parking demand patterns demonstrate peak occupancy ranging from 79-86% on weekdays and 40-59% on weekends. Magnolia Avenue showed the highest on-street parking occupancy, peaking at 96% on weekdays at noon and 86% on weekends at 7:00 p.m.

Recommendations

- Residential parking permit (RPP) program – limit on-street parking to allow for only residents to park within an RPP zone from 4:00 p.m. – 6:00 a.m.
- On-street paid parking – paid parking on Magnolia Avenue and other commercial streets
- Commercial loading zone – set defined loading times and locations
- Customer service zone (short term parking) – on-street parking with set time limits to increase vehicle turnover
- Parking Benefit District – directly ties economic benefits of parking revenue to improving Magnolia Village (such as lighting, landscaping, branding, and wayfinding)
- Paid parking garages – off-street paid parking for long-term parking needs

Granite Properties Dallas, Plano, Addison Office Parking (2019)

Granite Properties performed in-house parking usage observations for 24 primarily “office use” properties located in the metropolitan regions of Dallas, Atlanta, Denver, Houston, and Los Angeles. Three of the 24 properties are in Dallas’ Uptown neighborhood while the other six are in the cities of Plano and Addison. Using a table provided by Granite Properties in 2019, the results as interpreted by NCTCOG staff are summarized below.

Findings

Of all the observed Granite properties, those located in the Dallas region had some of the highest amounts of supplied parking with an average ratio of 3.23 spaces per 1,000 retail square feet, compared to the national Granite property average of 3.15.

Both Dallas area and Granite properties elsewhere are over-supplied in parking compared to demand. When Dallas area Granite buildings were leased at 82.53% occupancy, the observed two-week average parking demand rate was measured at 47.19%, with peak occupancy at 51.69%. Using observed parking occupancy data, parking demand was then projected for when 100% of the building space would be leased. At this projected occupancy level, the two-week average parking demand rate was 56.36% and peak occupancy was 63.18%. This is lower than the national average of all observed Granite Properties’ projected two-week average parking demand rate of 61.90% and peak occupancy of 68.82%.

Of all the Dallas-region properties, the three located in Uptown had the highest projected two-week average parking demand rate of 75.10%, with peak occupancy at 82.71%.

McKinney Historic Town Center Parking Study Update (2019)

McKinney's Historic Town Center is a dense, walkable shopping, dining, and business district centered around McKinney's Performing Arts Center. To ensure its district's parking supply can support downtown activities, the city conducts an analysis of the downtown's parking utilization every five years. In addition to examining parking supply and occupancy levels, the 2019 study added parking turnover to their quinquennial analysis.

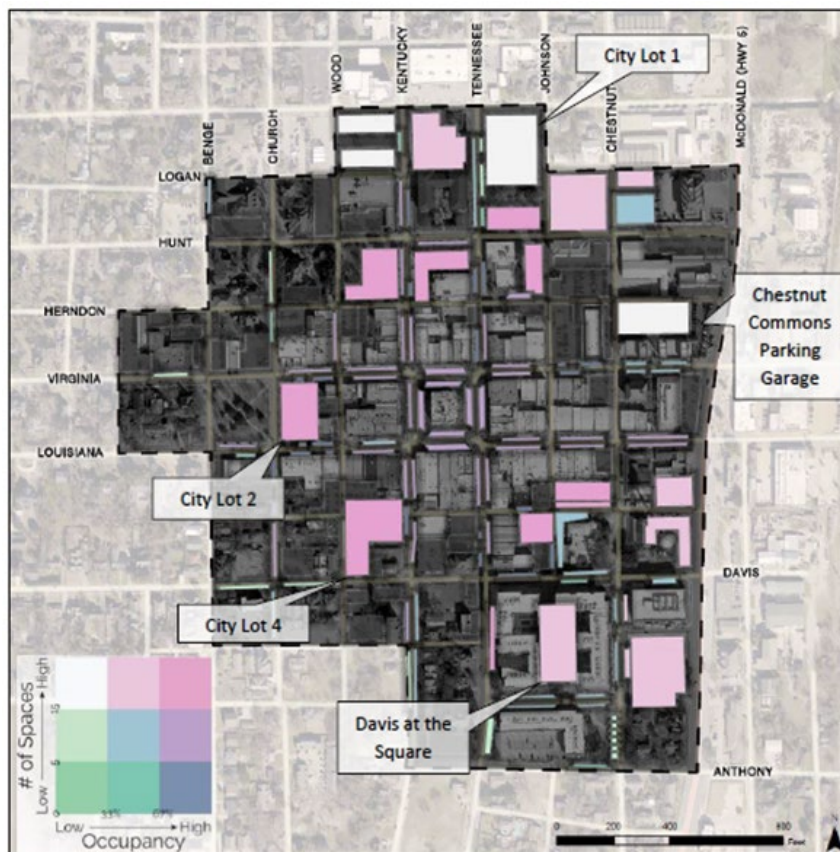
Findings

Made up of public off-street parking, public parking garages, private off-street parking, and on-street parking, there are a total of 2,989 available parking spaces in downtown. The amount of available parking increased since 2014 by 404 spaces due to two newly constructed off-street parking garages.

The peak occupancy rate for all public parking was found to be 59% on a weekday afternoon with ample excess parking concentrated in off-street garages to the east and north of downtown. These off-street public parking garages had a peak weekday occupancy rate of 42% and weekend rate of 38%. On-street parking had the highest peak occupancy rate of 79% on weekdays and 80% on weekends. In the square proper, on-street parking spaces measured a peak occupancy rate of 97% on weekdays.

Figure 3.1 Mid-day parking occupancy by lot size for public off-street parking

Source: McKinney Historic Town Center Parking Study Update

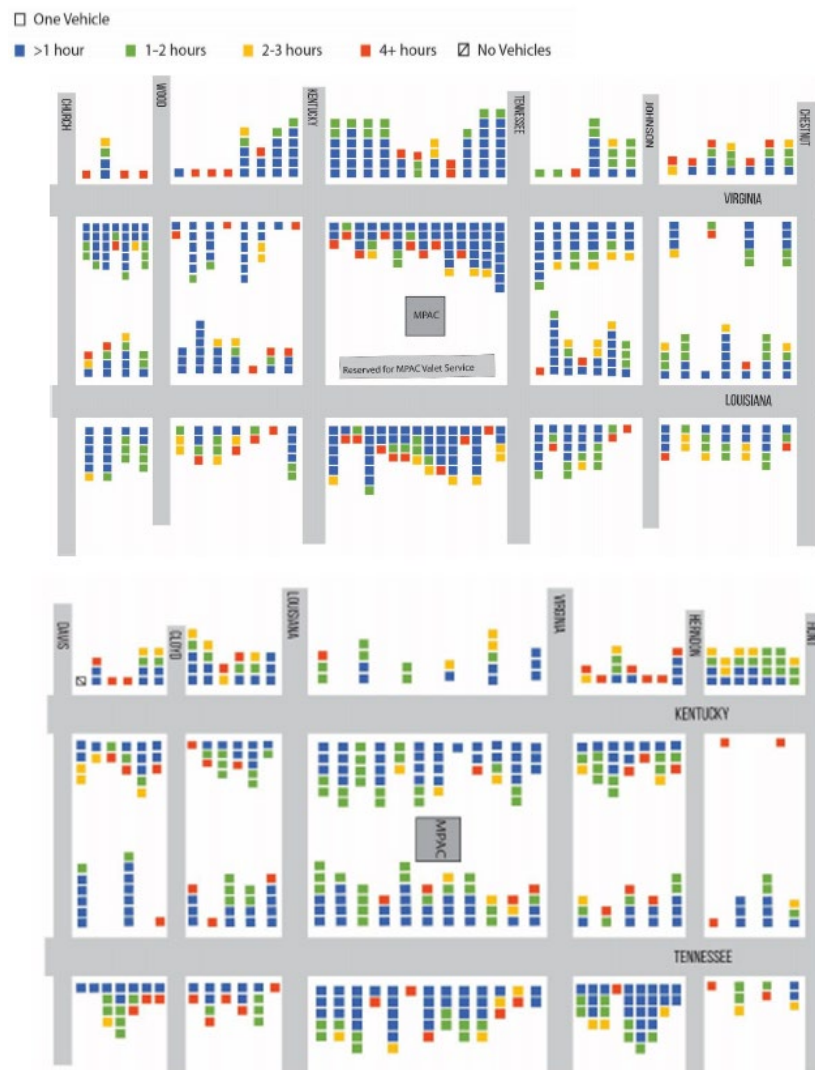


Drivers who park in on-street parking spaces on the square proper were found to stay for an average of around two hours on weekdays and 2.5 hours on weekends. The report attributes the longer weekend stay to the weekend exemption of the downtown's three-hour parking limit.

A pilot valet service has made efficient use of on-street parking and underutilized off-street parking lots, serving approximately 11.6 vehicles an hour on weekdays and 5.1 vehicles an hour on weekends. This weekday valet use exceeds the average number of vehicles-per-hour served by on-street parking in the rest of the square.

Figure 3.2 On-street Parking Turnover around the Historic Square

Source: McKinney Historic Town Center Parking Study Update



Recommendations

- Modify sign regulations – ensure drivers are aware of available parking lots they can use compared to private parking lots that are towing-enforced
- Improve utilization of existing supply – expand existing programs to get people from parking lots to the square such as the on-demand Downtown Area Shuttle and extend the pilot valet parking program
- Improve wayfinding to and within Downtown McKinney – identified need for a city-wide wayfinding study to guide drivers to parking through physical signs, online outreach before drivers begin a trip downtown, and pedestrian-scale wayfinding around the area

Mansfield Downtown Development Strategies (2020)

In 2013, the City of Mansfield completed the Historic Downtown Mansfield Implementation Plan that resulted in a Tax Increment Reinvestment Zone for the downtown area. Since then, the Mansfield Downtown Development Strategies study was created to determine how best to attract more development. As part of this study, parking supply and demand were observed on one weekday and weekend to verify whether existing supply would meet future need.

Findings

In total, there are 1,140 parking spaces in the downtown study area. Four hundred three of these are off-street, 455 are on-street, and 282 are dedicated parking. In general, the existing parking supply appears underutilized. Even at peak occupancy during the city's "Third Thursday" extended hours shopping evening, the entire downtown study area had an occupancy rate of only 18.16%. In addition, most on-street parking spaces and off-street parking lots are a 5-10-minute walk from the downtown's main intersection. Seven hundred forty-eight, or 65.61%, of all parking spaces are within a 5-minute walk and 1,048, or 91.93%, parking spaces are within a 10-minute walk.

Recommendations

- Wayfinding – adding gateways and other signage to help visitors navigate to and around downtown
- Parking awareness campaign – advertise existing parking, locating public and shared parking on an online map
- Residential street parking – restrict parking to one side of residential streets during special events to maintain adequate traffic circulation
- Downtown sub-district parking requirements – downtown parking should be subject to restrictions in addition to updated downtown zoning requirements

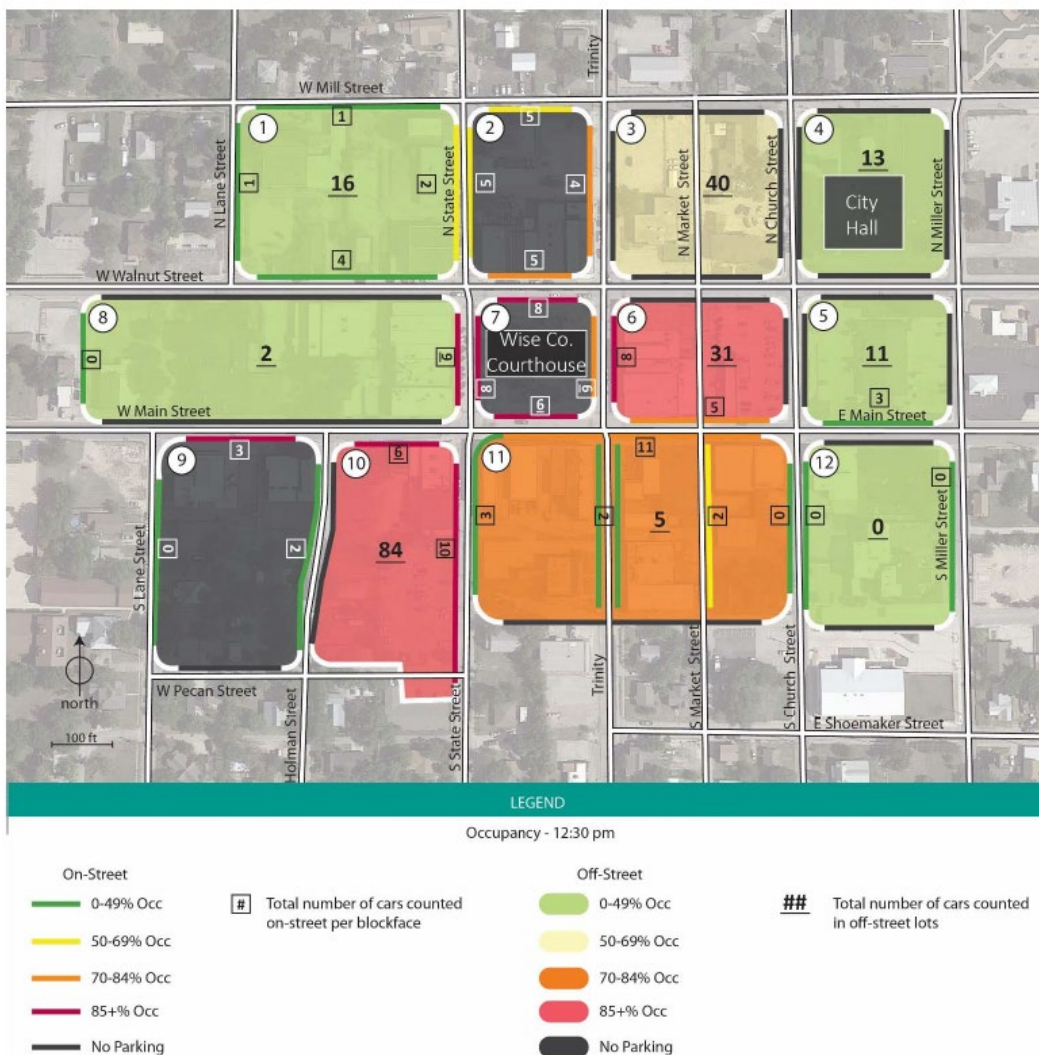
Downtown Decatur Parking Inventory and Analysis (2019)

Downtown Decatur is a walkable, historic downtown, centered around the Wise County Courthouse square. Consultants performed a parking supply and occupancy analysis of the 12-block Main Street Overlay District in response to concerns from stakeholders and city officials. The study took measurements of parking supply and occupancy at three separate times over one November weekday.

Findings

In total, there are 674 parking spaces in Downtown Decatur with 214 on-street spaces, 133 off-street public spaces, and 327 off-street private spaces. Off-street public parking refers to parking lots that serve a variety of land uses/commercial entities and private parking refers to parking lots that serve the specific land use/business it is associated with. Of the 214 on-street spaces, the 60 located predominantly around the square have two-hour parking limits during weekday business hours. Consultants observed that parking signage was inconsistent and did not appear to be actively enforced. In addition, pedestrian infrastructure was difficult to navigate or sometimes missing altogether.

Figure 4.1 Peak parking occupancy at 12:30 p.m.



Source: Walker Consultants, 2018-2019

Off-street public parking had the highest occupancy rate of 58-86% during weekdays while off-street private parking had the lowest occupancy rate of 27-29% during weekdays. On-street parking around the main square was generally considered to be full, peaking at 85% occupancy on weekdays at 12:30 pm. Off-street parking located at least one block from the town square is generally vacant, peaking at 49% on weekdays, while on-street parking at least one block from the town square measures peak occupancy of 70-84% on weekdays. Based on the measured occupancy rates, there is more than enough parking supplied in Downtown Decatur to meet current parking demand.

Recommendations

- Increase enforcement of time-limited spaces – gradual increase in enforcement through a more customer-friendly approach
- Improve wayfinding to and within Downtown Decatur – improve signage at, and wayfinding to, public parking facilities, stripe parallel parking spaces on main street to better delineate available parking, and create a parking map and advertise through online marketing campaigns
- Allow long-term parking in off-street facilities
- Public-private partnerships – work with private entities to open parking areas to the public on weekdays
- Engagement with stakeholders to create a parking management strategy – hold a downtown stakeholder meeting with downtown businesses and city staff to understand parking issues and how best to utilize off-street parking supply
- Study does not recommend parking technology improvements because of the expected small return on investment for a small geographical area and local political opinion

Arlington Parking Needs Analysis Technical Memorandum (2019)

The Arlington Parking Needs Analysis Technical Memorandum was created to fulfill NCTCOG's Parking Garage and Transportation Interface Study deliverables for Downtown Arlington. Two scenarios were prepared as a parking needs assessment/shared parking model based on the land use goals outlined in the Downtown Master Plan Existing Conditions Market Assessment. The first 'base' scenario projects existing transportation behavior for each land use to determine future parking need. The second 'aspirational' scenario takes a progressive approach for each future land use based on Arlington's vision of a more connected and walkable downtown. Both scenarios calculate parking needs based on future parking demand independent of city code parking requirements. This study did not measure current parking utilization.

Findings

The 'base' scenario projected an overall peak of 3,278 parking spaces demanded on a weekday across four square miles of Downtown Arlington and 3,351 on a weekend. The 'aspirational' scenario projected parking demand at 2,360 spaces on weekdays and 2,288 on weekends, down 28-31% from the 'base' scenario projected parking demand. Parking demand is lower in the 'aspirational' scenario because it calculates all parking as shared, residential car ownership down from 95% to 80% due to increased development density, and lower drive ratios because of increased multi-modal transportation usage.

Recommendations

- Wayfinding – encourage a “park once” policy intended to limit vehicular circulation within Downtown Arlington
- Garage siting policy – strategize locations for parking supply to maximize the ability to conveniently serve as many user groups as possible and act as multimodal hubs
- Shared-use parking strategies – develop efficiency of existing and new parking facilities
- Off-street parking requirements and in-lieu fee program – developers could contribute to a fund to build, operate, and maintain shared parking structures rather than constructing their own parking
- Transportation and parking management authorities – explore options for managing the parking program and complementary programs
- Transportation demand management planning – active programming to reduce single occupancy vehicle usage

Grapevine Dallas Road Transit District Parking Study (2019)

Downtown Grapevine is a historic main street corridor featuring small shops and local attractions. With the expansion of the Trinity Metro TEXRail adding a station to the south end of Grapevine's downtown, there is potential for higher density growth along the Dallas Road Transit Corridor. The purpose of this study is to provide a comprehensive parking evaluation of Grapevine's downtown, balancing expected future parking demand with current supply. Consultants performed on-site occupancy counts and interviews with local stakeholders.

Findings

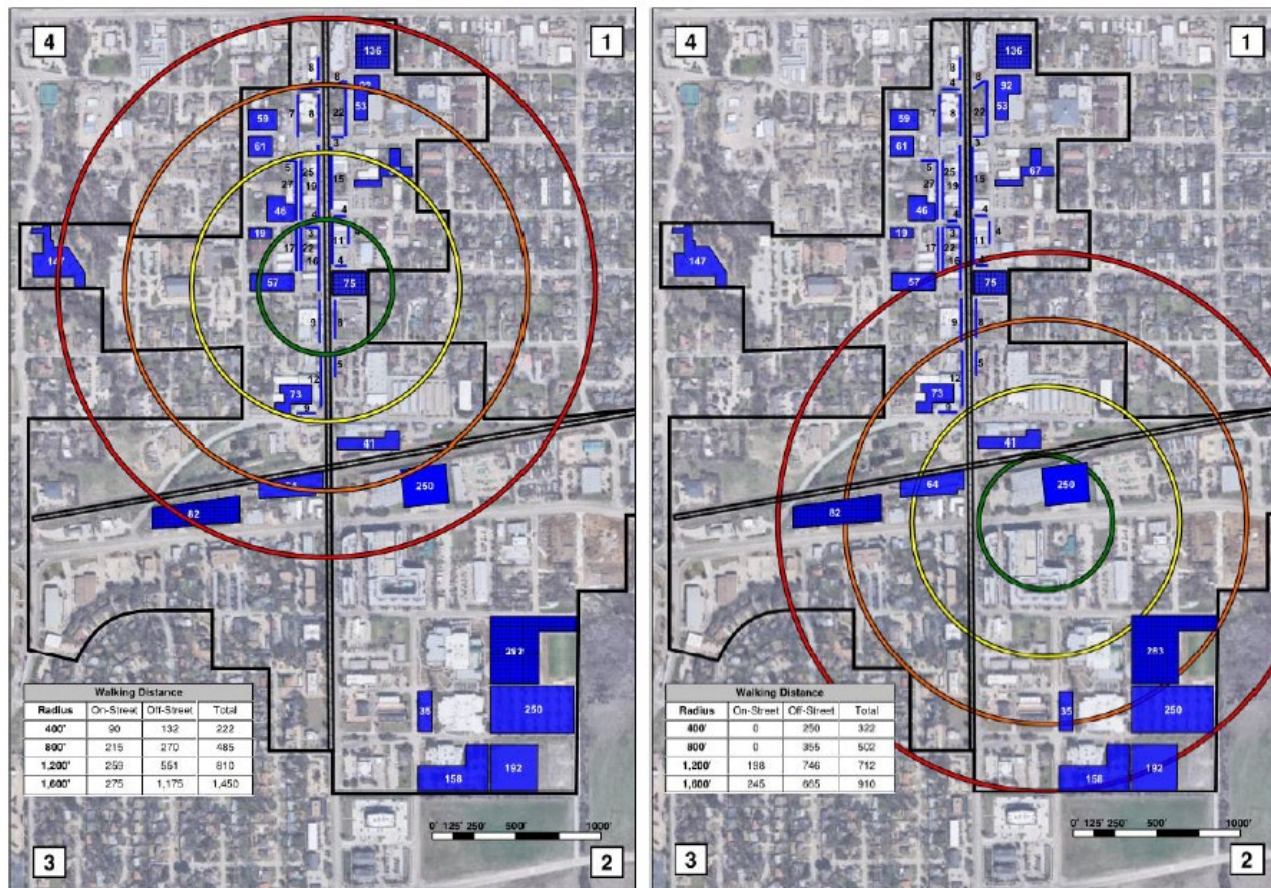
There are a total of 5,931 off-street parking spaces in Downtown Grapevine: 1,990 spaces are city-owned public surface lots, 2,878 privately-owned surface lots, and 552 in the TEXRail garage. Of the 511 total on-street parking spaces, 232 are unmarked, referring to vehicles parked in "no parking" zones or un-striped spaces. As per city ordinance for each current land use, a total of 8,400 parking spaces are required. However, only 5,379 spaces are supplied (excluding the 552 spaces in the TEXRail garage). This is only 64.03% of the total required spaces yet observed occupancy data indicates that the district's current parking supply is underutilized – especially in off-street parking lots. Off-street parking had a measured peak occupancy of 32% at 10 a.m. on a weekday and 30% at 4:00 p.m. on a weekend. On-street parking had a measured peak occupancy of 87% at 12:00 p.m. on a weekday and 92% at 8:00 p.m. on a weekend.

Most of the on-street parking spaces were noted to be more convenient than off-street parking. Current off-street parking lots are further than 1,200 feet from demand generators at a UCF level of 2 (Acceptable, 50% of patrons will be satisfied). Comparatively, during the City of Grapevine's Holiday Parade of Lights special event, off-street parking spaces had the highest peak occupancy of 67% at 7:30 p.m. and on-street parking peak occupancy peaked at 50% at 7:30 p.m. Although these occupancy rates are significantly higher for off-street parking than typical weekday and weekends, they are still under the industry ideal of 85%.

Consultants employed the User Comfort Factor (UCF) approach to measure how comfortable users would feel walking to Main Street from different parking locations (see **Figure 5.1-5.2**). There are 810 spaces (12.57%) located within a comfortable walking radius from Main Street shops and 712 (11.05%) within a comfortable walking radius from the Dallas Road Corridor area. As development is expected to expand, connectivity and pedestrian access between parking and destinations will be critical to user comfort.

Figure 5.1-5.2 Analysis of Walking Distance to Available Parking for the Main Street Shopping Area (left) and Dallas Road Transit Corridor (right)

Source: Grapevine Dallas Road Transit District Parking Study



Recommendations

- Wayfinding in and to district – increased pedestrian connectivity between parking and destinations
- Centralized parking facilities – increases access and reduces parking congestion
- Shared-use Parking – creation of shared parking locations to encourage and benefit pedestrian activity and provide needed parking in Central Business District
- TEXRail coordination – the city should continue to monitor TEXRail ridership reports and consider modal split in parking planning
- Marketing and communication – expand existing marketing and branding program by creating a web-based parking map
- Circulator visitor shuttle – expand existing program to include Dallas Road corridor and outlying areas
- Leverage parking technology – mobile apps that allow visitors to navigate downtown through a device
- Parking ordinance updates – incorporate shared parking, parking assessment fees, and/or reduction of parking requirements in the Transit District

Dallas Midtown Autonomous Transportation System and Shared Parking Feasibility Study (2019)

Dallas Midtown is a master-planned redevelopment site with a mix of uses, including residential, office, retail, restaurants, and community spaces. Stakeholders identified a specific mobility vision for Dallas Midtown: a pedestrian-friendly, multi-modal mobility network where convenience and connection between uses are prioritized. Parking is traditionally supplied as a by-product of each development project, but this would not contribute to the mobility vision for Dallas Midtown. As such, a study of the technical feasibility of using an autonomous transportation system (ATS) to move visitors around the development and the feasibility of a shared parking strategy.

Findings

At full build-out, the study projects approximately 68,000 parking spaces will be required for the proposed development. However, using a shared parking and multimodal transportation model, Dallas Midtown can expect to see a parking demand of only 42,204 spaces. This is 37.26% less than what would be demanded if current parking and transportation trends continue.

Recommendations

- District-wide shared parking – parking structures are strategically located to serve whole district through pedestrian infrastructure connections to destinations (pg. 84, 86-87)
- ATS group rapid transit (GRT) shuttle – fixed pick up and drop off locations between destinations and parking (pg. 85)
- Wayfinding – integrate parking supply with pedestrian framework through pedestrian-oriented wayfinding and reduce cruising for parking through car-oriented wayfinding (such as Advanced Parking Guidance Systems at key parking facilities) (pg. 93)
- Unified management – authority responsible for funding, operating, enforcing, and maintaining parking assets (pg. 83, 91)
- Administrative and regulatory changes – revise off-street parking requirements to encourage shared-parking, discourage oversupply of parking, eliminate parking minimums, partially unbundle residential parking, and set peak trip caps for large developments (pg. 82-83, 90-91)

Summary

Regardless of varying scale or focus, all summarized studies revealed that parking is generally oversupplied relative to current demand and city code parking requirements. When combining total parking demand for off-street and on-street public spaces, no local parking study development or district met the industry-standard peak occupancy of 80-90%. Of the few local studies that compared existing supply to code-required parking supply, the provided parking was at least 10% higher than what the local code required.

Most summarized local studies that examined parking on the district-scale found that off-street parking is underutilized compared to on-street parking spaces. Studies demonstrated that customers were more likely to park in on-street parking spaces than off-street as peak occupancy rates for on-street parking spaces were higher than off-street. This trend is reinforced when comparing off-street and on-street parking spaces located the same distance from destinations. For example, in Downtown Decatur's study, off-street parking located at least one block from the town square was observed to be generally vacant, peaking at 49% on weekdays. Meanwhile, on-street parking at least one block from the town square measured a peak occupancy of 70-84% on weekdays.

Throughout most studies, the solution to the commonly noted issue of oversupplied, underutilized, off-street parking is a Parking Management District. Additionally, shared parking agreements and changes to city code requirements were recommended to leverage oversupplied existing parking. The most frequently noted solutions to underutilized off-street parking are wayfinding and improvements to parking availability online marketing. The most recurring implementation recommendations are defined below and summarized for each study in **Figure 6.1**.

Strategy Definitions

Wayfinding: guide drivers to parking through vehicle-scale and pedestrian-scale wayfinding signage, visual cues around the area to limit vehicular circulation and increase space utilization

Shared Parking: leverage existing parking through arrangements between different property owners and land uses, typically with different peak demand times

Public Parking: garage/lot siting policy that maximizes the ability for off-street public parking to serve as shared parking for all users and may also act as multimodal hubs (see **Shared Parking**)

Fees and Enforcement: collect parking revenue towards public improvements, enforce time limits, and use paid parking to manage parking demand (see **Curb Management**)

Parking Management Districts: public or private management entities, also known as "Parking Benefit Districts" (when parking fee revenue is reinvested as public improvements in the district), that manage a collective pool of public spaces and/or increase effectiveness of existing parking supply through various strategies

Code Revisions: reduce minimum parking requirements, establish parking maximums, credit off-site parking, promote shared parking, fee-in-lieu of parking requirements, etc.

Parking Availability Information and Marketing: parking maps, branding, and online outreach with information about parking availability before drivers begin a trip

Multi-Modal Mobility: incorporate infrastructure and amenities that support biking, walking, and highlight proximity to transit to reduce internal vehicle circulation and parking demand

Curb Management: management of competing demands for the curb space typically occupied by on-street parking such as short-term parking, loading zones, resident parking permits, and other strategies

Shuttle and Valet: programs to help people conveniently access or better utilize, more remote, underutilized parking lots

Figure 6.1 Recurring Implementation Recommendations by Summarized Local Study

Recurring Implementation Recommendations	Plano Downtown	Dallas Preston Center	DART TOD	Fort Worth Magnolia Village	McKinney Historic Town Center	Mansfield Downtown	Downtown Decatur	Arlington	Grapevine	Dallas Midtown
Wayfinding (9)	■	■	■		■	■	■	■	■	■
Shared Parking (8)	■	■	■	■			■	■	■	■
Public Parking (7)	■		■	■			■	■	■	■
Fees and Enforcement (7)	■	■	■	■	■		■			■
Parking Management Districts (6)			■	■		■	■	■		■
Code Revisions (6)	■		■			■		■	■	■
Parking Availability Information and Marketing (6)	■		■		■	■	■	■		
Multi-Modal Mobility (5)	■		■					■	■	■
Curb Management (4)	■		■	■		■				
Shuttle and Valet (4)	■				■				■	■

This review of a 11 local parking studies can be considered as a first step in understanding parking management for a local downtown or main street. Additional information on the implementation of parking management strategies can be found at www.NCTCOG.org/parking under the “Best Practices Toolbox”. Furthermore, coordinating a regional approach to managing parking challenges would benefit from more examples and shared data from additional local studies. If your community or group has recently completed a parking study, please contact to the NCTCOG staff listed on the parking website to share information.