



# The Role of Parking in Texas Commercial Real Estate

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# The Role of Parking in Texas Commercial Real Estate

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Ever since the automobile became the dominant form of personal transportation, parking has been among the most scrutinized features of commercial real estate properties. Plentiful on-site parking attracts new tenants and keeps existing tenants happy. Conversely, the lack of adequate, convenient parking can spell doom for a business. While this fundamental truth still holds, trends in commercial parking have been changing since the mid-1990s for a number of reasons.

Interior office layouts have been changing to accommodate increasing numbers of employees in limited space. This, along with changes in municipal codes and new transportation alternatives, is affecting the quantity, type and cost of parking provided at individual office properties. In spite of increased costs for parking, many building owners and developers are finding it necessary to purchase, add on or build more parking spaces to stay competitive.

This report describes the role parking plays in the development and marketing of Texas commercial real estate. It examines customer demand for parking, the responses by property owners and the often significant impact of municipal regulations on office, retail and multifamily uses. Finally, it describes parking's new frontier, New Urbanist developments, where cars are secondary to pedestrians.

## OFFICE USES

### Historical Parking Supply Patterns

Provision of parking for office properties has evolved around the rise of the automobile as the dominant mode of urban transportation and the expan-

sion of employment centers into the suburbs.

**Suburban office development.** After World War II, the automobile became the dominant transportation mode for home-to-work trips, particularly in Texas. This trend became even more pronounced as office development moved into suburban areas beginning in the 1960s. Because automobiles provided the only reasonable means of access for most nondowntown locations, it was important for employers to provide ample employee parking.

Because suburban land was plentiful and inexpensive compared to that in central business districts (CBD), parking ratios provided at suburban office properties closely reflected the employee density projected for a building's tenants, plus additional spaces for visitors. The standard ratio for typical suburban office properties built in the 1970s and 1980s was three to 3.3 spaces per 1,000 square feet of leaseable area. Medical office properties usually required five to six spaces per 1,000 square feet, often mandated by municipal codes.

In many cases, landlords included the cost of parking spaces required for a tenant's employees in the quoted rent. This was especially true of Class B or C properties with surface parking lots. Many Class A buildings, which usually had adjacent parking structures, charged for parking in addition to rent, especially for reserved spaces.

**CBD properties.** Office properties in CBDs did not often have the luxury of additional inexpensive land for parking. Limited space almost always required the use of parking structures. Buildings constructed after the 1950s often had parking included under-

ground or onsite, adjacent to the structure. However, CBD land was too expensive to financially justify providing the same ratios as in the suburbs, so landlord-provided parking often had ratios of less than two spaces per 1,000 square feet.

Texas cities differ from other cities around the country in that they have not enacted *maximum* parking requirements in downtown areas. Some northern cities established maximum parking ratios to encourage employees to use public transportation.

Landlords generally charged a parking fee in addition to rent. Tenant employees who did not obtain a parking space from their employer had to either pay out-of-pocket to use nearby public parking facilities or find alternative means of transportation. Although many factors influenced tenant location decisions, cost and availability of parking were major elements of the competitive disadvantage faced by CBD office properties by the 1990s. This situation was exacerbated by the lack of mass transit services in most Texas cities.

### Current Trends in Parking Requirements and Supply

Parking remains an important factor in marketing commercial properties to new tenants and keeping existing tenants. A 1999 survey report, *What Office Tenants Want*, gives the results of a survey conducted by the Building Owners and Managers Association and the Urban Land Institute. Ninety-four percent of surveyed office tenants ranked on-site parking as an "important" factor in office buildings. Only 80 percent were currently "satisfied" with their on-site parking facilities.

The cost of parking was ranked "important" by 91 percent of respondents, and only 75 percent were satisfied with parking costs. Covered parking was ranked "important" by 77 percent of tenants, an equal percentage of whom were satisfied. The survey confirmed that parking is a key factor in office building marketability and that many properties show much room for improvement.

Since the mid-1990s, parking characteristics sought by office tenants and provided by developers in Texas have become considerably more dynamic. Changes in building interior layouts, employee densities, financial imperatives for developers and tenants, municipal codes and new transportation investments are affecting parking provided at individual office properties.

**Financial requirements.** Most businesses want to minimize real estate expenses, and the cost of building or leasing structured parking in addition to base rent can be prohibitive. According to Randy Garrett, principal with NAI Stoneleigh Huff Brous McDowell in Dallas, high-rise districts such as downtown Dallas and Las Colinas are leasing space for \$22 to \$26 per square foot without parking. By comparison, flex space in newer suburbs is leasing for \$19 to \$21, parking included.

The additional cost of parking in high-density areas is significant. Both Garrett and Susan Arledge, principal with Arledge-Power Real Estate Group in Dallas, report that structured parking costs from \$40 to \$220 per month per space in downtown, uptown and other high-density commercial areas of Dallas. According to Chris Perry of Trammell Crow in Austin, offsite parking in that city's central business district runs \$110 to \$125 per unreserved space per month and \$150 to \$175 per reserved space. In downtown Houston, office occupancies have increased dramatically since the mid-1990s, and parking charges have followed suit.

According to a February 2, 2000, article in the *Houston Chronicle*, the average cost for a reserved space in Houston was \$190 per month, with well-located, highly amenitized garages fetching \$400 or more per month. Unreserved spaces average

\$124 per month, with low-end spaces available for \$50 to \$100 per month.

Competition for high-quality employees plays into the cost equation: passing the cost of parking on to employees diminishes their income, making a firm seem less competitive than one offering free parking. Even employees using off-site surface lots with lower rates suffer a significant out-of-pocket cost. Paying for top employees' parking while requiring lower-level employees to find and pay for their own goes against the culture of many companies seeking to minimize perceived differences in organizational hierarchy.

Many firms use real estate to maximize employee productivity. In a November 10, 2000, article in the *Dallas Business Journal*, Eric Langford of Onyx Property Co. in Irving says that low-rise buildings surrounded by surface parking not only make parking easier but also improve productivity by reducing walking and elevator time between employee parking spaces and their desks.

**Flex-office space and rising employment densities.** Most office markets report a growing demand for flex space, which is characterized by rectangular, low-rise buildings, usually no more than three stories, with 20,000 to 25,000 square feet of space. Interior construction makes them suitable for a variety of uses (hence the "flexible" label), including research and development, warehouse, showroom, call center and office. Most flex properties are in recently developed suburban areas.

Flex office layouts generally feature few ceiling-to-floor walls and offices. Instead, most space is used for modular arrangements of partitions and cubicles. This type of layout is favored by high-tech and creative services firms and accommodates a higher density of workers than traditional office buildings. Consequently, more on-site parking is needed.

**Flex-office parking ratios.** The North Dallas area, particularly Richardson and Plano, has had considerable low-to-mid rise flex office development related to growth in the telecommunications industry since the mid-1990s. Cisco Systems' new corporate campus at Highway 190 and Jupiter Road in Richardson will have

surface lots for as many as 5,000 workers.

Garrett and Arledge say such flex buildings are developed with parking ratios of at least five spaces per 1,000 square feet of leased area, although some tenants require six. Perry reports that similar parking ratios for Austin flex-office developments. Surface parking is the norm at these properties.

Municipal codes usually do not address flex office properties. The exception is Plano, where research-technology center zoning requires flex buildings to provide parking that represents 75 percent of the regular office ratio applied to the entire square footage of the building, whether or not the entire building is used for offices.

The Metroplex is not the only area where high-density parking ratios are in demand from flex-office tenants. In San Antonio, former movie theaters are being marketed for conversion to low-rise office space, with high parking ratios used as a major selling point.

**Covered vs. uncovered.** Structured or covered parking is required in metropolitan areas for a traditional office building to be considered a Class A property. For the newer high-tech campus and flex-office properties, however, the criteria have not yet been settled.

While parking garages are usually out of consideration for financial reasons, some properties provide covered parking in the form of sheds or carports. Arledge asserts that covered stalls are valued amenities but are not generally required. Even high-level employees have become more accepting of uncovered, surface parking. Foregoing covered stalls and reserved spaces for top-tier executives helps perpetuate the perception of a "flat" corporate structure that is popular with high-tech firms.

Garrett, however, finds otherwise, saying that east- and west-coast executives of tenant companies often eschewed covered stalls for their Texas locations initially as a cost-saving measure, not realizing the value of shade in the summertime. He reports that many office properties now have plans for sheds to accommodate the top one or two employees of each tenant. Charges for such space will be an additional \$15 to \$45 per month to the tenant.

**New high-rise office properties.** The trend toward greater parking demand applies to new high-rise properties as well. In response to tenant requirements, developers are building parking structures with ratios higher than three spaces per 1,000 square feet. On the Dallas North Tollway at Spring Valley Road in the North Dallas area, the Chase International Plaza will consist of 1.1 million square feet of Class A space sharing a garage with a parking ratio of 4.5 spaces per 1,000 square feet.

Even in downtown areas, new or improved high-rises usually have new or improved parking structures. For example, TPMC plans a 550-space garage in downtown Dallas to serve two properties, Main Tower and Center City Plaza. In downtown Houston, Wedge Commercial Properties Corp. has purchased an 1,100-space garage to serve a 30-story office tower being built across the street. The garage purchase allowed Wedge to change its development plans for the office tower from including ten levels of parking to just four or five levels. Hines is building a 32-story office tower in downtown Houston with 900 spaces on seven parking levels. Based on the 26 floors of office space in the tower with about 26,500 feet per floor, the parking ratio is estimated to be 1.4 spaces per 1,000 square feet.

**Public sector influence: municipal codes and public transit.** In most Texas cities, municipal parking codes are fairly restrictive require a minimum of 2.5 to 3.3 on-site parking spaces per 1,000 square feet of office space (see Table 1).

Arlington has the most restrictive ordinance of the large cities surveyed, requiring four on-site spaces per 1,000 square feet. By contrast, El Paso appears lenient requiring 2.5 spaces per 1,000 square feet of gross floor area or usable floor area. In downtown areas, most large cities have codes that require much lower ratios, or, in some cases, none at all.

Public transit service is another important public sector factor that influences parking demand for office users. Real estate professionals report that large-scale commuter transit service, such as light rail in Dallas and park-and-ride service in Houston, helps reduce the pressure for higher ratios, although the extent of the impact is debatable. Transit service generally focuses on downtown areas and the limited service available in suburban areas is generally thought to have no effect on the ratios required by tenants.

**Effects on older office properties.** The trend toward higher parking ratios is having a negative impact on the competitiveness of older office properties. Tenants requiring lower parking ratios are primarily smaller, higher-end service firms such as legal and accounting firms plus certain high-profile corporate headquarters. In fact, Arledge reports that she is no longer seeing "three per 1,000" tenants. As firms increase their employee densities, buildings that cannot provide the needed ratios become unattractive. Edwin Murphy of Century Development in Houston states that properties without adequate parking will not compete and will suffer lower rental rates and higher chronic vacancy,

unless alternative off-site parking services can be acquired to meet demand.

Class A properties in suburban locations built in the 1970s and 1980s are perhaps at greatest risk. These buildings were usually constructed with surface parking at ratios around three spaces per 1,000 square feet. In the Houston and Dallas metropolitan areas alone, tens of millions of square feet of such space was built. Garrett and Arledge both believe that parking is perhaps the most important reason that numerous suburban office properties have become uncompetitive in the last five years. Arledge reports that many 1970s and 1980s properties have become obsolete.

Empirical evidence appears to agree: the office properties along I-635 (LBJ Freeway) in North Dallas, mostly built in the 1970s and 1980s, have lost tenants since 1999 while the area's economy has boomed. In 2000, multitenant office properties in the LBJ Freeway area showed negative absorption of 24,372 square feet, according to Kennedy-Wilson Property Services. Downtown Dallas, which suffers competitively because of parking issues despite transit service, saw negative absorption of 41,436 square feet. Real estate professionals report that tenants are leaving older buildings and moving to newer buildings with higher parking ratios in areas such as Richardson and Plano.

Parking-poor office properties have limited options to regain competitiveness. Surface parking can be provided if there is adjacent vacant or underdeveloped land available at a reasonable price. Most garages have additional structural capacity, according to Murphy, and can add one or two levels. Existing spaces can be restriped for smaller cars, although trends show that car sizes have increased in recent years. The final question is a financial one: will the additional investment in parking provide an adequate return by making a building more marketable?

#### RETAIL USES

Retail was the first commercial to suburbanize to a large extent, following the disposable incomes under single-family rooftops. The need for parking soon became apparent, and the typical suburban retail configuration of strip centers and malls along major streets with large parking lots in

**Table 1. Spaces Required by Ordinance**

City	Spaces Required	Per Unit of Area
Amarillo	2.5	1,000 square feet
Arlington	4	1,000 square feet
Austin	3.3	1,000 square feet
Dallas	3	1,000 square feet
El Paso	2.5	1,000 square feet usable floor area
Fort Worth	2.5–3.3	1,000 square feet
Galveston	2	1,000 square feet
Houston	2.5 or 2.8	1,000 square feet gross floor area 1,000 square feet usable floor area
Plano	2.5–3.3	1,000 square feet
San Antonio	3.3	1,000 square feet

Source: Planning departments of listed cities.



front has not changed in four decades. Over time, optimal parking capacity has been estimated from studies and developer-tenant experience. Current conventional wisdom states that, for a retail site with surface parking, two-thirds of the site area will be parking.

In addition to trends in parking supply ratios, retail property owners must deal with the evolving tenant demands and configurations at typical shopping centers. More daunting challenges face retail developers choosing infill and high-density urban locations, where ample surface parking supply can be difficult to come by.

### Typical Ratios and Configurations

Developers and marketers of retail properties must understand parking needs for different types of retail users. Municipal codes, retail center tenant mix, daytime demand patterns and parking amenities such as landscaping and lighting all play into the appeal of a site to a potential retailer. A key point to remember is that parking demand comes not only from customers but also employees.

**Municipal codes for individual uses.** Retail developers and brokers report that in most Texas cities the parking ratios for various retail uses required by municipal codes are relatively in line with market forces. Some codes address a single tenant use. Cities generally address restaurants and nightclubs with separate required ratios, because these uses accommodate a high density of patrons with concentrated peak use periods during the day, unlike the typical retail store.

Many cities designate ratios for other specific retail uses, such as banks, service stations and furniture stores, because each has unique visitation and parking characteristics in relation to their floor area. Dallas' code is notable for the disaggregation of its zoning designations such that many specific types of stores (liquor stores, home improvement centers and general merchandise, for example) are addressed. For each use, the parking requirement is explicitly stated. Municipal requirements for some retail uses in selected Texas cities are shown in Table 2.

Most municipalities surveyed in this report require five spaces per 1,000 square feet of gross floor area for the

Table 2. Municipal Requirements for Retail Uses

Use/City	Spaces Required	Per Unit of Area
<b>General Merchandise</b>		
Amarillo	5	1,000 square feet
Arlington	3.3	1,000 square feet
Austin	4–5	1,000 square feet
Dallas	5	1,000 square feet
El Paso	5	1,000 square feet
Fort Worth	4	1,000 square feet if < 4,000 square feet
	5	1,000 square feet if > 4,000 square feet
Galveston	3.3	1,000 square feet
Houston	4	1,000 square feet
Plano	5	1,000 square feet
San Antonio	5	1,000 square feet retail/sales area
	1.25	1,000 square feet storage/display area
<b>Dine-in Restaurant</b>		
Amarillo	1	45 square feet of usable seating area
Arlington	10	1,000 square feet
Austin	10	1,000 square feet if < 2,500 square feet
	13.3	1,000 square feet if > 2,500 square feet
Dallas	10	1,000 square feet
El Paso	10	1,000 square feet
Fort Worth	1	4 guest seats plus
	1	4 employees
Galveston	1	4 fixed seats
	1	40 square feet of area w/movable seating
Houston	8	1,000 square feet
Plano	10	1,000 square feet
San Antonio	10	1,000 square feet
<b>Furniture Store</b>		
Amarillo	2.5	1,000 square feet
Arlington	2.5	1,000 square feet
Austin	2.5	1,000 square feet
Dallas	2	1,000 square feet
El Paso	3.3	1,000 square feet
Fort Worth	NA	NA
Galveston	NA	NA
Houston	2	1,000 square feet
Plano	2.5	1,000 square feet
San Antonio	NA	NA

Source: Planning departments of listed cities

majority of small single-tenant retail uses (as much as the size of a supermarket). Arlington, Houston and Galveston are the exceptions. Arlington and Galveston require just 3.3 spaces per 1,000 square feet. Houston requires four spaces per 1,000 square feet for most retail uses except supermarkets, which require five spaces.

**Restaurants and bars.** Restaurants and bars represent the most parking-intensive types of common retail uses.

They are characterized by sharp peaks in parking demand during the day. Restaurants typically peak at lunch and dinner hours; bars, after 9 p.m.

Several of the surveyed cities require ratios of ten spaces per 1,000 square feet of gross floor area for restaurants and bars. Austin has sliding scales for ratios based on establishment size (higher ratios for larger establishments) that require from ten to 13.3 spaces per 1,000 square feet for

restaurants and ten to 40 spaces per 1,000 square feet for cocktail lounges. Other cities express their ratios in terms of seats, square feet of seating area or other measures, making comparisons difficult. Sassy Stanton, retail broker with Insignia ESG in Houston, reports that restaurants serving liquor generally need more parking than those that do not.

Retail property developers and marketers find that the extent to which tenant restaurants and nightclubs demand similar ratios depends on the size and experience of the tenant's owner. Stanton has found that national restaurant chains generally require ten spaces per 1,000 square feet dedicated to them, even within a large shopping center. However, smaller, local establishments, such as family-run ethnic restaurants, tend to be less demanding. Restaurant and nightclub tenants usually must show that on-site parking is sufficient to obtain an occupancy permit from the municipality.

**Variations with retail center size.** Municipal parking requirements can change, not only based on the type of establishment but also based on the total leaseable space on the property. This means that shopping centers of certain sizes may have separate required overall ratios. For example, in Austin, for retail properties of more than 25,000 square feet, the required ratio drops from five spaces per 1,000 square feet to four spaces. For properties exceeding 400,000 square feet, the ratio rises to 4.4 spaces; those with 600,000 or more square feet, require five. Houston's requirements shift from four to five spaces per 1,000 square feet for retail centers between 400,000 and one million square feet; thereafter, the requirement drops back to four spaces.

Variations in municipal codes based on shopping center size are likely an attempt to recognize different factors affecting parking demand at larger retail centers, including tenants sharing parking and likelihood of parking-intensive entertainment uses at large centers. *Parking Requirements for Shopping Centers*, a 1999 study produced by the Urban Land Institute (ULI) and the International Council of Shopping Centers (ICSC), serves as a guide for the private sector. The study which estimated parking demand for the 20<sup>th</sup> busiest hour of the year, rec-

ommends ratios of four spaces per 1,000 of gross leasable area (GLA) for centers under 400,000 square feet and 4.5 spaces for centers more than 600,000. Centers between these cut-offs would follow a sliding scale adjustment more than the four space ratio based on the increment of GLA more than 400,000 square feet. These ratios apply no matter how much of GLA is devoted to restaurant, entertainment, and cinema space.

For many retail properties, peak parking demand times such as the Christmas shopping season may fill the on-site facilities to capacity. However, according to the study, the incremental revenues lost because of insufficient capacity at these times do not justify the expense of providing the additional parking necessary to accommodate peak demand, according to the study.

While municipal codes and the ULI-ICSC study provide guidelines for overall retail center ratios, developers and marketers of multitenant properties must still pay attention to individual tenant parking demands. Dan Muniza of CenterAmerica Property Trust, L.P., a developer and redeveloper of grocery-anchored shopping centers in Texas and other states, asserts that supermarket anchors must be assured of a five space per 1,000 square foot ratio in front of their store before they will commit to a lease. Smaller tenants tend to be less demanding. Lenders for shopping center development generally require an anchor commitment and compliance with applicable municipal parking codes; they do not have their own specific parking standards.

Muniza also finds that the presence of alternative access modes, such as transit or pedestrian travel, has no impact on required ratios for grocery-anchored centers except in high density urban locations such as central business districts, where such centers are unlikely to locate anyway. The ULI-ICSC study found that the percentage of nonautomobile travel to surveyed retail centers around the country had a significant impact on parking demand. Despite the study's findings, such travel is highly unlikely in most Texas locations outside of central business districts.

**Evolving tenant mix.** Parking is often a key consideration in replacing

existing tenants in retail centers. This is particularly true if the prospective new tenant is parking-intensive user such as a restaurant or nightclub. Joseph May, a planner with the City of Plano, states that proof of sufficient on-site parking or a shared parking agreement with an adjacent property must be provided before a change of land use is allowed. (see "Infill and Urban Sites" p. 6).

River Oaks Shopping Center in Houston is one of the oldest strip centers in the nation, dating back to the 1930s. The center has several restaurant establishments. Weingarten Realty, which owns the center, reports that shared parking opportunities are diminishing as existing neighborhood-oriented tenants are replaced with nationally known retailers such as Talbot's. The new retailers tend to stay open until 9 p.m., which conflicts with the peak demand times of restaurants.

**Space sizes.** The small-car trend of the 1970s and 1980s reversed itself in the 1990s, as seen in the growing popularity of sport-utility vehicles and pickup trucks. The ULI-ICSC study acknowledged this trend and recommended a "one size fits all" design for parking spaces instead of partitioning parking areas into small-car and regular spaces.

Muniza reports that many tenants, especially grocers, ask for ten-foot wide spaces, placed in a diagonal configuration to the drive aisles. This layout makes it easier to get in and out of parking spaces but is not the most efficient use of space. Smaller tenants are usually provided 90-degree (right angle to drive aisle) parking stalls, the most efficient layout, 9.5 feet wide. This width exceeds the recommended width in the fourth edition of the ULI publication, *The Dimensions of Parking* (2000), which for a U.S. community retail center ranges from eight feet nine inches to nine feet. The publication finds that retail centers with less turnover (longer stays) can provide narrower spaces. However, the prevalence of large personal vehicles in Texas suggests a need for spaces larger than the nationally recommended standards.

Small-vehicle-only stalls are no longer recommended, even at the national level. Many Texas municipalities already have restrictions on the number of small stalls that can be used



to meet required ratios. The trend away from small stalls is posing problems for some existing retail properties that once needed them to meet parking codes but are now changing tenant mix or redeveloping.

All publicly-accessed properties are required to provide parking that complies with the Americans with Disabilities Act (ADA). ADA stalls are larger and are restricted to certain locations within a parking lot. Retail anchor tenants and lenders generally will not commit to a retail property until the developer or property owner receives certification from the State of Texas that ADA parking requirements and other ADA-related requirements have been satisfied.

**Site configurations.** Suburban retail sites follow a standard pattern with the building placed near the rear of the site as viewed from the main access street with surface parking between the building and the street. Retail pad sites near the street also have parking spaces between the building and street because retailers want to show drive-by customers that parking directly in front of the store. Retailers also want vehicles near the store's entrance to give the impression that the store does a successful business.

Employee parking may be located to the rear or side of the building. Muniza reports that some retailers will consider side parking for sites, especially pad sites, that are located at high-traffic intersections in demographically desirable areas. Otherwise, deviations from the standard suburban model only work in high-rent central business district locations in Texas.

Other layout considerations include curb cuts and loading-stacking areas. Curb cuts (street access into and out of surface lots) may be a point of negotiation between retail property owners and tenants. According to Muniza, retailers such as fast-food outlets usually require curb cuts to provide access to drive-through lanes. Loading (areas for unloading of store merchandise, usually at the rear of the retail building) and stacking (of vehicles waiting to use drive-through facilities) standards for specific types of retail tenants are detailed in most municipal parking ordinances.

### **Other Features and Considerations**

**Landscaping.** For most retail properties, landscaping of parking facilities

is simply a matter of complying with municipal codes. The requirements vary from city to city and will not be discussed in this report. Landscaping requirements should be researched when estimating the cost of a parking facility.

Retail tenants' reactions to landscaping vary as well. Middle- and lower-market tenants place a high importance on occupancy costs so the extra cost of common area landscaping maintenance may be seen as undesirable. The cost may even compromise a property's competitiveness. In addition, because suburban retail buildings are situated at the rear of the property, anything (including landscaping) that decreases visibility of the building or tenant signs may provoke a strong negative reaction. For many upscale retailers, however, the presence of high-quality landscaping around surface parking may be seen as a way of differentiating the shopper's retail experience, thereby adding value to the location.

**Lighting and security.** According to Muniza, while municipal parking codes usually contain regulations on lighting levels in parking facilities, the codes are much less restrictive than tenant demands and property owners' voluntary standards to reduce liability. CenterAmerica generally provides parking lot lighting in its centers that far exceeds municipal requirements but is often less than what anchor tenants demand. Muniza states that customers can read a newspaper anywhere in the parking lot at nighttime.

Year-round parking lot security services are not required by municipal codes, and as a pass-through cost to retail tenants, may be viewed as an unnecessary cost. Security generally is only provided at upscale retail locations or sites where crime would be a major deterrent to store patronage. Many regional malls provide parking lot security during the Christmas shopping season.

**Operating costs.** Ongoing costs of operating retail parking facilities fall into the "common area maintenance" charges usually passed through to retail tenants under a triple-net lease. Muniza estimates that operating costs for CenterAmerica's properties average \$2.50 per square foot of tenant space per year.

### **Infill and Urban Sites**

Since the mid-1990s, residential and commercial development has returned to the urban cores of several Texas cities after being concentrated in the suburbs for decades. The rising number of affluent households moving into inner cities has brought a wave of retail development.

Except in certain central business and historical districts, retail properties are subject to the same need for parking as they are in the suburbs. Limited space and expensive land around many infill sites makes satisfying parking demands difficult.

**Effect on ratios.** Depending on the tenure of a particular retail property and its occupants and the codes of the relevant municipality, older retail properties may be exempt or "grandfathered" from current municipal parking requirements. As long as property improvements are not substantial or the occupant replaced, a shortage of on-site parking may not have to be addressed, as long as the occupant's business does not suffer.

Actual parking demand in high-density or infill areas may be reduced somewhat by increased pedestrian or public transit travel to the property. Some older, high-density retail areas may also have significant on-street parking plus cross-shopping patterns among properties by pedestrians. In Texas, however, the impact of these travel modes and shopping patterns on parking demand is likely to be minimal outside of downtown.

When on-site parking is difficult to provide, shared parking opportunities at adjacent properties may satisfy municipal requirements. Many city parking ordinances have sections that allow shared parking agreements between property owners to achieve required ratios. One example is the City of Plano, which allows shared parking if the two property owners provide a legally sufficient written agreement assuring the perpetual joint usage of the parking. According to Christina Day, a senior planner with the city, the joint parking area is generally required to be within 300 feet of the tenant that is deficient in its parking supply.

**Parking facility type and services.** New or redeveloped retail property in urban infill locations may have to use structured parking to satisfy parking

demand on site. While the cost of a parking structure far surpasses that of surface spaces, the economics of land costs in such locations may make structures preferable financially.

While the additional capital and operating costs of a parking structure are generally passed on to tenants, many upscale tenants are willing to accept the cost to obtain prime urban locations. Suzanne Anderson, associate director of property management for Weingarten Realty found this to be the case when a centralized parking structure was built in one of the firm's Rice Village properties in inner-city Houston. The upscale retail tenants were willing to pay to have on-site parking in that affluent area. The Highland Village shopping center, a decades-old center on the edge of Houston's wealthy River Oaks neighborhood, is adding a 320-space parking garage. The center has been attracting upscale and destination retailers and restaurants that have heavier parking demand. The garage, at the rear of the property, will accommodate employee and valet parking freeing up spaces in front of individual stores.

Other types of parking facilities have been used as well. Another Weingarten's center in Rice Village has rooftop parking directly over the stores. Anderson reports that it took a few years of "training" to get customers to use the rooftop spaces instead of the limited surface spaces but now rooftop parking is accepted. Randall's Food Markets is planning the first new grocery store in Houston's rapidly growing Midtown area, just south of the central business district. The company is reportedly considering underground parking, a common format in New York and San Francisco.

Retail properties in urban locations may be expected to provide more services in parking facilities than their suburban counterparts. Shoppers in urban locations typically have a heightened concern for security, so security patrols and extra lighting may be required, especially in parking structures. Valet parking services may prove useful for parking-intensive uses such as restaurants. Sassy Stanton, director of retail leasing at Insignia/EsG, has found valet parking particularly important in Texas. Restaurant properties in downtown locations without on-site parking must use valet parking to attract patrons. This requires use of a

valet service and rental of parking spaces in nearby garages or surface lots.

In Texas it is rare in for retail properties to charge for parking, even in on-site garages, unless valet service is provided. Usually, customers' parking charges are transferred to tenants through validation.

**Neighborhood conflicts.** Infill retail properties may have to deal with neighborhood conflicts over parking. Traditionally, neighborhood residents fear spillover parking from retail properties or tenants onto residential streets, with accompanying noise and litter. Ample provision of on-site parking generally alleviates this problem. Such accommodation can lead to additional conflicts though, as was the case with Weingarten's Rice Village properties.

Anderson reports that many retail properties in the Rice Village area were built before parking ratios were required by tenants or the City of Houston, so they Village provided little on-site parking, even for the many restaurants located there. As public awareness of the parking garage built within Weingarten's property grew, patrons of other retail properties began parking in the garage. Although this practice offered some cross-shopping benefits to Weingarten tenants, it became so common that Weingarten

tenants' customers were unable to find parking spaces.

After a public awareness campaign for neighborhood visitors proved ineffective, tenant protests led to a towing enforcement policy for the properties' nonpatron parkers. However, the difficulty of enforcement and negative public relations caused Weingarten to curtail enforcement. This case illustrates the complexities of providing parking for retail uses on infill sites, where the overall parking situation in the neighborhood may have a significant impact on a single site.

## MULTIFAMILY USES

Although it plays a less obvious role than in the retail and office markets, parking is also an influential factor in the development and marketing of multifamily projects. The nature and level of demand for parking is different because the property is primarily used by residents, not by visitors as with a retail or office property.

### Ratios

The number of parking spaces provided at a multifamily development is influenced by both municipal codes and tenant (resident) preferences. A survey of some municipal off-street parking codes for multifamily uses is provided in Table 3.

**Table 3. Municipal Requirements for Multifamily Uses**

City	Spaces Required	Per Unit of Area
Austin	1	Efficiency unit
	1.5	One-bedroom unit
	2	Two-bedroom unit
	2.5	Three-bedroom unit
	0.5	Each additional bedroom per unit
Arlington	2	Unit for the first 50 units
	1.75	For each additional unit
Dallas	2	1,000 square feet
El Paso	1	Efficiency unit
	1.5	One-bedroom unit
	2	Two- or more bedroom units
Fort Worth	2	1,000 square feet
	10	1,000 square feet indoor recreation area; subject to a 1.5 minimum and 2.5 maximum per dwelling unit
Houston	1.25	Efficiency unit
	1.333	One-bedroom unit
	1.666	Two-bedroom unit
	2	Units with three or more bedrooms
Plano	1.5	Efficiency unit
	2	One, two, or more bedroom units
San Antonio	1.5	Dwelling unit

Source: Planning departments of listed cities

Some Texas cities, including Austin and Houston, specify a ratio based on the number of bedrooms in each unit. Other cities have a flat ratio for all types of multifamily units, usually ranging from 1.5 to two spaces per unit. Dallas requires one space per 500 square feet of dwelling unit floor area. A major developer of Class A apartment properties in Texas reports that the company's complexes provide parking at 1.75 to 1.8 spaces per unit overall, roughly the ratio required in Dallas. These ratios account for both resident and visitor spaces. Municipal codes sometimes relax required ratios for multifamily projects in central business districts.

The presence of public transit does not normally impact amount of parking provided because municipal codes do not usually vary with this factor. Developers could pursue variances with the municipality on these grounds, but lenders generally want codes to be satisfied anyway.

### Surface vs. Structured

The decision to provide surface versus structured parking is an economic one for multifamily developers, driven by land costs. Prospective residents often expect parking structures in urban infill locations.

### Factors Affecting Layout and Design

The layout and design of on-site multifamily parking facilities are affected primarily by residents' concerns for accessibility, security and appearance. Marketability of individual units is affected by the closeness of the parking. When a significant number of units are relatively far from parking areas, rent premiums can be obtained for units.

Parking area security is another factor examined by prospective residents. Secured entrances and patrols every night or at least on weekends are highly desirable. Parking area lighting generally exceeds code because of liability issues related to security.

Parking structures placed in the interior of multifamily properties (surrounded by the residential units) have a higher natural level of security than structures on the perimeter. Developers in urban locations have found interior structures are more aesthetically pleasing to residents. Landscaping at Class A properties generally exceeds

codes to enhance the aesthetic appeal to residents.

### PARKING DEVELOPMENT COSTS

The construction cost of parking facilities depends on two factors: (1) parking efficiency and (2) architectural and structural factors. Parking efficiency is defined as the floor or surface area of a facility per parking space. Architectural and structural factors affecting cost include construction materials, accommodation of infrastructure for nonparking uses, drainage features, structure type (underground or above-ground) and landscaping and architectural finishes.

Development costs for parking facilities are significant enough to be the deciding factor in assessing the financial feasibility of a project. For this reason, it is important to have good schematics and other necessary studies done (geotechnical work, for example) prior to estimating costs on more than a preliminary basis.

### Surface

Surface parking is much cheaper to provide than structured parking in most suburban locations because of relatively inexpensive land costs, as compared with high-density urban areas. Efficiency of the lot will depend on its overall shape (nonrectangular sites reduce efficiency), choice of angled or 90-degree parking stalls (90-degree stalls are more efficient), stall sizes and the amount of landscaping and other nonparking features within the lot, including rainwater ponds.

Because the lots must accommodate a required number of spaces to meet codes, a reduction in efficiency results in a larger lot, meaning more land must be purchased or allocated away from revenue-producing uses such as retail or office buildings. Estimates of lot area per parking space typically are around 350 square feet, although the factors mentioned above can result in slightly higher or lower figures.

Architectural and structural factors affecting cost include the choice of asphalt or concrete paving and provision of drainage facilities. Both may be at least partially dictated by municipal codes. Sloped sites are likely to be more expensive. Other costs include those for landscaping, dictated by municipal codes, and lighting, which

must meet the requirements of anchor tenants. Estimates of surface parking costs range from \$1,000 to \$3,500 per space.

### Structured

Structured parking is more expensive on average and has a wider range of development costs. Parking efficiency in a structure depends largely on the type of ramps and the width of columns and stalls. These factors are in turn affected by the shape of the site, code requirements and the presence of other uses within the structure such as retail or office space.

According to *The Dimensions of Parking* (Urban Land Institute, Washington, D.C., 2000, 4<sup>th</sup> ed.), recently built garages can achieve efficiencies as tight as 200 square feet per space, though this generally requires use of small-car-only stalls, which are declining in practicality. The average efficiency is 315 square feet per space with a high end of 350 square feet for garages with sloped parking areas where the driving aisle functions also as a ramp. These factors exclude stairwells, elevator shafts, storage/maintenance areas, and lobbies. Garages with express (nonparking) ramps and shorter column spans, which are required when the structure contains mixed uses, may balloon to 450 square feet per space. In Texas, efficiency estimates average around 350 square feet per space, according to Muniza and another major apartment developer.

Architectural and structural costs of parking structures depend on a variety of factors including ventilation systems, sprinkler systems, size of structure (number of floors and architectural finishes). Enclosed garages are more expensive than open ones.

Subterranean structures are the most expensive and are limited by the geological conditions of the site plus the extent of uses above the structure. According to *The Dimensions of Parking*, costs per space in subterranean garages increase exponentially with every floor level below the surface. Estimates for these structures range from \$10,000 on up to \$20,000 per space.

Above-ground structures are less expensive than subterranean garages but are still costly. Poured-in-place concrete garages cost less than steel structures, with costs as low as \$6,000 per

space. Garages that make up the lower levels of commercial buildings are more expensive, with one estimate of \$8,500 per space. Estimates of stand-alone garages range from \$7,000 to \$15,000 per space.

## **PARKING AND NEW URBANISM**

Parking standards and techniques of parking development in commercial real estate in Texas have evolved over several decades. However, an emerging style of development commonly called New Urbanism directly and indirectly challenges many of these conventions.

New Urbanism is based on the typical urban design characteristics of cities and towns before World War II and before the automobile became the dominant mode of transportation. Strong pedestrian orientation is a key feature of New Urbanist projects.

In Texas and around the country, New Urbanist projects are appearing in both urban areas, particularly around downtowns of major cities, and in suburbs. Inner-city projects generally use structured parking and visually mimic development patterns of older core commercial areas. In suburban areas of Texas, these projects usually take the form of “town centers,” which are based on historical small town downtowns and street-car suburb commercial areas from the early 1900s. Town centers typically provide a mix of retail, office, civic and multifamily uses, often combining uses in a single building. The Dallas-Fort Worth Metroplex has several existing or planned New Urbanist projects, including Southlake Town Square, Legacy Town Center, Circle T Ranch and Addison Circle. The projects defy conventional suburban development practices, including those relating to parking.

### **Design Implications for Parking Layout**

Because New Urbanist projects are designed to optimize pedestrian accessibility to buildings, they generally feature both commercial and residential structures that are directly adjacent to the street without intervening parking lots. This provides a more enjoyable walking experience with opportunities for window shopping and sidewalk cafes, plus protection from

the sun and rain through use of street-side trees and building awnings.

While this environment fits in well with traditional Texas central business districts, it is a marked contrast to typical suburban Texas development. One of the great challenges faced by suburban New Urbanist developments is finding ways to accommodate parking, since most access to the overall development will still occur by automobile.

At the Southlake Town Square in Southlake, near the Dallas-Fort Worth International Airport, parking conventions were developed to satisfy the needs of businesses yet still provide a pedestrian-oriented environment. Because it focuses on becoming a mixed-use central business district rather than a single-use retail or multifamily development, developer Cooper & Stebbins, L.P., declines to call the project New Urbanism, although the project highlights many New Urbanist practices.

The development features retail uses, including several restaurants and upscale national retailers. Many structures feature office space for medical, financial and legal practices above the retail uses. At the center of the project is the new Town Hall for the City of Southlake. Future phases will include additional retail and office space, residential properties and possibly hotels.

Intended to become the “downtown” for Southlake, the project is divided into city blocks by new public streets. Structures with commercial uses are adjacent to sidewalks, providing direct pedestrian access. Parking for these uses is primarily provided by surface lots behind the buildings, in the interiors of the blocks. Thus, patrons can park in these lots and walk to the sidewalk on the perimeter of the block to access one or more businesses.

In addition, many stores have provided two “front doors” — one at the sidewalk entrance and one to the interior parking lot — to draw in customers. Frank Bliss of Cooper & Stebbins reports that although additional entrances present a design and security cost to retailers, tenants have found their patronage is increased by the additional exposure. Upscale retailers that typically embrace downtown sites around the country have been

willing to locate in Southlake Town Square.

Another New Urbanist-style project under construction, Legacy Town Center in Plano, also features mixed uses, including retail, hotel, residential and office. Instead of concentrating surface lots in the interiors of blocks as in Southlake Town Square, surface lots will be allocated toward the perimeter of the project, near major roads such as the Dallas North Tollway. Visitors can then walk along the streetfront businesses to reach their destinations in the interior. There also will be parking structures in the interior of the project.

A common feature of Southlake Town Square and Legacy Town Center and of most New Urbanist projects is on-street parking. Although the interior streets of many New Urbanist developments are dedicated as public streets, parking is provided in front of buildings with commercial uses, especially retail. Parking may be time-limited to encourage quick turnover and to cater to customers wishing to visit only one establishment for a quick errand. The stalls are often angled, which provides more efficiency, and therefore quantity, than parallel spaces. Steve Scott of EDS, developer of Legacy Town Center, says that street parking is mandatory for retailers.

### **Overall Parking Supply**

Because New Urbanist projects generally try to minimize surface area devoted to parking, developers look for ways to minimize the quantity of parking provided. This means closely analyzing shopping traffic patterns, peak demand by use and opportunities for shared parking. In Southlake Town Square, Cooper & Stebbins used a “park once” paradigm. This concept is based on the assumption that, given a high-quality walking environment and safe and direct pedestrian connections, visitors only have to park a single time and visit multiple properties on one trip.

Using the park-once paradigm, the Southlake Town Square can count the parking within a multiple-block area toward a target ratio for the commercial space it supports. For example, in the first phase of the project, Cooper & Stebbins was able to achieve targeted parking ratios by totaling spaces in a



six-block area covering 42 acres and supporting 14 buildings. New Urbanist developers also capitalize on street parking capacity. In Southlake Town Square, 20 percent of required parking is provided on the street.

A key factor in determining parking supply in New Urbanist developments is the pattern of peak parking demand for each use. Understanding these patterns is essential so that a project can take advantage of shared parking and reduce its overall ratio. By carefully placing, within the project, certain uses with intensive peak parking demand, such as medical office and restaurants, these uses can take advantage of parking spaces that serve other uses at other times of day.

Using the park-once, street parking and shared-parking concepts, New Urbanism projects reduce their overall off-street parking ratios for commercial properties. Southlake Town Square has a combined ratio of four spaces per 1,000 square feet for all the uses in its first phase. In Legacy Town Center, a Doubletree Hotel and planned adjacent office building will share a parking structure. The ratio for commercial development will vary from project to project, depending on the mix of uses and nature of the commercial occupants.

These projects may not design their parking to accommodate all demand for every day or occasion during the year. Because civic uses or public open spaces are incorporated into many of these developments, certain events such as holiday celebrations or certain times of year may produce parking demand that cannot be accommodated, or may require visitors to walk longer distances than usual. Frank Bliss of Cooper & Stebbins reports that this is not a problem. The

public generally accepts such situations because of the high-quality walking environment, which lessens the negative aspects of parking farther away. If the use mix changes in coming decades, causing the parking system to fail more often, the project is designed so that the interior of each block, which now contains a surface lot, can accommodate a parking garage.

### **Working with Municipalities**

While the parking management concepts described above are appealing in theory, obtaining municipal approval to apply them is another matter. In most cases, suburban parking ordinances do not allow for these concepts. Because parking is just one aspect of New Urbanist projects that conflicts with typical planning and zoning ordinances, project developers must often engage in a long process of educating public officials and modifying ordinances.

Both Southlake Town Square and Legacy Town Center required extensive discussions with their respective municipalities regarding parking ordinances. In Southlake, Cooper & Stebbins conducted considerable research on downtown parking and hired an engineer to create a parking model. The developer presented the findings of this research to city officials in a nonquantitative format but with the quantitative data for backup.

When it was apparent to Southlake officials that the existing ordinance would prohibit the Town Square project from applying concepts such as park once and differential peak demand, they worked with the developer to create a new ordinance with special parking provisions for the project. The developer studied other ordinances around the country to help draft the

new version. In the resulting planned-unit development zoning designation, the city allowed a "discount" on total required parking spaces of 10 percent each for retail and office space and 50 percent for restaurants and any future theaters. The stickiest issue revolved around the counting of on-street parking as part of required spaces.

EDS, the developer of Legacy, had to go through a similar process with the City of Plano. Scott reports that the city was enthusiastic about new development in general but was cautious about the treatment of parking in the Town Center project. The city applied a "Central Business District 1" zoning designation to the site, allowing for special additional parking regulations. Most importantly, it lengthens the distance from a property to an off-site shared parking facility from 300 feet to 600 feet and relaxes the code for on-site retail spaces to two spaces per 1,000 square feet.

### **CONCLUSION**

Parking is a key factor in development and marketing of commercial real estate in Texas. Many factors that must be considered in provision of parking have been relatively constant over time, such as the optimal supply of parking for certain types of retail stores. Other factors, however, have changed rapidly over the past few years, such as the parking ratios demanded by office tenants.

Developers, investors and managers who fail to recognize the importance of parking may find themselves with uncompetitive properties. Innovative parking solutions coupled with attractive and value-added design environments can be integral to the success of commercial development projects.