

APPENDIX A

Site Summaries

Site Summary Overview

This section provides summaries parking and mobility characteristics specific to 16 transit-oriented developments on sites within walking distance of 11 DART light-rail stations. These profiles focus on the planning context, land use characteristics, and parking conditions (inventory, utilization, and management) specific to each development.

Understanding these site elements will provide insight on how various components increase or decrease reliance upon parking to support both ridership and TOD.

Each site summary will include the following:

- Summary of site land uses
- List of distinctive elements which increase access to multimodal transportation
- Required parking based on zoning and land use
- Provided parking supply and management attributes
- Three graphs profiling:
 - Observed on-site parking utilization continuously across a selected Thursday, Friday, and Saturday in the second half of 2018
 - Parking demand generated across a typical weekday by a shared industry-standard parking model (as described in the Study Summary methodology and Appendix D) compared to the peak observed weekday occupancy
 - Parking demand generated across a typical weekend by a shared industry-standard parking model compared to the peak observed Saturday occupancy

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5 Mockingbird

5555 East Mockingbird Lane, Dallas TX 75026

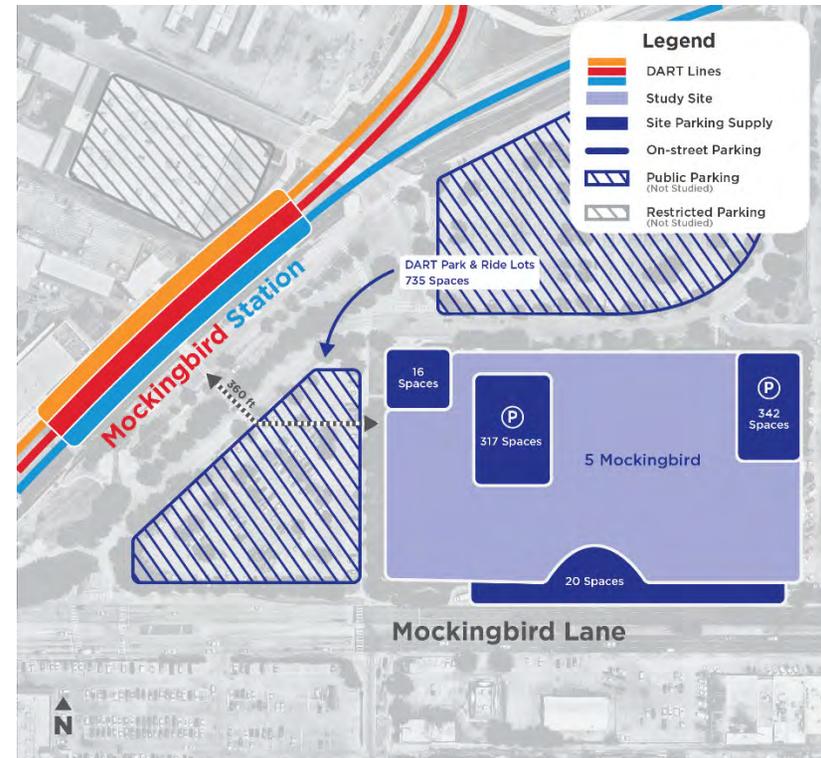
Development Overview

5 Mockingbird is located on the eastern side of Mockingbird Station, within 400 feet of walking distance from the station. Constructed in 1998 on a lot of just over 6 acres, the development contains 449 apartment units spanning from one to three bedrooms in size, and just over 8,000 SF of retail space. Apartment rents range from \$1,091 to \$2,810 per month.¹

On-site services include a fitness center, spa, and a salon.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
24	263	152	10	449	92%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		8,167		8,167	100%



Distinctive Mobility Elements

	Walkscore = 87 (Very Walkable) ² 0.85 mile west: Southern Methodist University
	750 feet northwest: Katy Trail
	300 feet north: Bicycle racks in the adjacent DART Mockingbird Station park-and-ride lot (None on-site)
	300 feet south: Bus stop for DART routes 076 (Mockingbird Station to Downtown Dallas, 7 days a week) and 081 (Wynnewood Village Shopping Center to Mockingbird Station, 7 days a week)

¹ All apartment rents were checked on December 2018 at apartmentfinder.com

² All Walkscores were checked on September 2019 at walkscore.com

Parking Supply

Required Parking: 621 **Provided Parking: 695**

Although the area is zoned “Mixed-Use 3” (MU-3), the parking requirements for the site defer to baseline ratios in the City of Dallas zoning code. The minimum of one space per bedroom (studios require one space) sets the requirement at 621 spaces. If a quarter space per unit is included (for situations when “the required parking is restricted to resident parking only”), the minimum increases to 733 spaces. Nonetheless, the development provides 74 spaces in excess of the required 621.

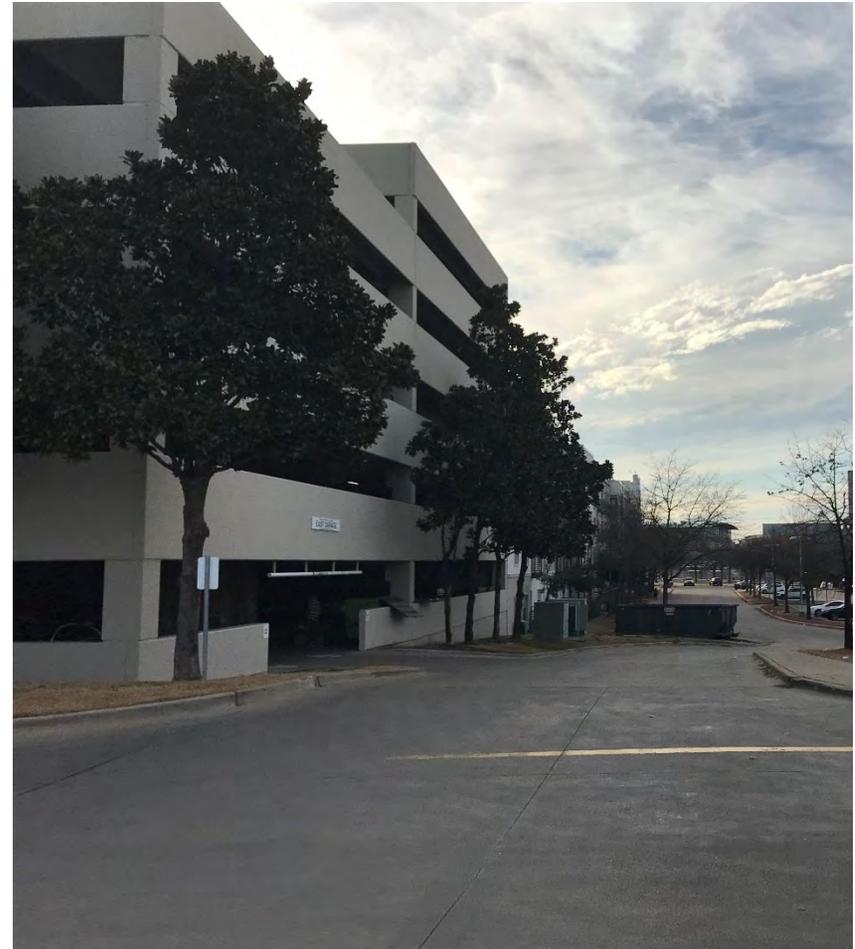
Of the 695 spaces on site, 633 are reserved for residents, 43 are for set aside for visitors, 16 are dedicated to retail uses, and 3 are signed for customers only. Two garages enveloped by the larger building provide most of the parking – 659 spaces. The top floor of each of these five-story garages is reserved for visitors.

Parking Management

Each resident at 5 Mockingbird is given a free parking space. Those with additional parking needs must pay for a reserved space (\$25 per month). Visitors using rooftop spaces must be let in by a resident, or someone with a key fob to the garage. Visitors may also park in the front on the building to be let in through the side doors.

Separating 5 Mockingbird from Mockingbird Station is a DART park-and-ride surface lot containing 735 spaces. Like all DART park-and-rides, parking is provided to DART riders at no additional charge. Parkers may park for extended durations past the overnight hours, but at their own risk.

Leasing-office employees and prospective residents use exclusively signed spaces for them on the surface lots outside of the office.



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Parking Utilization

Studied Inventory: 659

Utilization was documented at the 5 Mockingbird parking facilities on August 19th, 20th, and 21st. The highest observed utilization rate was noted on Friday at 5:00 AM, when it reached 71% with 470 vehicles parking. Following this peak, utilization steadily decreased until 1:15 PM. The lowest observed utilization level recorded across the full 72 hours was 40% with 262 vehicles parked. On Saturdays, the early morning peak reached 69%, while the midday decrease was more modest and longer-spanning compared to weekdays, falling to just 51% (at 4:30 PM).

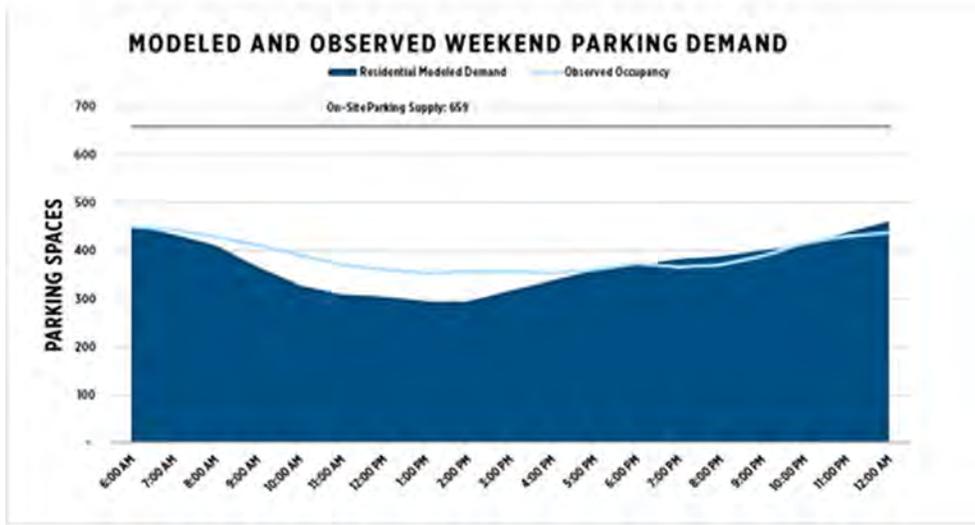
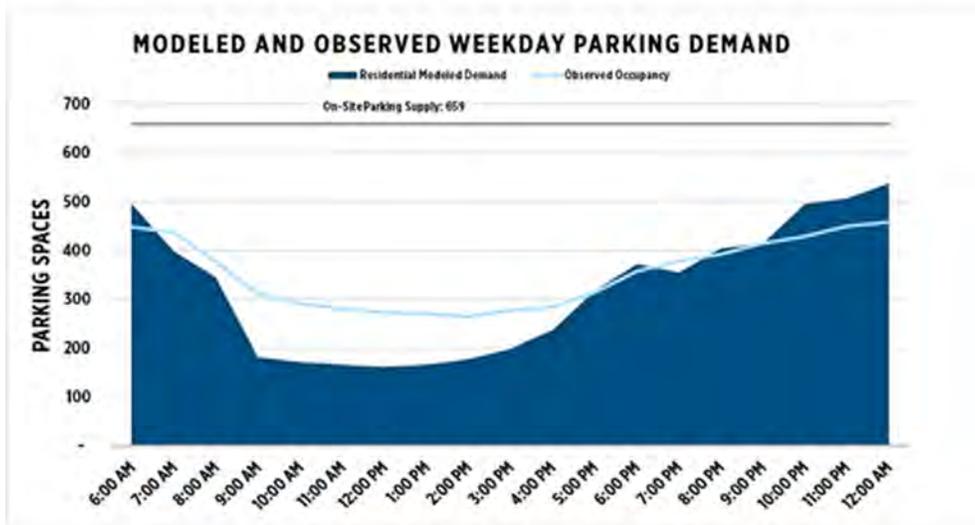
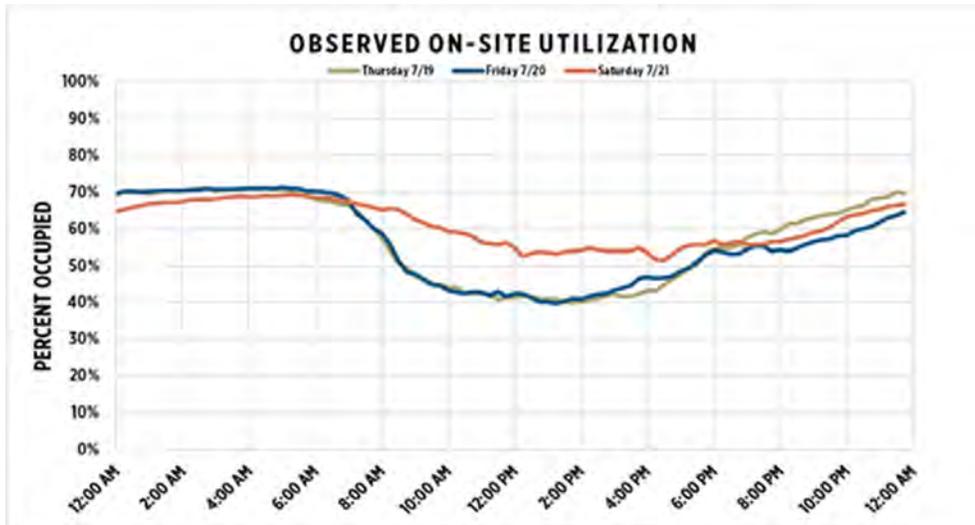
Parking occupancy for the retail portion was not measured or modeled in this study, as the 16 retail spaces are in a separate location from the residential parking.

Modeled Parking Demand

The bottom two charts on the following page track demand patterns that a shared-parking model would predict for the Mockingbird 5 development, for both weekdays and weekends. Observed demand peaked below modeled demand by about 69 vehicles suggesting notable parking efficiencies for this development. The gap between observed and modelled weekday demand was even greater, with at least 100 fewer vehicles than the model predicted for this period.

By comparison, however, model projections of parking need for this development were much closer to actual demand than were either the City's minimum requirement or the supply provided by the developer

5 MOCKINGBIRD



The Belleview

1400 Belleview Street, Dallas TX 75215

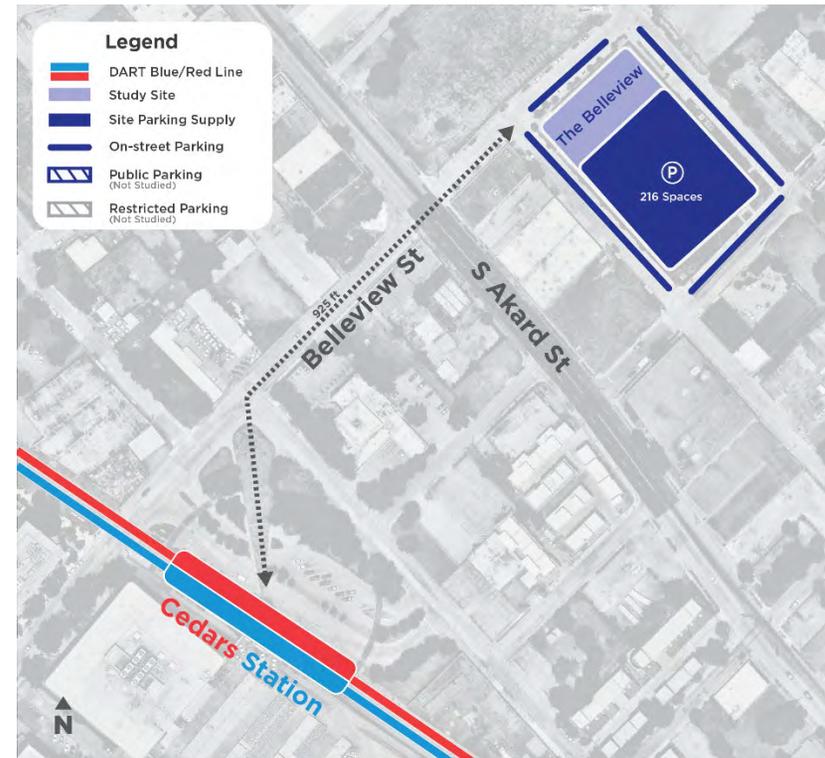
Development Overview

The Belleview is a 5-story mixed-use development containing 164 apartments and 7,500 square feet of ground-floor retail space, located just over 900 feet of walking distance from Cedars DART Station. The project's primary objective was to provide affordable housing in the Cedars area. All of the units in the Belleview are rent-controlled and income-restricted. The monthly lease for units range from \$394 to \$1,140. Indicative of the demand for such housing, there were no vacant apartments at the Belleview in July of 2018. Common characteristics of Belleview residents suggest the development is likely to generate below-average rates of parking demand:

- Employment at the Omni Hotel, a 20-minute walk away, or a 10-minute transit/walk trip.
- Single-parent households
- Predominantly low-income households

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	46	87	31	164	100%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		7,500		7,500	0%



Distinctive Mobility Elements

	Walkscore = 79 (Very Walkable) 0.4 mile northwest: Kay Bay Hutchison Convention Center
	0.6 mile west: Bike Lane on Cadiz Street
	Bicycle racks: On-site on Belleview Street
	300 feet west: Bus stop for DART route 026 (Frazier Courts to Downtown Dallas, 7 days a week)

Parking Supply

Required Parking: 147

Provided Parking: 216

Located within Subdistrict 2 of the Cedars Area Special Purpose District (Planned Development #317) the Belleview's multifamily residential units are required to provide a minimum of one space per bedroom per unit, but no more than two spaces per unit. Adding requirements for the retail space (set at 1 per 200 square feet), the project's baseline requirement was set to 320 spaces. However, a 40% reduction is available for Subdistrict 2 developments offering "enhanced pedestrian amenities" within 1,400 feet of a DART Station. This resulted in a parking requirement of just 147 spaces, toward which the site's 45 on-street parking spaces could be counted. Nonetheless, the development included 216 parking spaces.

Parking is supplied in a garage embedded within the building, controlled by an exterior gate. The garage contains a total of 216 spaces, of which 175 are reserved for residents, controlled by an interior gate. The remaining 41 spaces in the garage are for any retail customers and tenants.

Parking Management

Resident-only spaces within the garage are accessed by a key fob that activates a roll-down gate. While all off-street parking is entirely private, the 45 on-street spaces surrounding the Belleview are free and unrestricted.



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Parking Utilization

Studied Inventory: 216

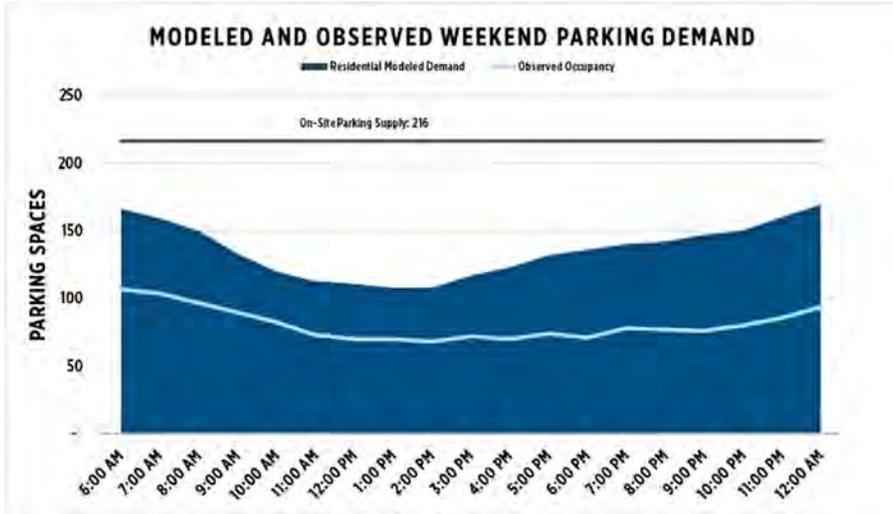
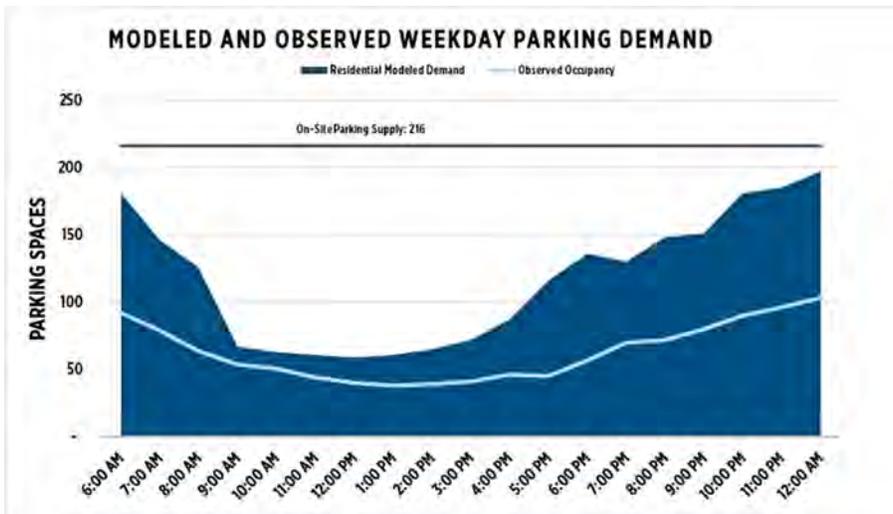
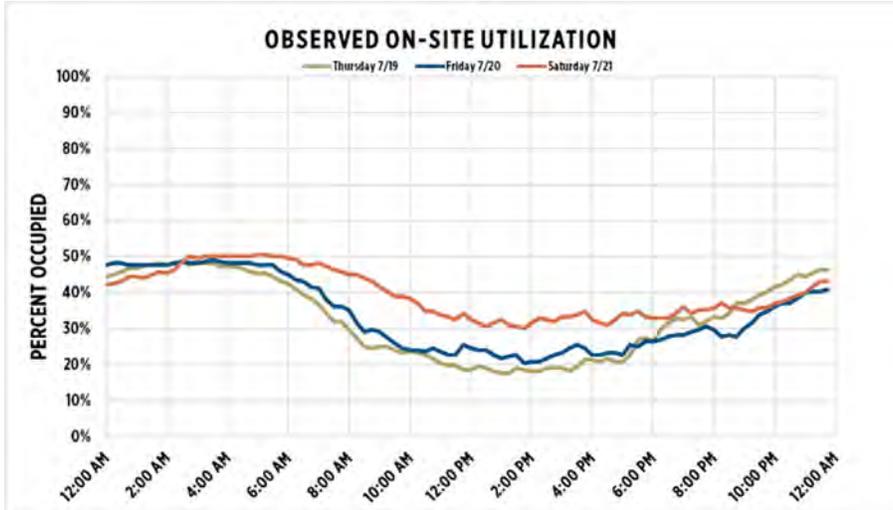
Utilization was documented at the Belleview garage July 19th, 20th, and 21st. The charts on the following page profile the observed utilization across the 72-hour timespan.

Garage demand peaked at just less than two parked vehicles per three dwelling units. The use of the surrounding 45 on-street spaces was sampled throughout the three days as well. The highest recorded utilization rate was 82%, on Saturday at approximately 1:10 PM. At the time of data collection, the retail spaces were not fully leased. Nevertheless, demand was significantly lower than the available on-street supply.

Modeled Parking Demand

The bottom two charts on the following page track demand patterns that industry-standard models would predict for the Belleview development, for both weekdays and weekends. Observed demand peaked well below modeled demand suggesting an on-site population with significantly below-average auto dependency. The gap between observed and modelled weekday demand was even greater, with at least 100 fewer vehicles than the model predicted for this period. Demand is also well below the supply provided, and the minimum parking requirement – even after the 40% adjustment for transit-adjacency.

THE BELLEVUE



Lancaster Urban Village

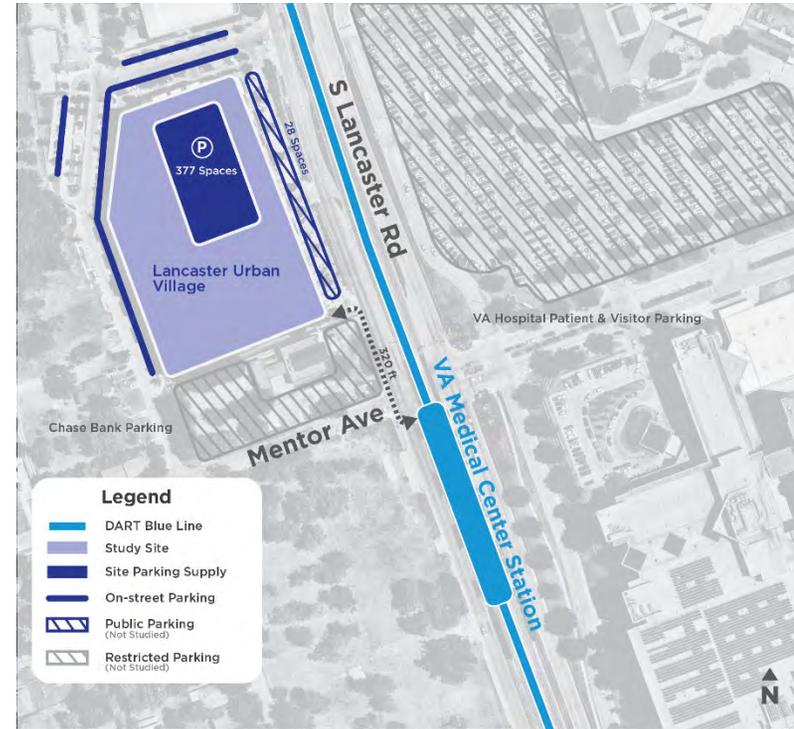
4417 S Lancaster Road, Dallas TX 75216

Development Overview

Opened in 2014, Lancaster Urban Village is a 320-foot walk from the VA Medical Center Station, located in southern Dallas. The development contains 193 residential units, 100 of which are maintained as affordable housing for households earning 80% or less of the area median income. Apartments rent for between \$604 and \$1,265 a month. There is an additional 14,000 square feet of commercial space located on the ground floor, facing Lancaster Road, including office space affiliated with the Veterans Affairs (VA) hospital.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
13	99	77	4	193	89%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
8,200		5,800		14,000	100%



Distinctive Mobility Elements

	Walkscore = 58 (Somewhat Walkable) ¼ mile east: Dallas VA Medical Center, which employs up to 3,600 staff ³
	330 feet north: Planned east-west bikeway on Ann Arbor Avenue
	Bike racks: None on-site
	150 feet south: Bus stop for the DART route 444 (Cockrell Hill to Ledbetter, 7 days a week)

³ https://www.northtexas.va.gov/news_and_events/media_kit/dvamc.pdf

Parking Supply

Required Parking: 322 Provided Parking: 405

Lancaster Urban Village is located within a Planned Development area (#832) with its own zoning regulations. Parking for residences is required at a ratio of one space per bedroom. Office space requires one space per 400 square feet, while retail/services space requires one space per 250 square feet. This adds up to a minimum requirement of 322 spaces for the development. While the code would have allowed up to 55 on-street spaces, along the north and west side of the building, to be counted toward this requirement, this was not necessary, as the developer chose to provide on-site parking that exceeds the requirement by 83 spaces.

The site has a garage containing 377 spaces, of which 270 are exclusively for residents (placed behind a gate opened by a key fob). 85 garage spaces are for the public, and 22 are reserved for the VA, purposes, personal/reserved spaces, or the building's maintenance fleet. On the east side of the building, facing Lancaster Road, there are 28 surface spaces located in front of the ground-floor retail, of which 5 are marked "customer only."

Parking Management

All on-site parking is free of charge. Residents receive a minimum of one fob for accessing the pool of resident-only spaces in the garage. Residents with additional vehicles may request additional fobs granted at no charge. Visitors must gain access from residents using a keypad/call button.

To prevent spillover parking from the VA Hospital, building management does not allow overnight parking for non-residential spaces. A check is done at 11:00 PM each night and towing companies may be called in.



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Parking Utilization

Studied Inventory: 405

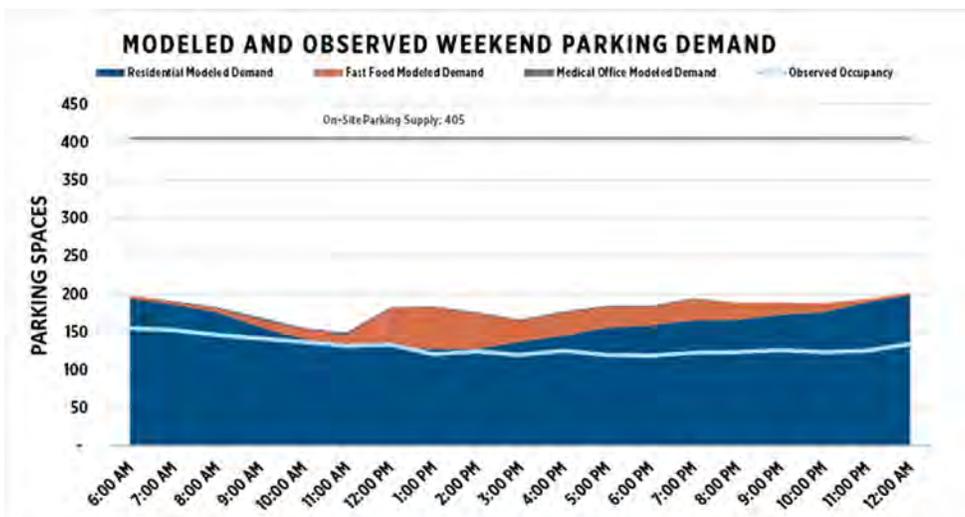
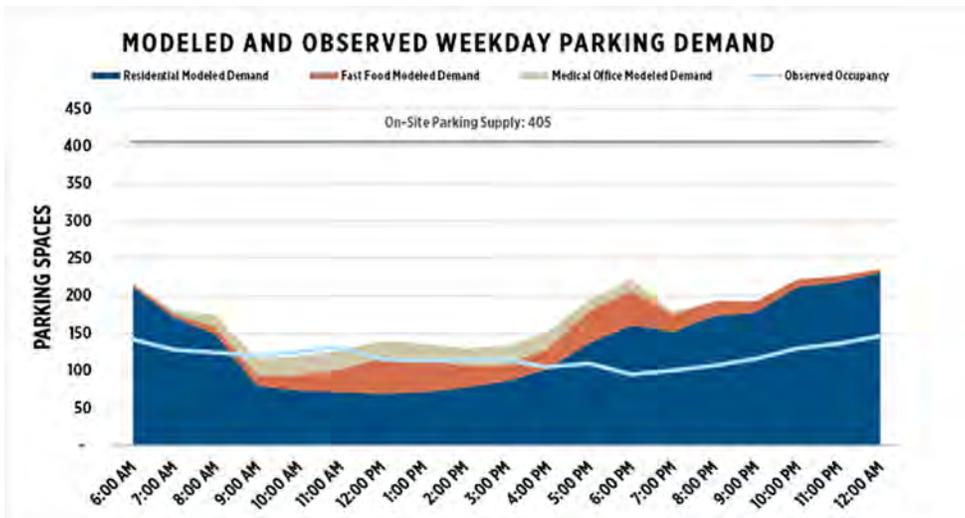
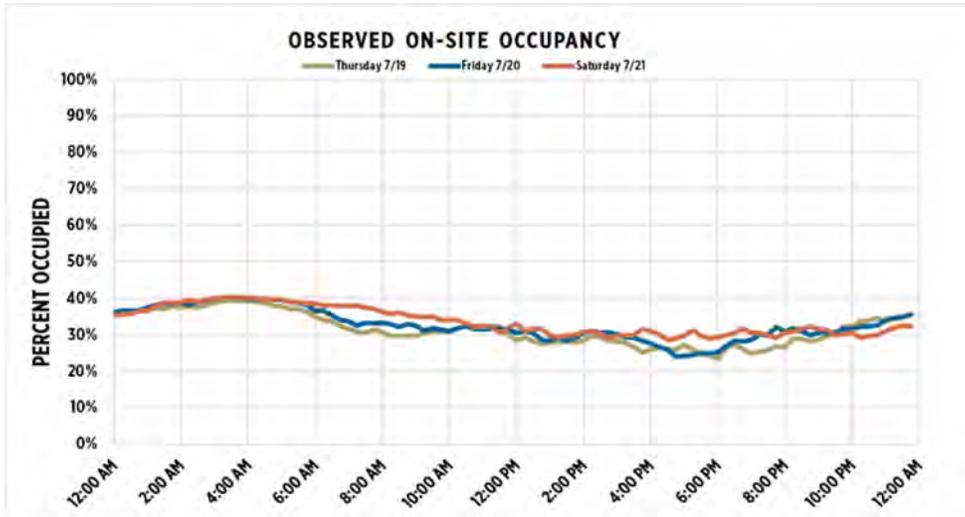
Parking utilization was documented on July 19th, 20th, and 21st. During that time, 88% of apartment units and 100% of the non-residential space were leased. The highest observed utilization was 40%, or 163 parked vehicles, during the overnight period on weekday and Saturday surveys. This is less than half of the reported occupancy of the building's residential units (88%) at the time of data collection, and 30 spaces less than the total number of units in the building. Over the survey period, utilization decreased to just under 30% during the midday period, and as low as 24% at 5:00 PM on Friday. Sample occupancy measures taken among the surrounding 55 on-street spaces peaked at 37% utilization during the Saturday lunch hour.

Modeled Parking Demand

Weekday modeled parking demand anticipated a spike at around 6:00 PM (due to the fast food located on-site) before climbing again to an overnight peak of 236. The only time modelled weekday demand aligned with observed measures is from 9:00 to 11:00 AM, in which about one-third of parking capacity is occupied. On weekends, peak modelled demand barely reached 200 spaces, or less than half of the actual supply at the property. Compared to the provided supply and the development's parking requirement, however, the model was much closer to the observed demand peak of 163 cars.

Property management noted that parking demand would experience higher-than-average rates from November to January, and again in July, roughly corresponding to when property leases would change. If observed demand were higher by 25% in December, as noted by the property staff, it would still fall short of the modeled peak demand rate.

LANCASTER URBAN VILLAGE



LBJ Station Apartments

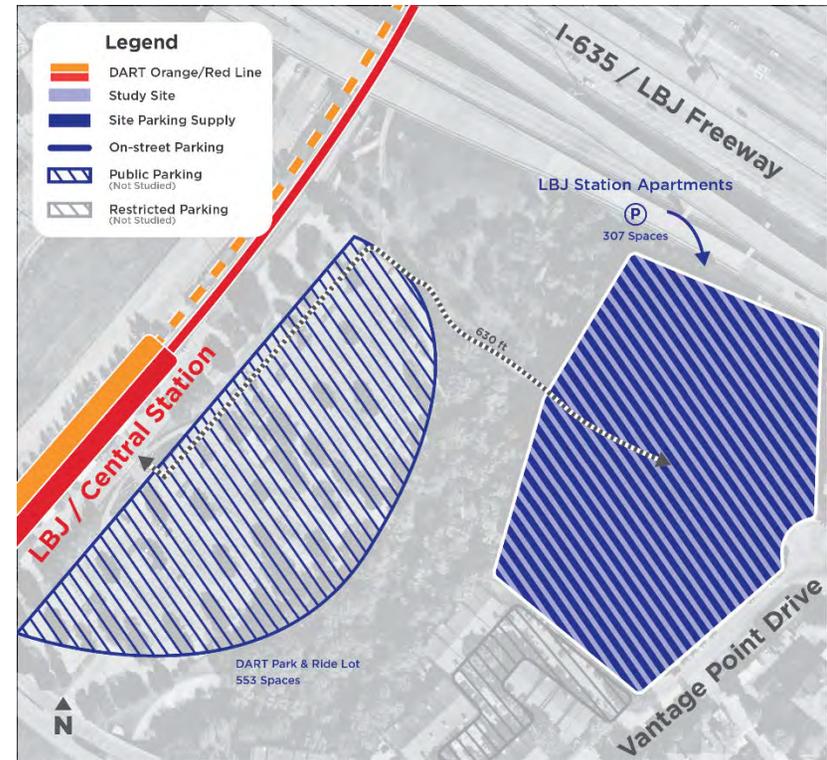
8997 Vantage Point Drive, Dallas TX 75243

Development Overview

Built in 2017, LBJ Station Apartments contains 249 residences in a complex of multiple three-story buildings spread across a 6.76 acre lot. The center of the complex is a 630-foot walk from the LBJ/Central DART station. Rents range from \$1,050 to \$1,714 per month.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	187	62	--	249	93%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		--		--	--



Distinctive Mobility Elements

	Walkscore = 47 (Car-Dependent) 0.6 mile southwest: Texas Instruments Incorporated Headquarters
	0.8 mile north: Cottonwood Creek Trail, a 3.6 mile trail linking DART stations, neighborhoods, employment centers, trails, and institutions ⁴
	Bike racks: None on-site
	0.2 mi west: Bus stop for DART route 582 (Walnut Hill Station to LBJ/Central Station, Monday to Saturday) and 585 (Forest Lane Station to Spring Valley Station, Weekdays)

⁴ <https://www.dallasparks.org/406/Major-Linear-Trails>

Parking Supply

Required Parking: 311

Provided Parking: 307

LBJ Station Apartments is in a “Mixed-Use 3” (MU-3) zone, but its parking requirements defer to baseline ratios in the City of Dallas zoning code. For multifamily dwellings, that means 1 space per bedroom is required, which translates to an estimated 311-space requirement for LBJ Station Apartments.

Today, 307 spaces serve the complex, of which 295 spaces are reserved for residents and located behind a sliding security gate accessed by a key fob. Residents can park for free among unreserved surface spaces, or they can pay for a reserved space under a covered canopy (\$25/month), in an a podium-level section of parking underneath apartments (\$50/month) or within a private podium-level parking space with an individual garage door (\$125 per month).

Visitor parking is provided in 12 spaces located outside of the leasing office in the front of the development (which were not included in utilization data collection).

The DART park and ride lot, containing 553 spaces is located in between the apartment complex and DART station. There are no other public parking options on or adjacent to the site.

Parking Management

Parking permits are limited to two per apartment.



Google Streetview © 2017

Parking Utilization

Studied Inventory: 295

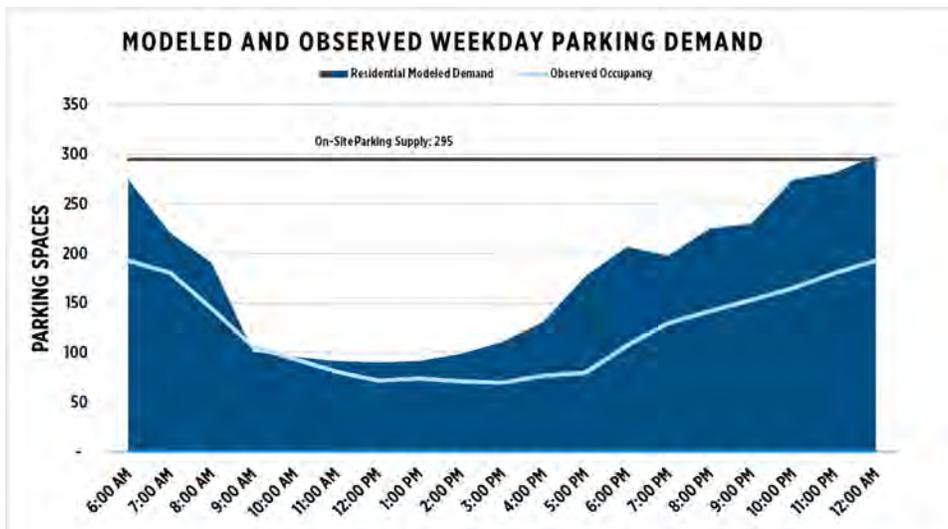
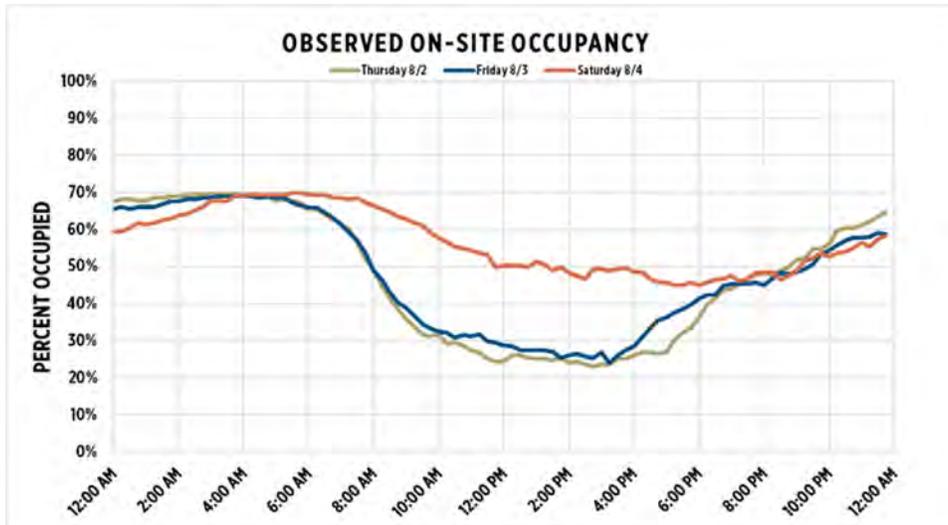
Utilization at the LBJ Station Apartments was studied on August 2nd, 3rd, and 4th. Utilization peaked at 70% (206 vehicles parked) at 5:30 AM on Saturday, with a similar peak experienced during weekday overnight periods.

Weekday demand declined to as low as 23% at 2:45 PM on Thursday, while Saturday demand declined to 45% on at 5:15 PM.

Modeled Parking Demand

The modeled demand-peak, as well as the City's parking requirement and the resulting on-site supply, significantly overestimated demand compared to observed patterns.

LBJ STATION APARTMENTS



The Lofts at Mockingbird Station

5331 East Mockingbird Lane, Dallas TX 75206

Development Overview

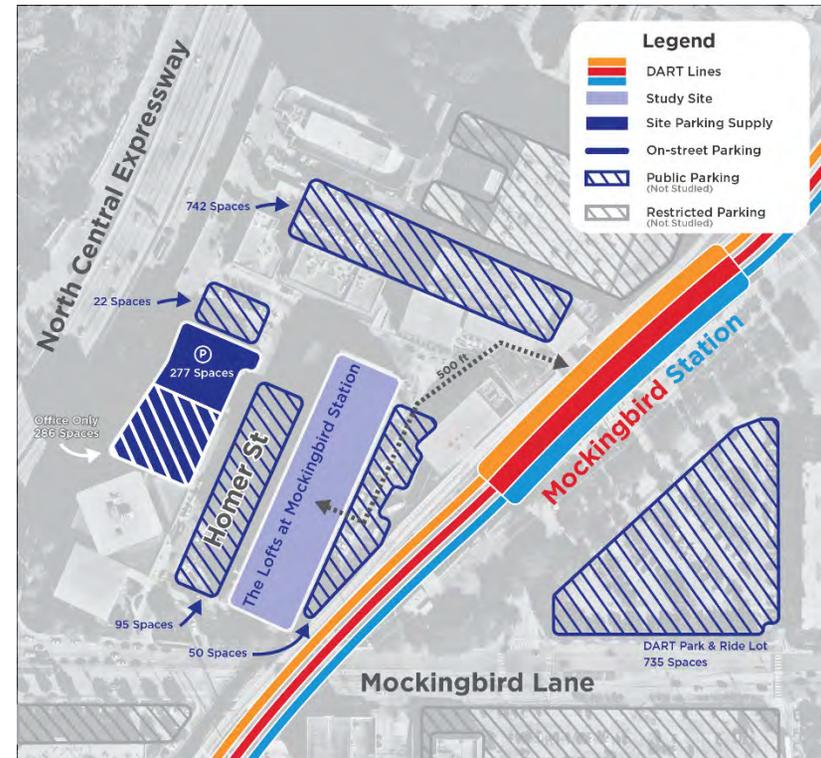
The Lofts at Mockingbird Station is a residential component of a larger mixed-use development known as Mockingbird Station, named for the on-site DART station. The development, which includes a variety of retail shops, restaurants, a movie theater, and offices, was originally started in 1927 as a Western Electric manufacturing facility, and redeveloped in 2001 as what is considered among the first transit-oriented developments in North Texas. The Lofts building was originally constructed in 1948 as a warehouse, and now contain 211 rental “loft-style” apartments. These loft apartments, are the only component of this development which was analyzed. Monthly rents range from \$1,450 to \$5,100.

The front door of the Lofts is approximately 500 feet away from the DART station entrance, but parking is connected to the Lofts via an underground walkway of about 100 feet.

Land Use Summary*

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	187	24	--	211	93%

*Note: Studios and One-Bedroom units could not be differentiated by the property manager and are combined under one category. This has no impact on parking requirement analyses.



Distinctive Mobility Elements

	Walkscore = 85 (Very Walkable) 0.7 mile northwest: Southern Methodist University
	88 feet east: Katy Trail. A 3.5 mile linear park ⁵
	Bike racks: 1 rack on-site serving the larger development.
	520 feet: Bus stop for DART route 521 (Northwest Highway (Mockingbird Station, weekends) to Cityplace/Uptown Station, 7 days a week)

⁵ <https://www.dallasparcs.org/406/Major-Linear-Trails>

Parking Supply

Required Parking: 234 Provided Parking: 227

Parking requirements of the site defer to baseline ratios in the City of Dallas zoning code, per the Mixed-Use-3 (“MU-3”) zoning. The requirements, which essentially set a minimum of one space per bedroom, translate into 234 spaces. Reasons the residential parking section of the garage is 7 spaces lower than the requirement is due to the possibility that the spaces are covered elsewhere in the 1,000+ space garage and the history of the site being granted a mixed-use parking reduction by the City of Dallas.

The parking for The Lofts is in a separately accessed and restricted section of a larger Mockingbird Station garage that also serves retail and office uses. Among the 227 spaces dedicated for the lofts, 18 are available as reserved (at \$125 per month). Vehicles access the residential section of the garage from Homer Avenue, an access street located within the development. The fob-controlled entrance for resident-only parking is situated to the east of The Lofts and signed “Lofts Parking”. This entrance leads vehicles down one story to their dedicated facility. The same fob provides access the Lofts building and elevator.

Parking Management

Stickers are provided for resident vehicles to facilitate enforcement, and signal resident-parking eligibility to the contracted towing company, which periodically checks for overstayed and noncompliant vehicles. Resident guests are supposed to park in the Mockingbird Station garage, outside of the area restricted for just residents, or floor P2. Frequently, however residents let guests into the exclusive area of the garage by opening a door for them according to an individual working at the property.

Immediately to the west of The Lofts, there is a 95-space surface lot for retail customers. Some of the spaces are signed exclusively for a

specific location (e.g. Interbank) or for loading purposes, but most spaces are without a marking of any regulation (including the fact that overnight parking is not permitted in this location).



DART

Parking Utilization

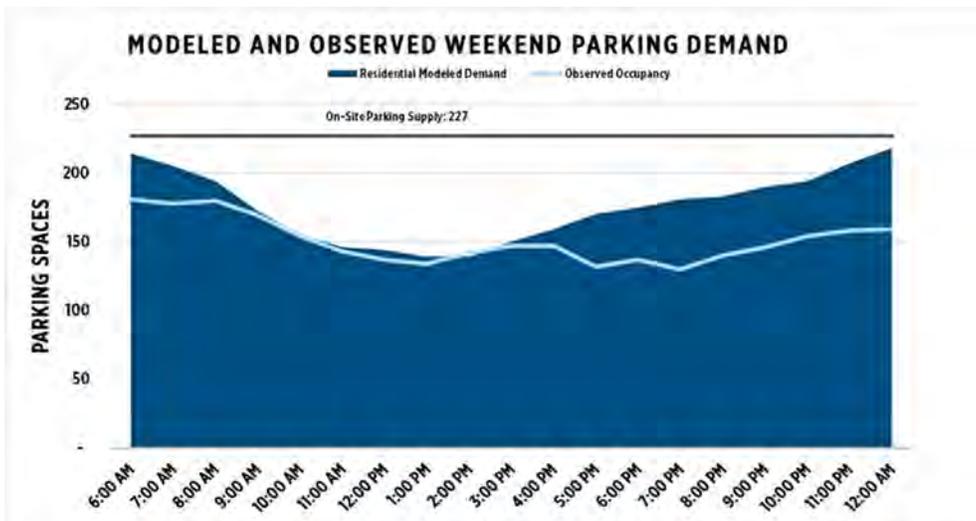
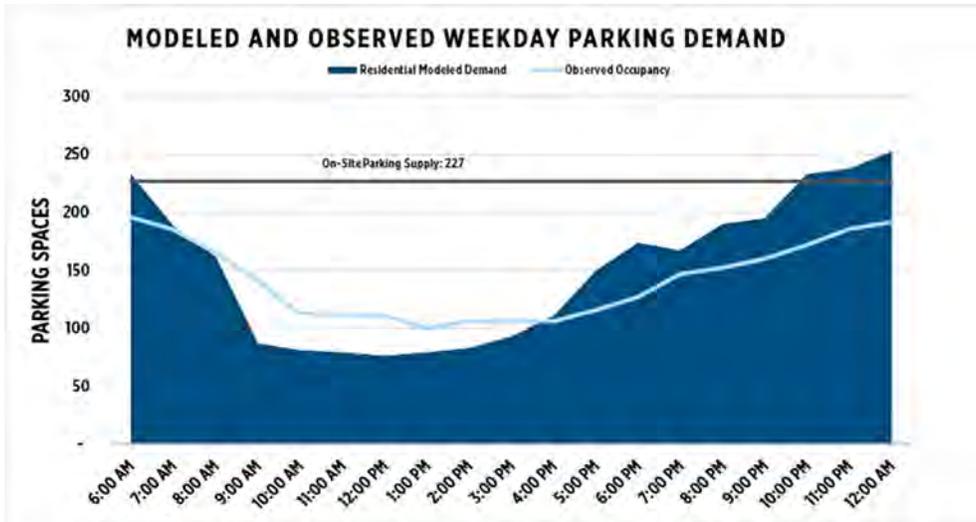
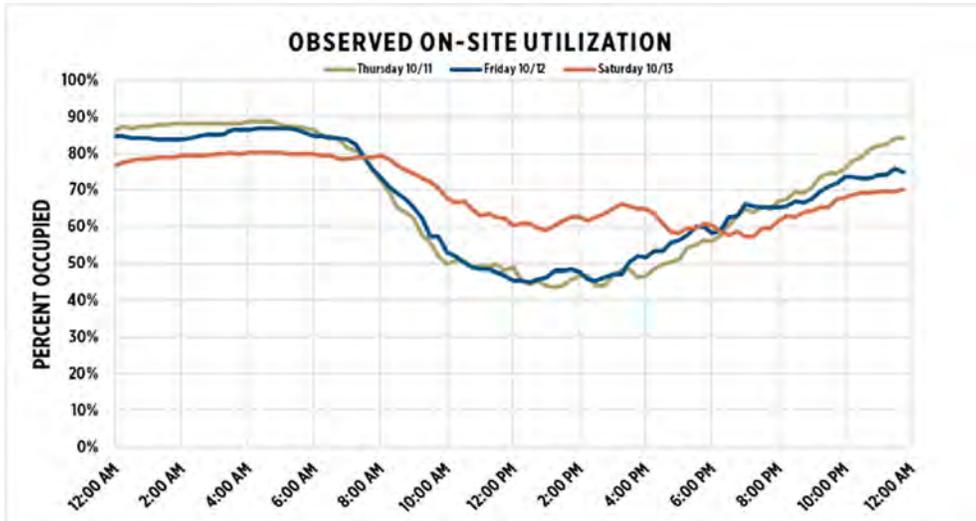
Studied Inventory: 227

Residential parking utilization was documented October 11th, 12th, and 13th. The charts on the following page display the observed on-site occupancy across the span of 72 continuous hours. As expected, demand peaked overnight, reaching a high of 89% around 5 AM on Thursday. This approximates the 90% standard commonly targeted for optimal garage efficiency. As the morning progressed, the garage experienced a net exodus of vehicles, dropping to half full by 10:00 A.M and falling to 44% utilization around midday. The return of vehicles was spread throughout the afternoon and evening, on both weekdays. Saturday experienced lower peak utilization (80%), and less variation throughout the day, with utilization never falling below 50%.

Modeled Parking Demand

Although modeled weekday demand suggests that the available supply is insufficient, the 227 spaces proved comfortably ample to meet observed demand. This suggests that a combination of parking management and contextual mobility conditions may have meaningfully reduced auto/parking dependency among the residents of this development.

THE LOFTS AT MOCKINGBIRD STATION



Modena

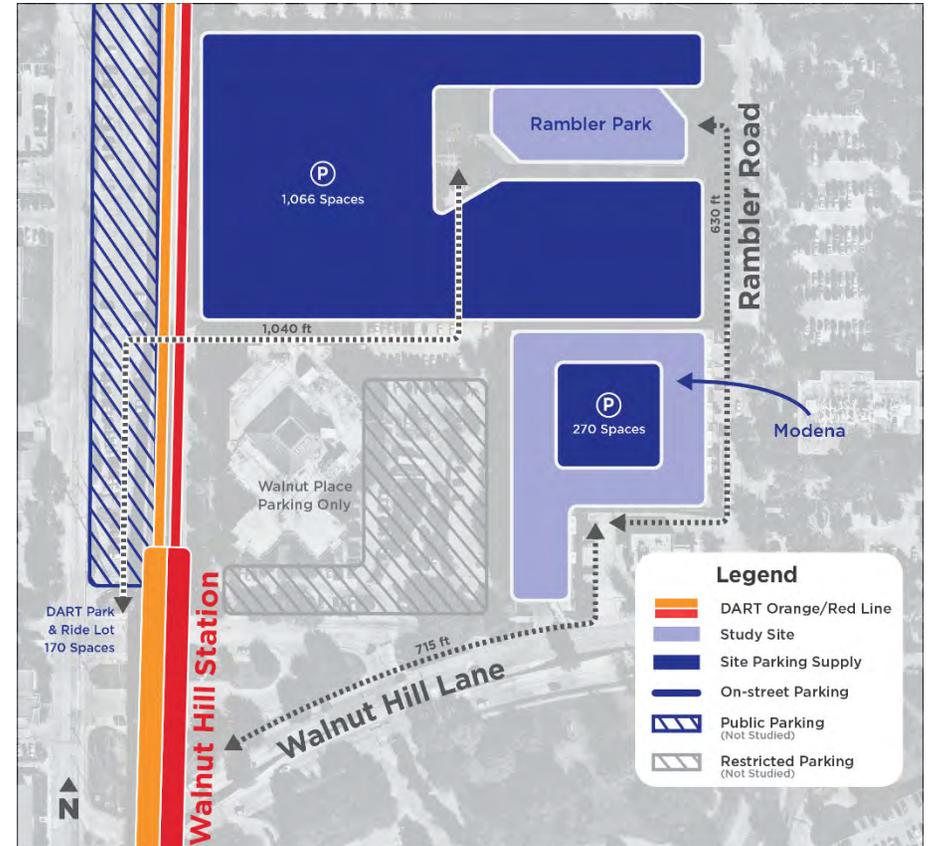
8275 Walnut Hill Lane, Dallas TX 75231

Development Overview

The Modena contains 230 apartment units located within a 715-foot walk from the Walnut Hill DART station. The development was built in 2017 and is managed by the Tipton Group when studied. Monthly rents at the Modena range from \$1,095 for a studio to \$1,971 for a two-bedroom.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	192	38	--	230	92%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		--		--	--



Distinctive Mobility Elements

	Walkscore = 67 (Somewhat Walkable) 0.2 miles south: Texas Health Presbyterian Hospital Dallas
	1 mile east: White Rock Creek Trail, a 7.6 mile trail that connects some of Dallas' parks.
	Short-term bicycle racks immediately in front of the main building entrance facing Walnut Hill Lane
	250 feet: Bus stop for DART route 502 (Manderville to Lovers Lane, 7 days a week)

Parking Supply

Required Parking: 268 Provided Parking: 270

Modena is in a Planned Development area (#926) as regulated by the City of Dallas. For off-street parking requirements in the PD area, the regulations defer to the City's Zoning Ordinance by land use. Therefore, with a minimum of one space required per bedroom per unit, Modena requires a minimum of 268 spaces. The provided parking supply at Modena slightly exceeded this requirement by two spaces.

Parking is provided in a two-level garage with three entrances. 255 spaces are exclusively for residential tenants and separated by a security fence gate. 15 spaces outside the gated area are for visitors and contractors who cannot access the gate.



Google Streetview © 2017

Parking Management

All residents have a key fob which allows them access to gated parking areas. Building management gives out parking spots based on the number of adults on the lease, but with a maximum of two spaces per unit, regardless of size.

Reserved spots are available to residents, starting at \$50 per month. If a resident prefers a space close to the building entrance, it costs \$75 per month.

Neighboring spaces are generally restricted, such as the Bank of Texas next door. There are no signed on-street spaces on the immediate blocks of Walnut Hill Lane or Rambler Road.

Parking Utilization

Studied Inventory: 270

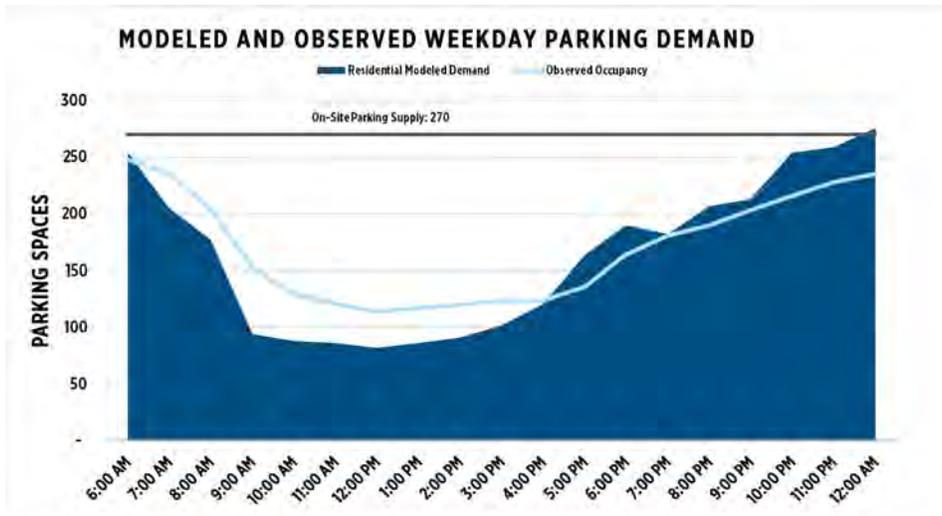
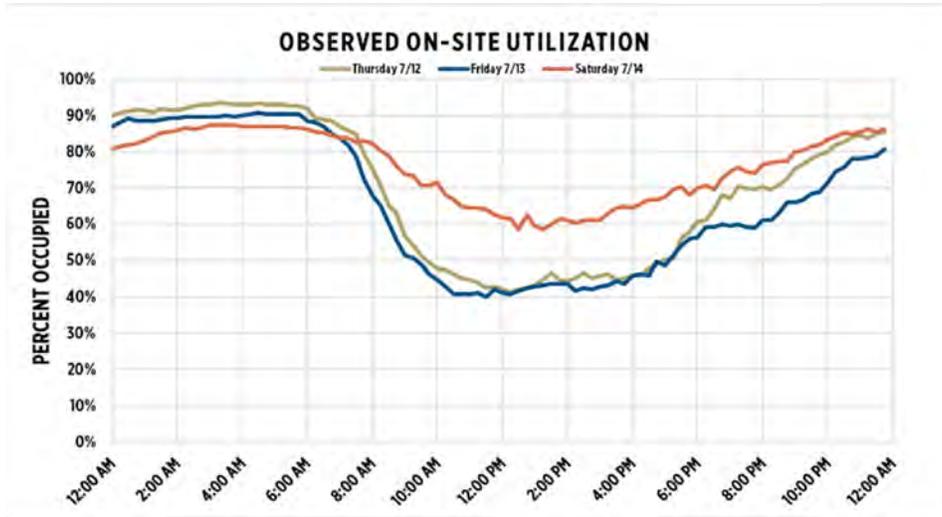
Utilization at the Modena was studied July 12th, 13th, and 14th. The highest utilization rate was 93%, reached during the overnight hours on Thursday the 12th. This observed peak of 252 cars parked equates to a demand of almost 1.1 vehicles per apartment unit. Modena was also one of two sites studies in which utilization surpassed 90%, a typically optimal rate for off-street parking.

Utilization started to drop beginning at 6:00 AM on Thursday, eventually bottoming out at 12:15 PM with 41% of The Modena's spaces full. Saturday parking utilization also hits its lowest level during the midday hour (12:30 PM), but the rate is 59%, a difference of 48 spaces.

Modeled Parking Demand

The on-site parking supply of 270 spaces aligns closely with the demand peak projected by the model on overnight weekdays, as well as the minimum requirement of 268 spaces.

MODENA



The Parc

7545 East Northwest Highway, Dallas TX 75238

Development Overview

The Parc at White Rock is a residential development immediately adjacent to the east side of White Rock DART Station on the Blue Line. Located at the northwestern corner of East Northwest Highway and West Lawther Drive, The Parc is a short walk and up a staircase to DART, approximately 230 feet from the front door to the station platform.

The Parc contains 291 apartments, including studios, one-bedrooms, and two-bedrooms. Currently managed by Richman Signature Properties, monthly rents for apartments range from \$1,227 to \$2,457. Built in 2016 on the former site of a liquor store and auto repair shop, its presence marks a striking increase in residential density immediately surrounding White Rock DART Station, which otherwise is predominated by single-family houses, detached retail, and preserved parkland. This site's neighborhood has a limited mix of land uses, with the only retail in a half-mile radius being three small buildings across the street.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
20	193	78	--	291	85%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		--		--	--



Distinctive Mobility Elements

	Walkscore = 15 (Car-Dependent) 0.8 mile west: LL Hotchkiss Elementary School
	300 feet west: White Rock Greenbelt, a network of bicycle paths that links to paths from North Dallas to Deep Ellum
	Secure room for bicycle parking: 1 long-term bicycle parking facility on-site with capacity for at least 41 bicycles
	Nearest Bus Stop at White Rock Station. Stop for DART route 428 (South Garland Transit Center to Bachman Station)

Parking Supply

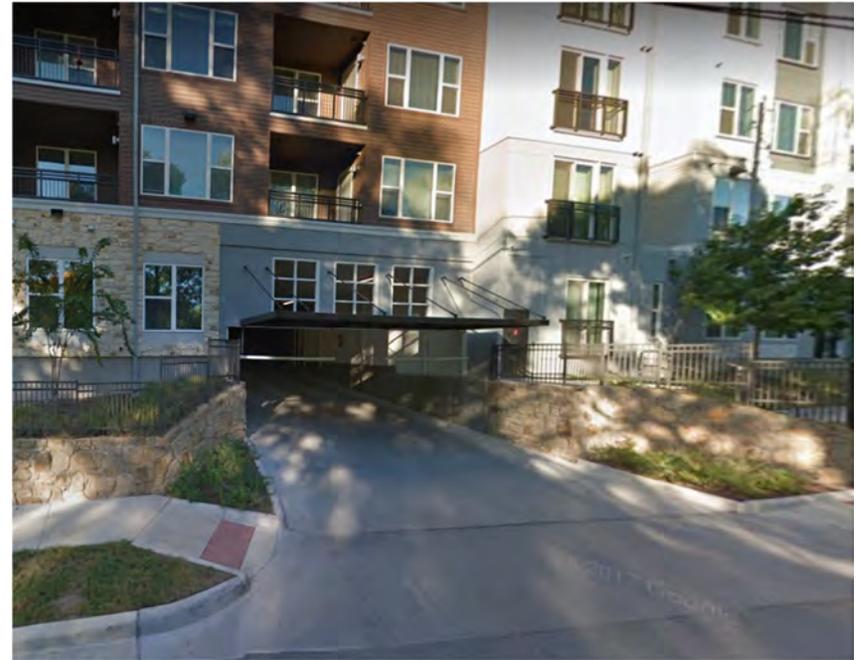
Required Parking: 291 **Provided Parking: 398**

The Parc at White Rock is subject to Planned Development zoning established by the City of Dallas. Given the size of the units provided at the Parc, none larger than 2-bedroom, the code required just one space per dwelling unit – 291 spaces for 291 units. The 398 provided spaces indicates that the developer anticipated a need for significantly more parking was required.

Most parking (371 spaces) is reserved for residents (all within the garage). Visitor parking is provided via 20 designated spaces within the garage. Seven spaces are designated for leasing office employees, in the front of the building. Generally, one parking space is allotted per leaseholder, regardless of the size of the unit. Residents have complete access to the garage via a fob. Resident spaces are largely unreserved, but residents may pay \$100 per month to reserve a space.

Parking Management

The garage is accessible, at all times, to those with a fob. After hours, visitors may use the leasing office parking located in the front of the building. The White Rock DART Station park-and-ride is also available for overnight and long-term visitor parking. Across the street from The Parc, a few detached retail shops provide their own customer-only parking. There is no on-street parking adjacent to this site.



Google Streetview © 2017

Parking Utilization

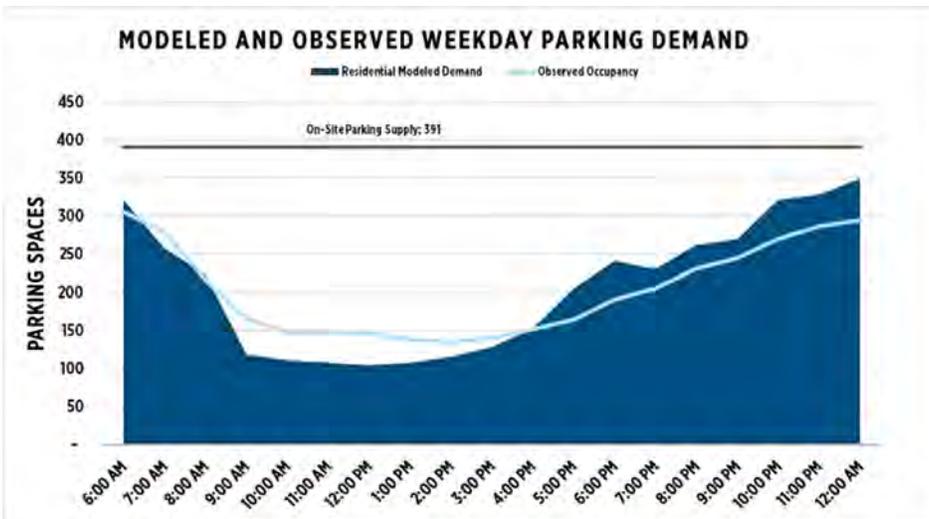
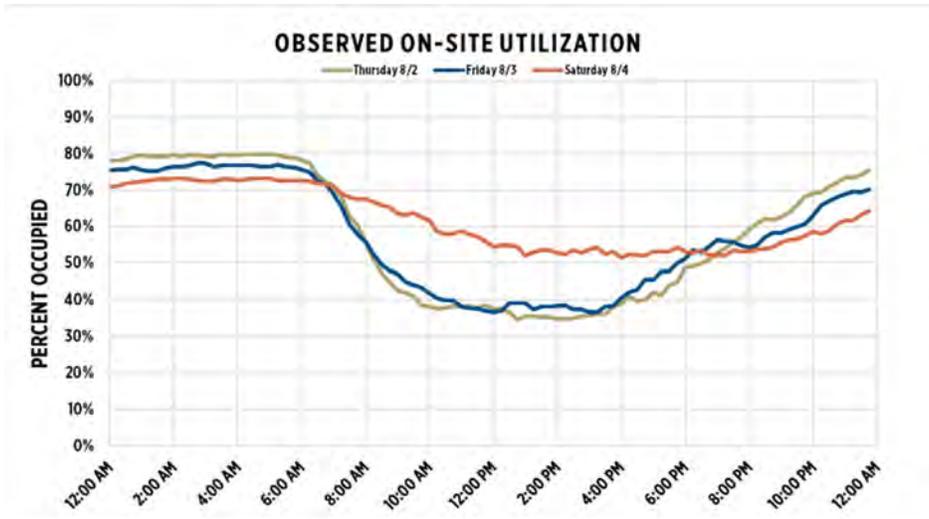
Studied Inventory: 391

Parking data was collected at The Parc at White Rock on August 2nd, 3rd, and 4th. The charts on the following page show the relative occupancy of the garage during that 72-hour span. Utilization peaked at 80%, during the 4:00 AM hour on both weekdays and Saturday. Throughout the day, utilization decreased, falling to 35% on Thursday at 12:45 PM. On Saturdays, the midday decline also occurred, but it was sustained at a “half full” level for the greater part of the day, hovering between 50% and 55% utilization from 12:00 noon to 9:00 PM. Saturday parking utilization also peaked during the overnight hours.

Modeled Parking Demand

Observed utilization fell below demand predicted by the model for weekday afternoons and evenings, by as many as 50 vehicles. Perhaps the most significant finding for this development is that observed demand, modeled demand, and the supply provided by the developer were all higher than the project’s minimum parking requirement. This suggests that the current code should perhaps be complemented by guidance on managing/reducing residential parking demand given the surrounding low-density single-use residential context.

THE PARC



Rambler Park

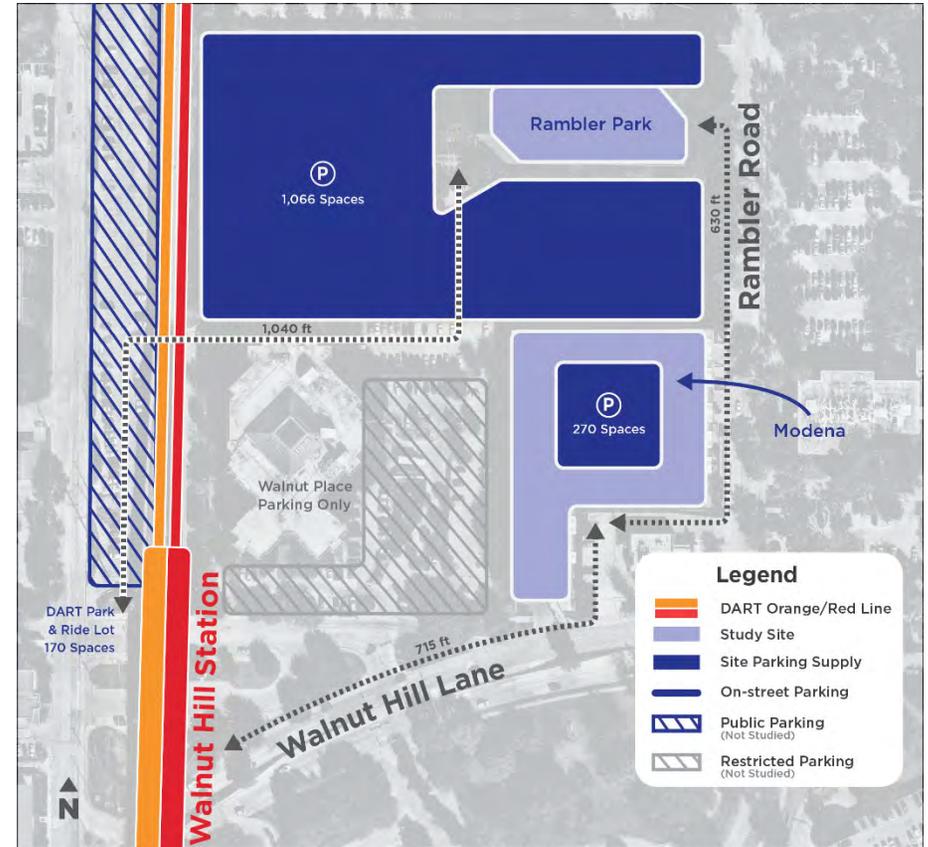
7557 Rambler Road, Dallas TX 75231

Development Overview

A 14-story office tower built in 1981, Rambler Park is located adjacent to the DART right-of-way. Via a direct sidewalk connection to the property's back door gate, Rambler Park is an estimated 1,040-foot walk from Walnut Hill DART Station. The property is also accessible directly off of Rambler Road. Financial-services and medical offices occupy most of its 310,771 square feet of useable space.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	--	--	--	--	--
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
310,771		--		310,771	85%



Distinctive Mobility Elements

	Walkscore = 53 (Somewhat Walkable) ¼ mile south: Texas Health Presbyterian Hospital Dallas
	1 mile northeast: White Rock Creek Trail, a 7.6 mile trail that connects some of Dallas' parks.
	Bike racks: None on-site
	200 feet: Bus stop for DART route 502 (Manderville to Lovers Lane, 7 days a week)

Parking Supply

Required Parking: 747 Provided Parking: 1,066

Rambler Park is in a Planned Development area (#926), which requires a minimum of 1 space per 333 square feet for office uses. Depending on the tenancy of its office spaces, its requirement could range between 747 spaces, if fully occupied by general office uses, and 995 spaces if half of its space were occupied by medical office uses. Rambler Park's on-site supply of 1,066 spaces is sufficient to meet minimum requirements for a scenario in which medical office uses occupied a slight majority of the overall building space.

A parking structure and large surface lot provide all parking for Rambler Park.

Parking Management

The 696-space garage is reserved exclusively for employees, with a key-fob controlled access gate to maintain employee-exclusive use of these spaces. Parking inside the garage is open to who gain entry, with the exception of approximately 40 spaces reserved/signed for individual employees.

The 379-space surface lot includes 45 spaces marked for visitors, restricted to two hours of parking to ensure turnover and, most critically, to prevent employees from using these high-convenience spaces. The remainder of lot's spaces are unmarked and available for general use.



Google Streetview © 2017

Parking Utilization

Studied Inventory: 1,066

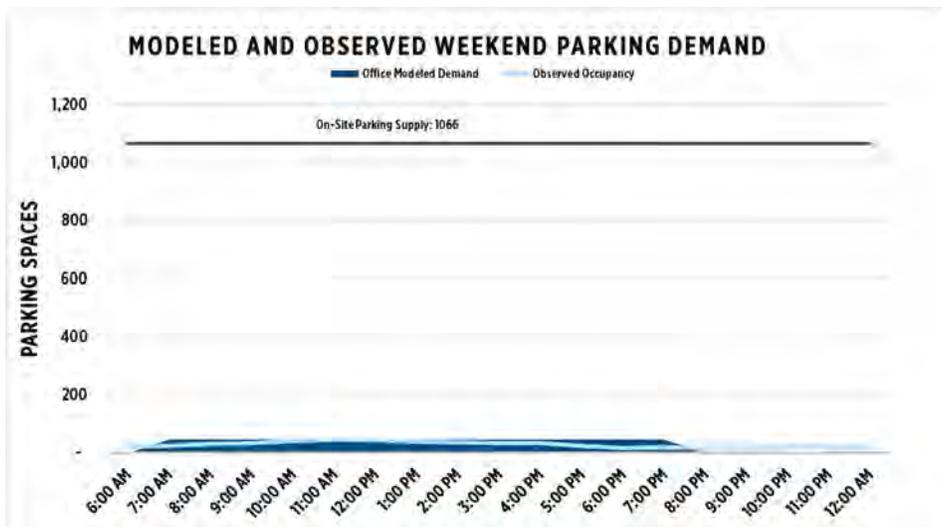
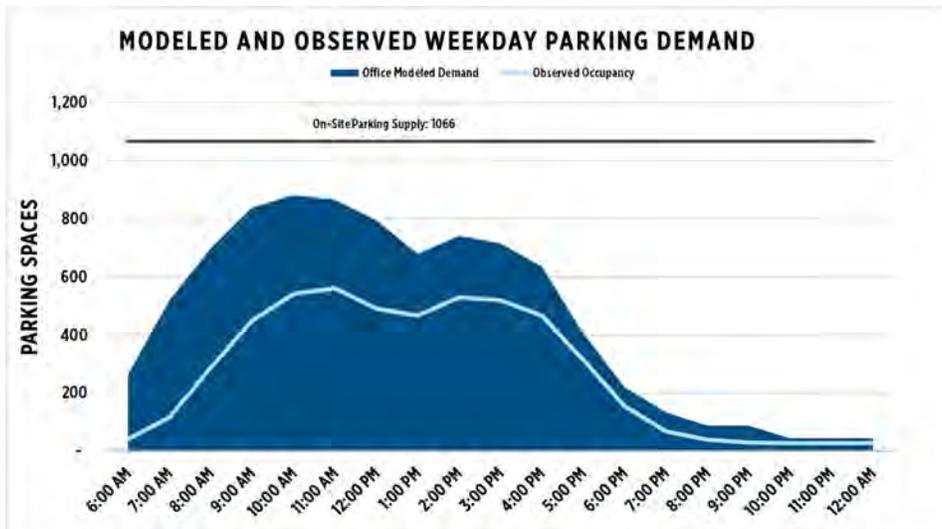
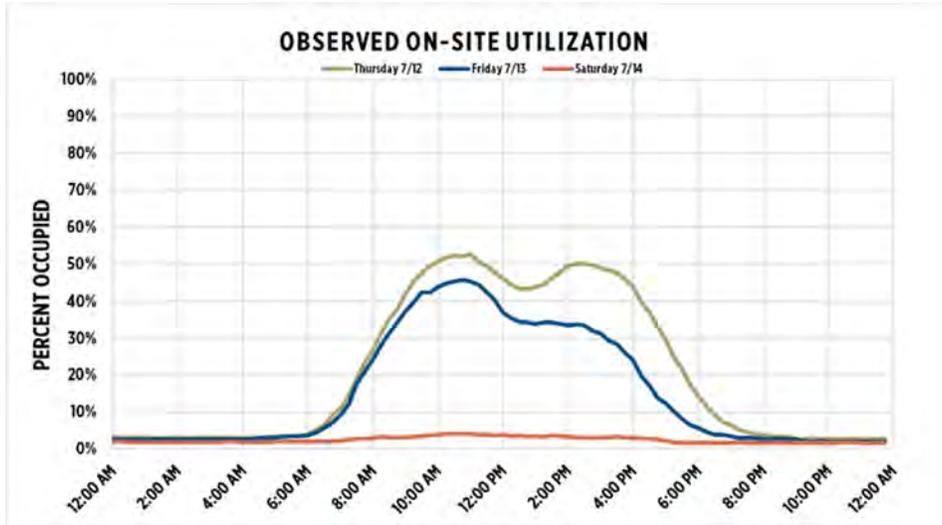
Parking utilization was observed on July 12th, 13th, and 14th. Utilization peaked at 53% on Thursday at 11:00 AM. A slight decline during the midday was evident on both weekdays, though only Thursday was marked by a significant rise in utilization during the mid-afternoon – on Friday, by contrast, the midday decline was followed by a tapering off of demand throughout the rest of the afternoon.

Saturday activity was extremely muted, with a peak occupancy of 42 vehicles.

Modeled Parking Demand

The modeled demand peak of 883 parked vehicles exceeded the observed peak by 322. This model output would suggest an optimal supply of around 981 spaces, suggesting that the actual supply of 1,066 spaces may have been determined based on similar demand calculations. Observed utilization conditions, with demand never exceeding what could comfortably be accommodated in the parking garage alone. At this level of use, the existing surface lot could offer an opportunity to support a new phase of development for the Rambler Park site.

RAMBLER PARK



Walnut Glen Office Tower

8144 Walnut Hill Lane, Dallas TX 75231

Development Overview

The Walnut Glen Office Tower is an 18-story building providing 464,289 square feet of commercial office space. Located on an approximate 5.8 acre parcel, the tower sits on the western side of the DART Red Line corridor, about a 600-foot walk from Walnut Hill Station. Walnut Glen Office Tower was built in 1985, and is a unique example in this study of a building designed and constructed before the nearby DART station existed. Since the station was built, the property did add a walkway directly connecting to the Texas Health Presbyterian Hospital to increase walkable connectivity.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	--	--	--	--	--
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
464,289		--		464,289	78%



Distinctive Mobility Elements

	Walkscore = 69 (Somewhat Walkable) 400 feet east: Texas Health Presbyterian Hospital via pathway under the elevated DART corridor
	1.3 miles northeast: White Rock Creek Trail, a 7.6 mile trail that connects some of Dallas' parks.
	Bike Racks: None on-site
	The nearest bus stops are at Walnut Hill Station. Stops for DART routes 502 (Lovers Lane Station to Manderville & North Central Expressway, 7 days a week), 506 (Stone Canyon to Park Lane Station, 7 days a week), and 582 (Walnut Hill Station to LBJ/Central Station, Monday to Saturday)

Parking Supply

Required Parking: 1,394

Provided Parking: 1,440

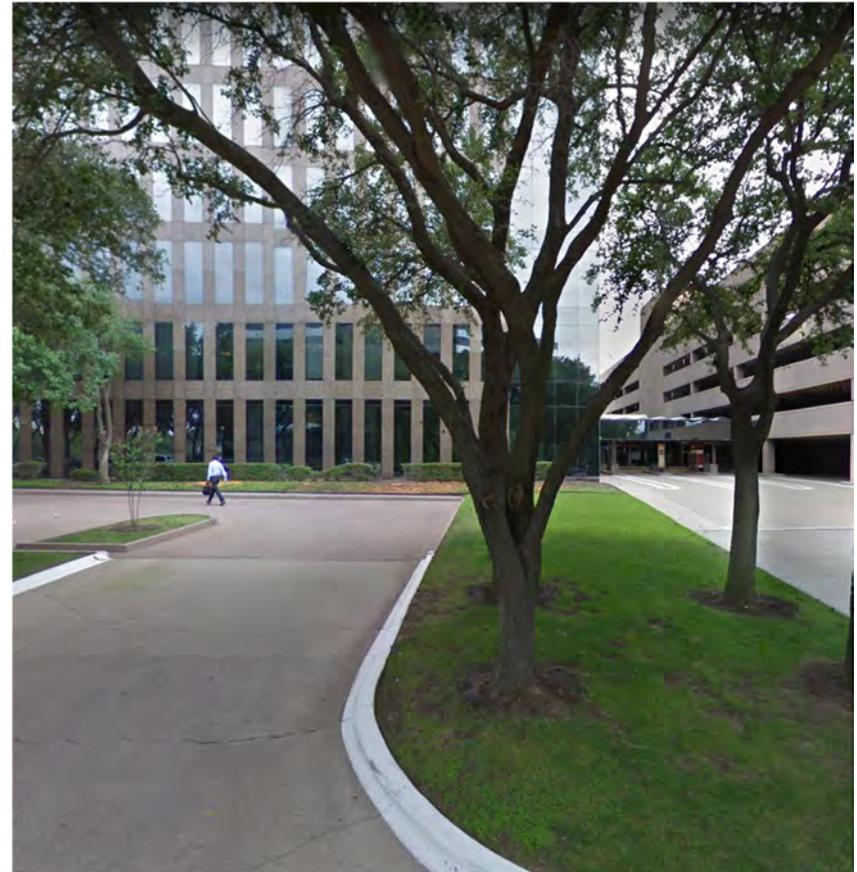
The Walnut Glen Office Tower parcel is subject to Planned Development zoning approved by the City of Dallas (PD# 898). For office uses, a minimum of one parking space is required per 333 square feet, which translates to the 1,394 spaces that were required for this development.

On-site parking includes a standalone six-story garage containing 1,388 spaces. The garage is connected to the tower by a covered walkway flush with the first floor of the office building. Deliveries are made in an underground section of the garage, accessed by a directly from Walnut Hill Lane. General access to the garage is available at 11 entrances and exits surrounding the structure on all sides. Tenant parking is controlled by gates and “Permit Only” signage.

Visitors and contractors are guided by signage along the surrounding driveways (and markings on spaces) to park in a 38-space surface lot located to the north of the parking structure. A smaller lot on the south side of the building is available for short-term customers only contains 14 spaces.

Parking Management

There is small signage at neighboring properties (e.g., Glen Oaks and CVS) denoting the parking is for a different building. There is no on-street parking, so all visitors must find their way to appropriate spaces in a lot or the garage. All visitor parking is signed specifically as such, with a three-hour limit denoted.



Google Streetview © 2017

Parking Utilization

Studied Inventory: 1,426

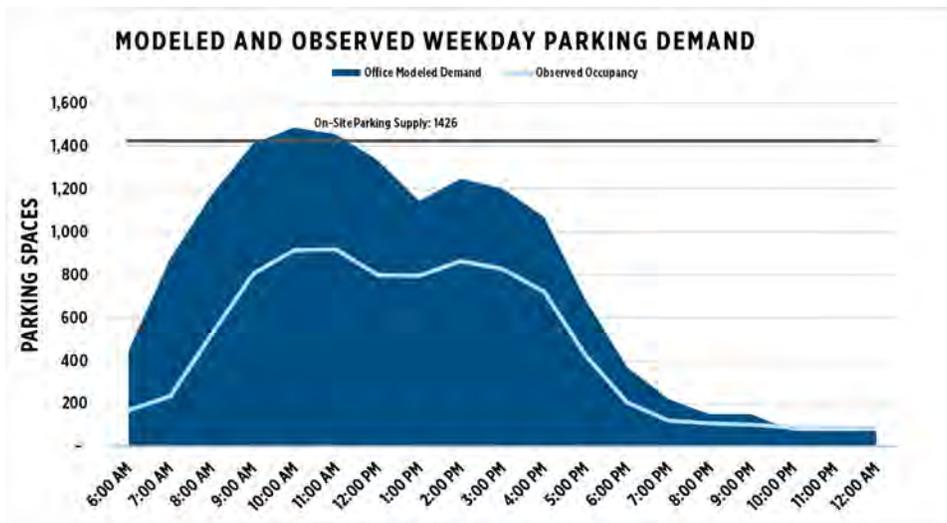
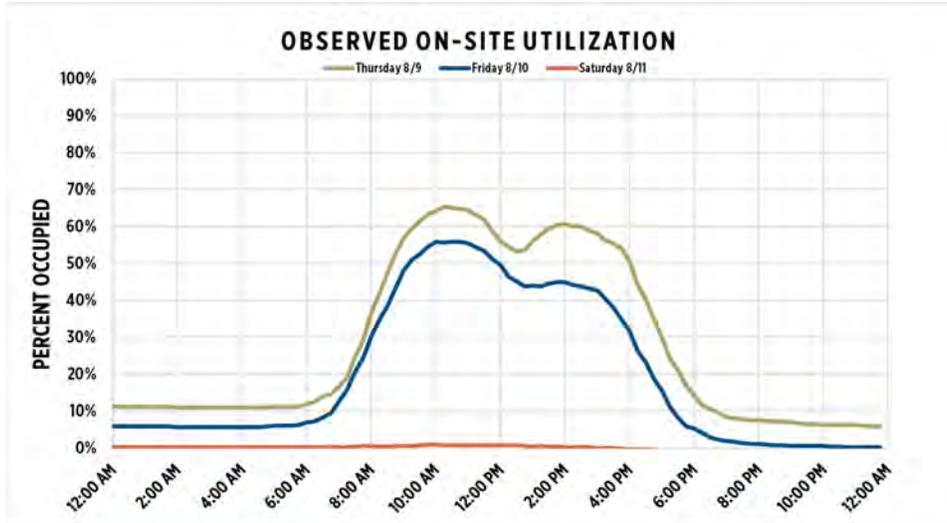
Utilization counts were made at Walnut Glen Office Tower (for the garage and the northern lot) on August 8, 9, and 10th. The charts on the following page display the observed on-site occupancy across the span of 72 continuous hours.

Garage utilization peaked at 65% at approximately 10:15 AM on Tuesday, after rapidly rising from 21% occupancy at 7:30 AM. During the lunch hour, a decrease in utilization bottomed out at 12:30 P.M, before rising again to 62% at 2:00 PM. At 5 o'clock, the garage was only 31% full. These trends are highly indicative of buildings entirely composed of traditional office uses, in which activity is limited to weekday daytime hours. Overnight on weekdays, the garage still had approximately 20% occupancy; on weekends, however that figure was virtually empty. Nevertheless, there is a clear amount of demand for parking to cover overnight service shifts.

Modeled Parking Demand

Observed demand patterns at Walnut Glen mirror traditional office parking generation patterns. Modeled demand exceeds observed demand during all hours of the day. The peak modeled demand of vehicles is still about 250 spaces, or 18%, less than the actual on-site parking supply.

WALNUT GLEN OFFICE TOWER



West Village Garage 2 and Sawyer Flats

3636 McKinney Avenue, Dallas TX 75204

Development Overview

West Village Garage 2 and Sawyer Flats are one component of the larger “West Village District,” a nine-block multi-use development located in proximity to the Cityplace/Uptown DART Station. Analyzed for this profile are the development and parking on the block surrounded by McKinney Avenue to the northwest, Cityplace West Boulevard to the northeast, Noble Avenue to the southeast, and Lemmon Avenue to the southwest.

Land uses on this site include The Sawyer Flats apartments, 103 units priced at \$1,499 to \$2,745 per month, and 50,000 square feet of commercial space, including a Chase Bank, four restaurants, two fitness centers, a barbershop, and a large Brooks Brothers store. These uses surround Parking Garage 2 and a small amount of surface parking, provided to serve all of the above uses.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	73	30	--	103	92%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		50,000		50,000	92%



Distinctive Mobility Elements

	Walkscore = 88 (Very Walkable) 0.2 miles east: North Dallas High School, part of the Dallas Independent School District
	0.3 miles northwest: Katy Trail, a 3.5 mile linear park ⁶
	Bike racks: Placed within residential portion of the garage. Short-term bike racks also available beside garage main entrance.
	44 feet: stop for M-Line Trolley on Cityplace West Blvd (Cityplace/Uptown Station to Arts District, 7 days a week)

⁶ <https://www.dallasparks.org/406/Major-Linear-Trails>

Parking Supply

Required Parking: 353 **Provided Parking: 468**

Planned Development zoning for the Cityplace District required a minimum of 353 spaces for this development. Provided parking exceeded this limit by 113 spaces.

The 451-space Garage 2 itself provides parking well in excess of the minimum required. Among these spaces, 144 are reserved for residents, leaving 307 spaces for public parking. Additionally, there are 17 spaces of public parking on opposite sides of the driveway connecting McKinney Avenue to the northern garage entrance providing convenient options for customer parking.

The garage may be accessed from McKinney Avenue and Noble Avenue. The driveway connecting Lemmon Avenue is for egress only.

Parking Management

Residential parking is secured through fob-controlled access equipment installed at the entry to the garages underground floor. The same fob provides access to an elevator connecting this level of the garage. Residents can reserve a space on this level at a cost of \$50/month. Otherwise, parking is provided at no cost. The remaining floors of the garage are open and accessible, offering free parking 24 hours a day.

The surface parking surrounding the garage entrance is marked for retail customers only with all non-ADA spaces limited to one hour of parking. On the first floor of the garage, Chase Bank has access to 10 spaces for customers only. As part of their monthly lease, Chase Bank pays \$540 in total for the privilege of reserved spaces for their customers. There are also on-street spaces along Cityplace Boulevard West offering 2-hour parking without specificity of time of day. There are also two spaces immediately outside the Sawyer Flats leasing office which are limited to 20 minutes.

Employee parking is not explicitly marked, but employees are directed to park on the 2nd floor of Garage 2. Businesses offering delivery use the top level of the garage to park their delivery vehicles.



Nelson\Nygaard

Parking Utilization

Studied Inventory: 468

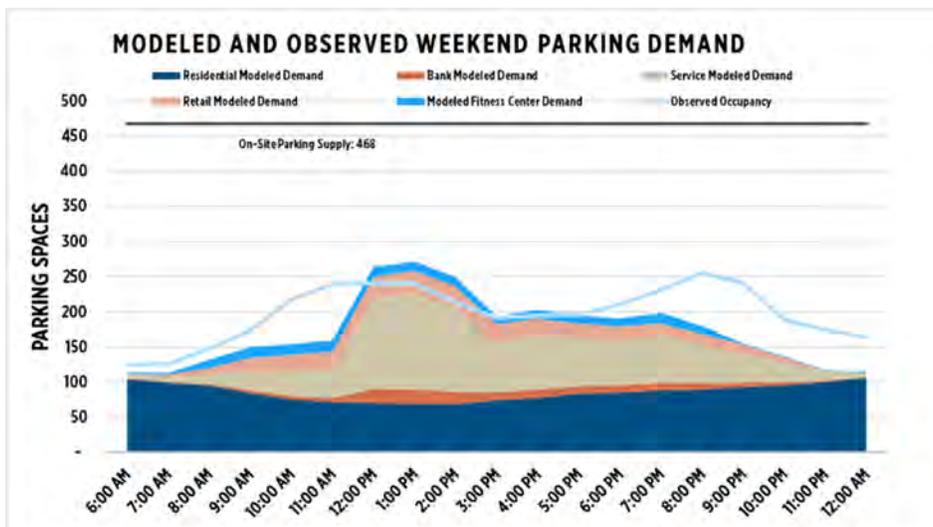
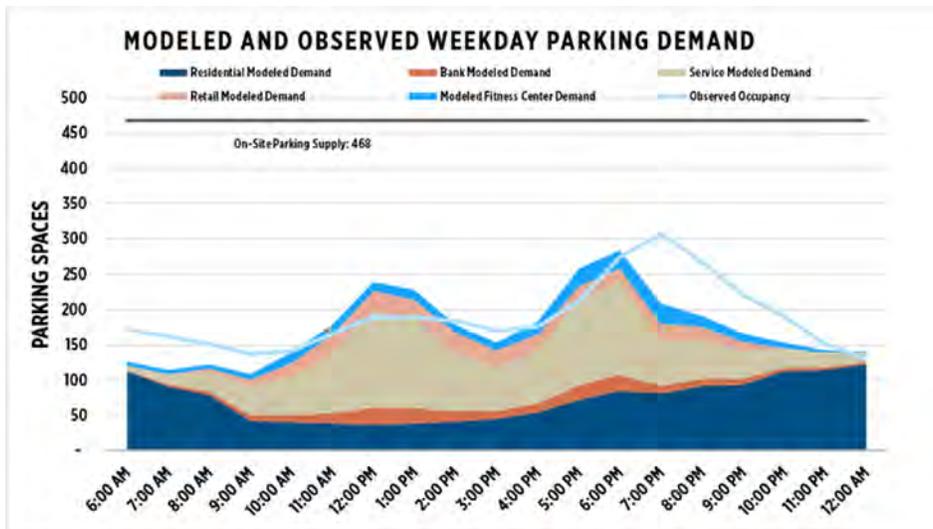
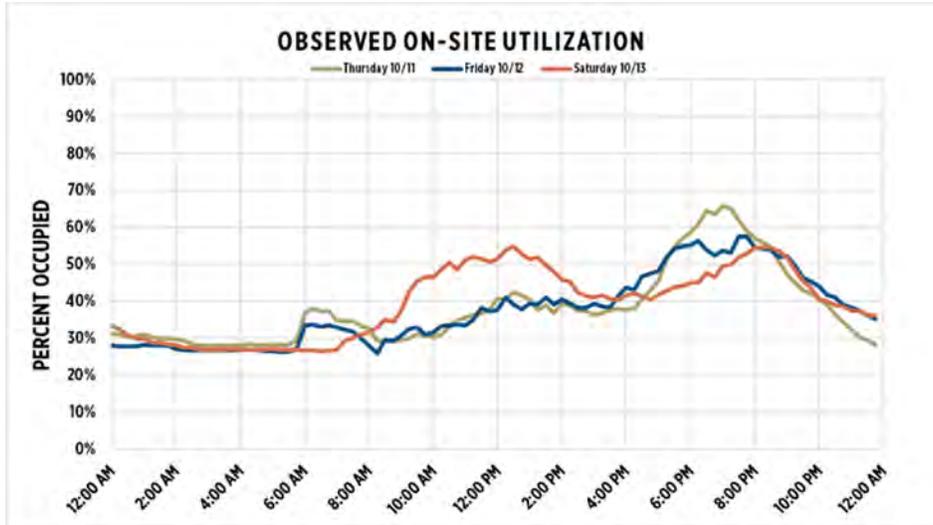
Parking utilization was documented for all of Garage 2 and the surrounding 17 driveway spaces on October 11th, 12th, and 13th.

At all times, parking utilization remained well below the available supply. On weekdays, parking remained less than half-full except during a few evening hours, from 5:00 PM to 9:15 PM. On Saturdays, utilization reached the half-full mark twice, during the midday period and again in the evening, for just a few hours.

Modeled Parking Demand

The observed weekday evening peaks were slightly higher than the model would suggest, while the model's projected Saturday peak was slightly higher than what was observed for that day. Generally, however, the model the code's parking requirement align much more closely with observed demand than does the provided supply for this site.

WEST VILLAGE GARAGE 2 AND SAWYER FLATS



West Village Garage 3 and 3700 M

3700 McKinney Avenue, Dallas TX 75204

Development Overview

Opened in 2014, 3700M consists of a 21-story tower and a 4-story building, together providing 381 rental apartments, surrounded by roughly 38,000 square feet of retail shops. Apartment rentals range from \$1,438 to \$5,576 per month. As a part of the larger West Village mixed-use complex, 3700M is located about an 815-foot walk from the entrance to Cityplace/Uptown DART station.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
27	270	84	--	381	94%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		38,000		38,000	95%



Distinctive Mobility Elements

	Walkscore = 88 (Very Walkable) 0.2 miles east: North Dallas High School, part of the Dallas Independent School District
	0.4 miles northwest: Katy Trail, a 3.5 mile linear park ⁷
	Secure room for bicycle parking: On each garage floor serving 3700M residents. The room is located near the building elevator.
	44 feet: stop for M-Line Trolley (Cityplace/Uptown Station to Arts District, 7 days a week)

⁷ <https://www.dallasparcs.org/406/Major-Linear-Trails>

Parking Supply

Required Parking: 571 Provided Parking: 813

The development includes 813 parking spaces, 242 more spaces than was required of the project.

The site's seven-story garage, known as "West Village Garage 3", contains 785 spaces. The parking along the driveways connecting to the garage's ground-floor entrance provide an additional 28 parking spaces, maintained for general retail and ADA-accessible parking.

Parking Management

Employees are directed to park on the second floor of the garage to keep the more convenient spaces offered on the first floor available for retail customers. Just beyond the second floor is a gate controlling access to spaces reserved for the residents of 3700M. All parking is free of charge with minimal restrictions beyond a prohibition on overnight parking for non-residents.



Nelson\Nygaard

Parking Utilization

Studied Inventory: 813

Parking utilization was documented for the full West Village Garage 3 and the surrounding 28 driveway spaces on October 11th, 12th, and 13th.

Weekday demand patterns largely follow expectations for a mostly-residential development, declining rapidly in the mornings and rising steadily from late afternoon through the evening, while falling as low as 29% utilization during the midday.

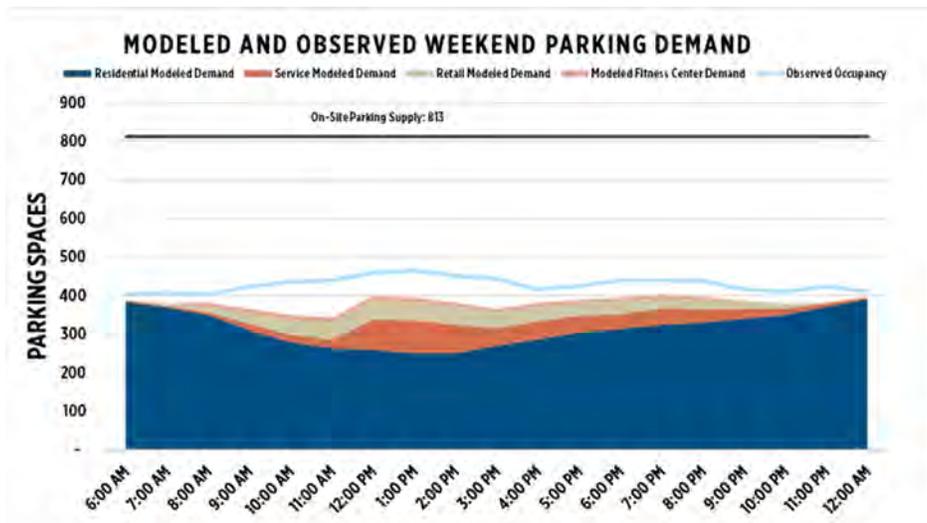
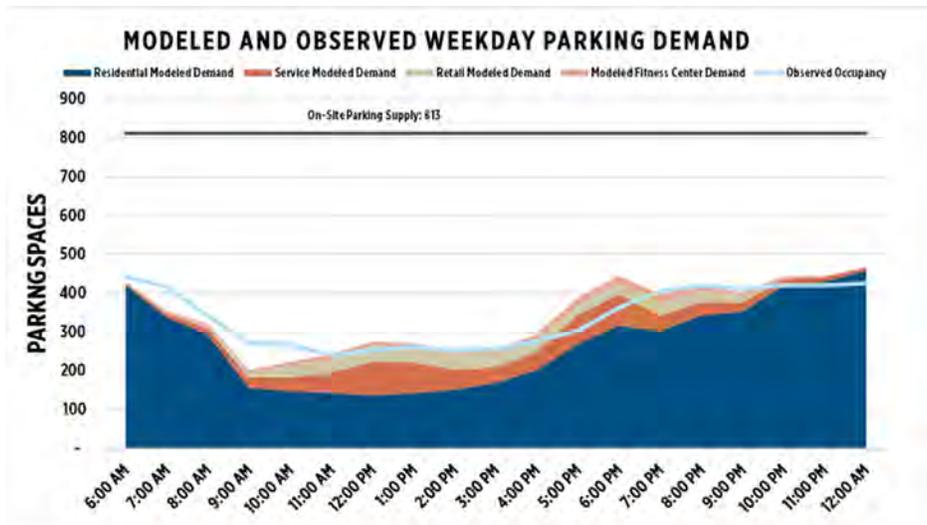
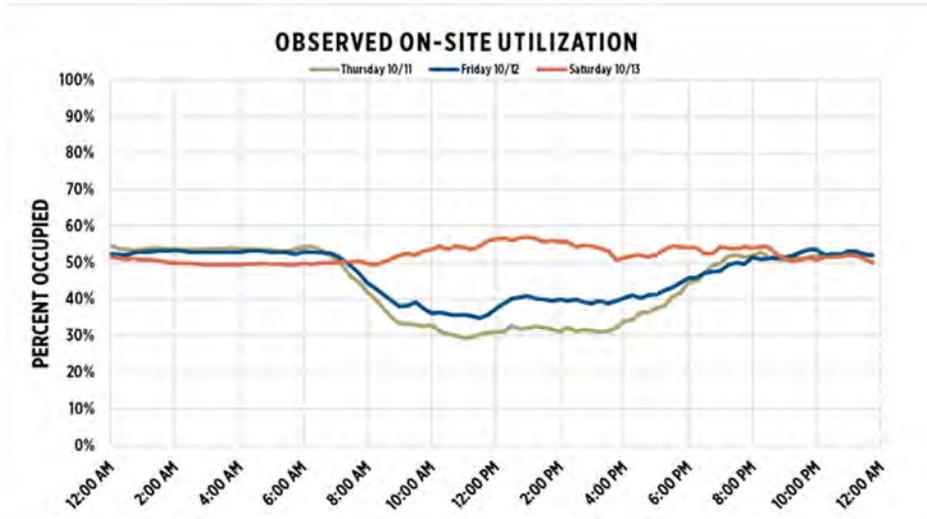
Saturday demand patterns were comparatively stable throughout the day, ranging between 49% and 57% utilization throughout the day. The Saturday peak of 57% utilization, at 1:00 PM was the highest observed across the three days of counts.

Modeled Parking Demand

The modelled and observed patterns at West Village Garage 3 are relatively more similar to one another than the modeled and observed patterns at the neighboring West Village Garage 2. This may possibly be due to the higher proportion of spaces reserved exclusively for residents living on-site. Both the demand projected by the model, and that observed on the site, fall significantly below what was required for the development. Even this requirement, however, fell far below what actually built for the project, resulting in several hundred parking spaces that sat empty, each hour, across the three days of counts.

Again, the property manager noted that demand often surges by roughly 25% during several weeks of holiday shopping in November and December. Such a surge would result in a seasonal peak of 71% utilization, far below industry standards for efficient supply utilization.

WEST VILLAGE GARAGE 3 AND 3700 M



Phase I Oaks 5th Street Crossing at City Station

351 North 5th Street, Garland TX 75040

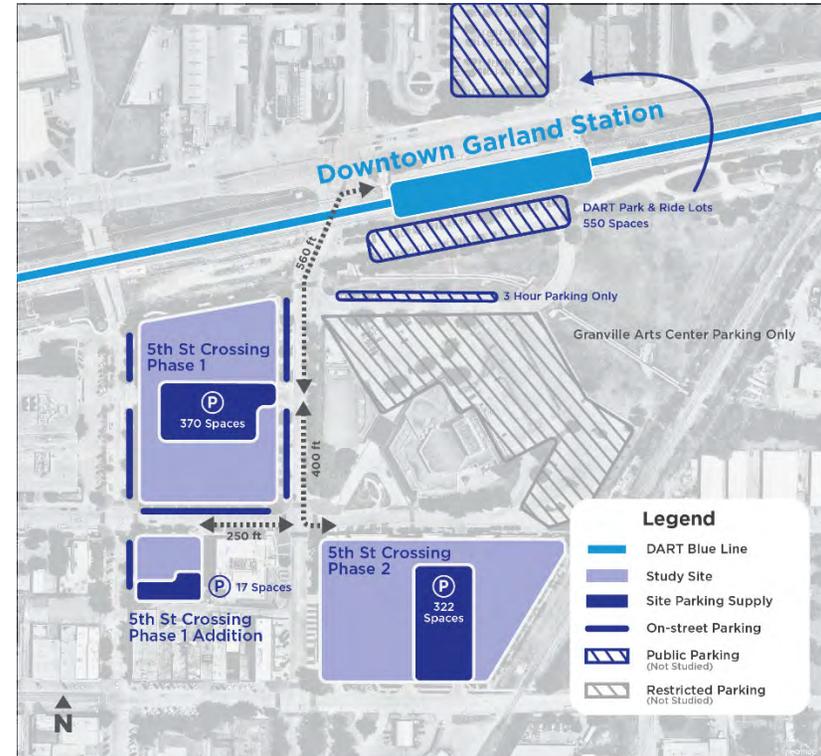
Development Overview

Phase I of the Oaks 5th Street Crossing at City Station was constructed in 2008 and remains the centerpiece of Downtown Garland's TOD transformation. Walking distance to the Downtown Garland DART Station ranges from about 560 to 1,200 feet. It contains 188 apartments, with monthly rents ranging from \$840 to \$1,370.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
23	105	60	--	188	100%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		11,700		11,700	*

*Data not provided



Distinctive Mobility Elements

	Walkscore = 57 (Somewhat Walkable) 650 feet southeast: William E. Dollar Municipal Building
	¼ mile west: Bike lanes on N. Glenbrook Drive and Main Street. The bike lanes on Glenbrook Drive extend between the Richland College Garland Campus and Miller Road to the South. The Main Street bike lanes reaches S. Garland Avenue to the West.
	Bike racks: Publicly-accessible bike parking in the garage.
	200 feet: Bus stop for DART routes 377 (South Garland Transit Center to Downtown Garland Station, Monday to Saturday) 380 (South Garland Transit Center to Downtown Garland Station, Weekdays), 486 (Downtown Garland Station to Royal Lane Station, 7 days a week), and 566 (Naaman Forest to Downtown Garland Station, Weekdays)

Parking Supply

Required Parking: 347 Provided Parking: 387

Current parking standards for the Downtown District (adopted in 2015) would require 347 spaces for the 5th Street Crossing development. The current on-site supply of 387 exceeds that by 40 spaces. A five-story, 370-space garage in the center of the development provides most of this parking.

Parking Management

146 on-site spaces are reserved for tenants, most of them in the garage, but with 17 provided outside of the Phase 1 addition at North 6th Street and Austin Street. The development's remaining 241 spaces are open to the public.

The garage is open 24 hours a day, 7 days a week and accessible from North 5th and 6th Streets. Standard parking permits are provided free of charge to residents, who can also choose to pay \$25 per month for a reserved space.

Temporary parking passes are available for resident visitors to use resident spaces. This pass is checked by random enforcement, as there is no attendant on site in the facility.

Several blocks of on-street parking line most sides of the development, providing free, convenient, short-term parking options for retail customers. Some spaces along North 5th Street are reserved/signed specifically for customers. Otherwise, on-street parking is generally open to the public, and limited to 3 hours, 8 AM through 5 PM on weekdays.



Nelson\Nygaard

Parking Utilization

Studied Inventory: 387

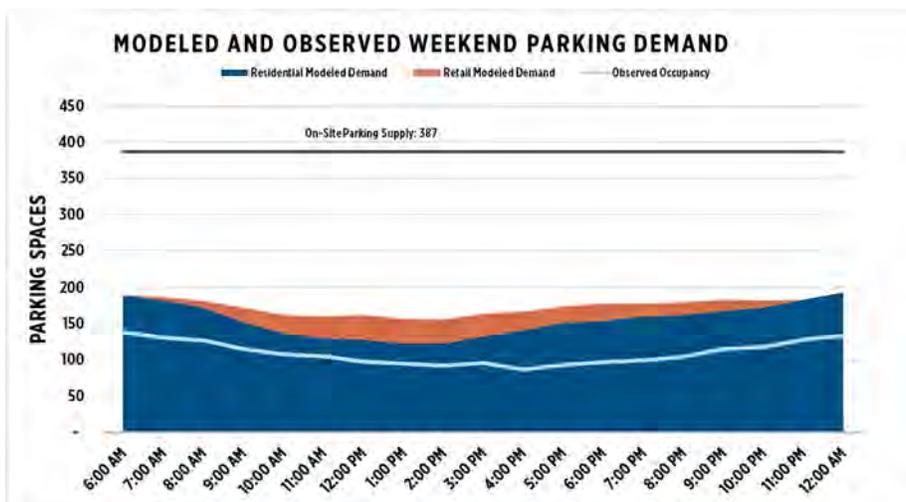
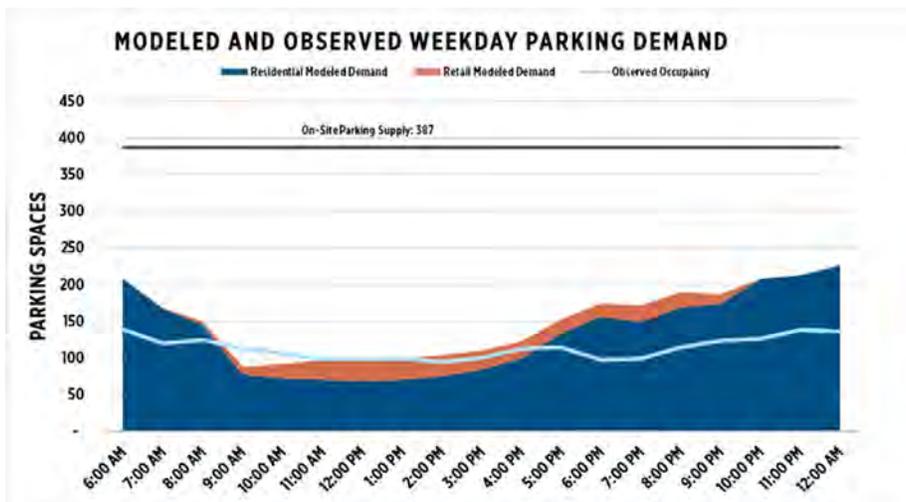
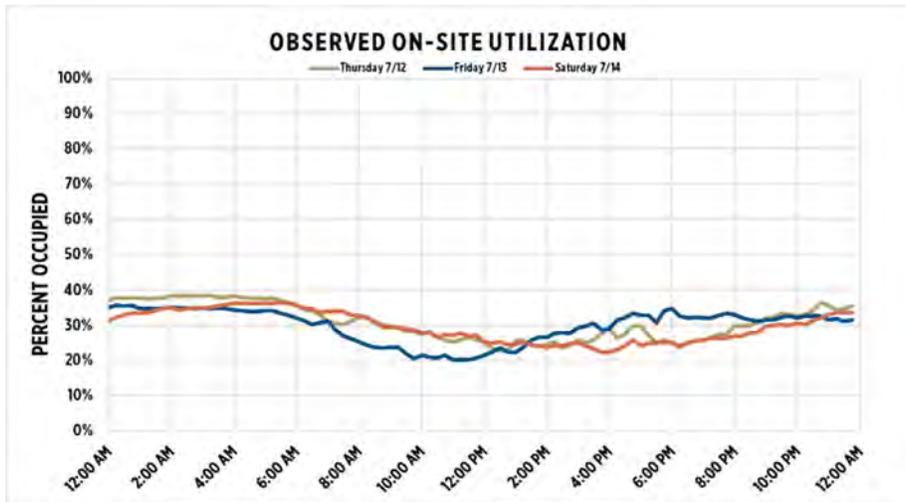
Utilization surveys were conducted on site on July 12th, 13th, and 14th. Overall, utilization peaked at 40% -- a rate of just 0.8 parked cars per apartment. Utilization fell to as low as 20% during weekday counts. Saturday experienced a very similar demand pattern, ranging between 22% and 36% utilization.

Throughout the same three days, sample occupancy measures were taken among the surrounding 47 on-street spaces. Over 90% of these spaces were observed full on Thursday during the lunch hour.

Modeled Parking Demand

Modeled demand for City Station peaked at 226 vehicles, significantly greater than any occupancy observed of the 72-hour span, still only 58% of the available parking available at City Station. While the model significantly over-anticipated demand for this development, it's projections were much closer to observed conditions than either what is required by the current code or the supply provided by the developer. This suggests the importance of relying upon a TOD-sensitive demand model to guide developer decision-making and inform any codified parking requirements for similar future TOD projects.

PHASE I OAKS 5TH STREET CROSSING AT CITY STATION



Phase II Oaks 5th Street Crossing at City Center

352 North 5th Street, Garland TX 75040

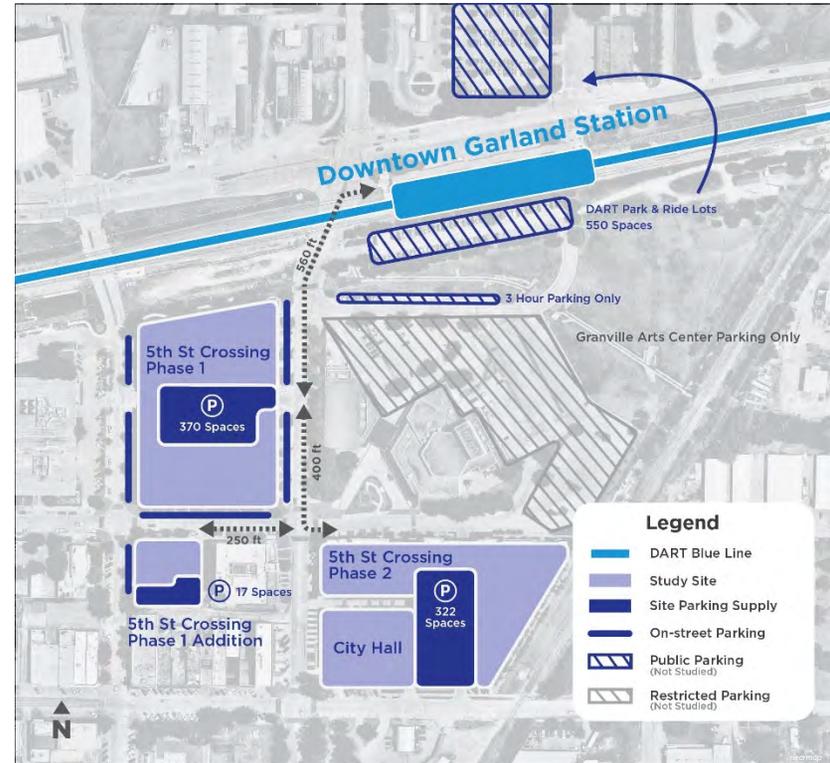
Development Overview

Phase II of the Oaks 5th Street Crossing development is situated on 3.4 acres located on the opposite corner from Phase 1, and its main entrance is approximately 960 feet away from the Downtown Garland DART Station. This phase was constructed in 2015 in partnership with the City for the refurbishment of the William E. Dollar Municipal Building, located at the corner of North 5th Street and West State Street.

The resulting 59,800-square-foot presence of government office space adds a distinctive element to this TOD compared to its DART-station peers. There are also 153 apartments, with month rents ranging from \$995 to \$1,695, as well as a modest amount of apartment amenities on the ground floor.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
22	88	43	--	153	96%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
59,800		--		59,800	100%



Distinctive Mobility Elements

	Walkscore = 57 (Somewhat Walkable) 500 feet south: Garland City Square
	0.2 mile west: Bike lanes on N. Glenbrook Drive and Main Street. The bike lanes on Glenbrook Drive extend between the Richland College Garland Campus and Miller Road to the South. The Main Street bike lanes reach S. Garland Avenue to the West.
	Bike racks: Publicly accessible bike parking in the garage.
	180 feet north: Bus stop for DART routes 377 (South Garland Transit Center to Downtown Garland Station, Monday to Saturday) 380 (South Garland Transit Center to Downtown Garland Station, Weekdays), 486 (Downtown Garland Station to Royal Lane Station, 7 days a week), and 566 (Naaman Forest to Downtown Garland Station, Weekdays)

Parking Supply

Required Parking: 440 Provided Parking: 322

Current parking standards for the Downtown District (adopted in 2015) would require 440 spaces for this phase of the development. However, the Planned Development (#1326) regulations applicable to the site state at the time of development did not require any minimum supply of parking. Exempt from any minimum requirement, the developer included a 332-space garage, built to support the uses developed for this phase.

The garage is split between 274 “permit only” and “reserved” spaces, and 48 spaces for the general public.

Parking Management

Residents receive permits to park in resident-only area of the garage. These permits are provided at no cost, however, residents can also choose to pay \$25 per month for a reserved space in the same area. Resident visitors need a temporary parking pass to use the residential area of the garage.

Several spaces are reserved/signed for City employees. These spaces, as well as resident-only spaces, are not blocked off by any gate or physical barrier.

The remaining spaces can be used by members of the public who are conducting city business (e.g. paying a bill).

The garage is open 24 hours a day, 7 days a week. Public parking spaces are subject to three-hour limits from 7:00 AM to 5:00 PM on weekdays. During evenings and weekends, spaces reserved for City employees are available for public parking.



Nelson\Nygaard

Parking Utilization

Studied Inventory: 322

Parking utilization at Phase II was studied on July 12th, 13th, and 14th. Utilization over this time peaked at 58%, at 9:00 AM on Thursday. Utilization varied slightly throughout the day on weekdays, falling below half-full starting around 4:30 PM before picking back up again in the evening.

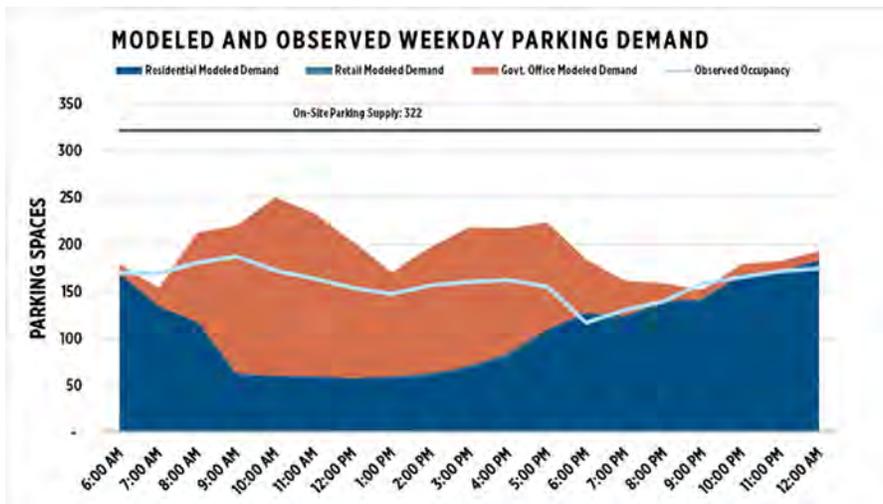
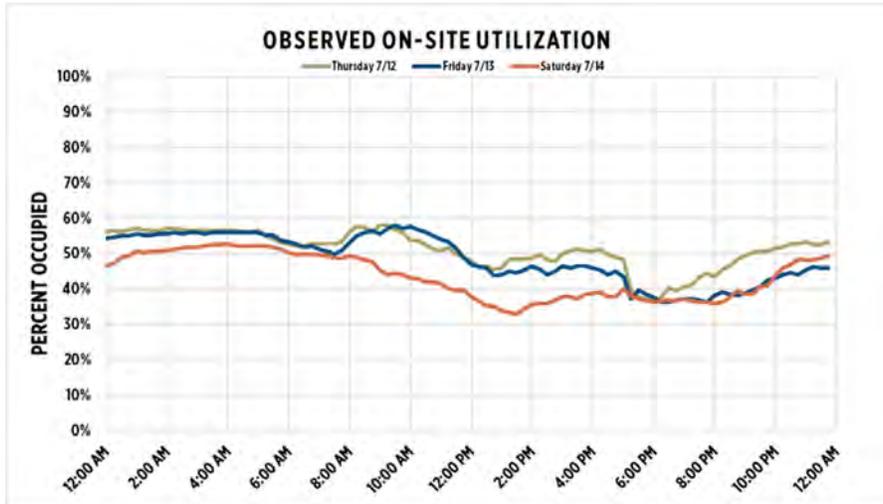
Saturday utilization peaked at 53% during the early morning hours, and spent much of the day well below the half-full level, and falling as low as one-third full around 2:00 PM.

Modeled Parking Demand

Modeled parking demand anticipated a peak of around 250 parked cars, during weekday late-morning hours. While actual parking demand did peak around this time, demand never rose to the 200-car level throughout the survey period. Observed Saturday demand tracked closely with the model projections.

While the model significantly over-anticipated demand for this development, it's projections were much closer to observed conditions than either what is required by the current downtown code or the supply provided by the developer. This suggests the importance of relying upon a TOD-sensitive/walkable-urban demand model to guide developer decision-making and inform any codified parking requirements for similar future TOD projects.

PHASE II OAKS 5TH STREET CROSSING AT CITY CENTER



Junction 15

930 East 15th Street, Plano TX 75074

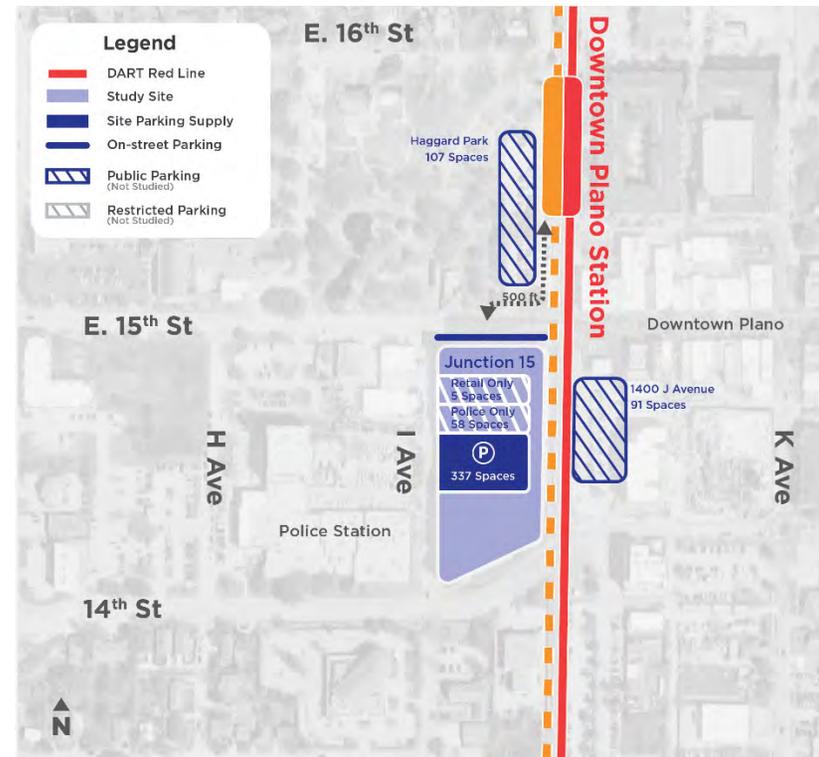
Development Overview

Junction 15 Apartments is the only study site in Downtown Plano. It sits on a 127,849 sq. ft. parcel where the front door is approximately 500 feet from the Downtown Plano Station. It is located on the western side of the at-grade DART rail corridor that runs along J Avenue. Downtown Plano's historic and walkable main streets sit on the other, eastern side of this corridor.

Developed in 2013 by the Southern Land Company (and currently managed by Gables Residential Communities), Junction 15 includes 278 multi-family rental apartments and approximately 7,700 square feet of ground floor retail fronting East 15th Street nearest the transit stop. Junction 15 is marketed to young professionals interested in renting and living within walking distance of historic downtown Plano. Monthly rents at Junction 15 range from \$965 for a studio to \$2,785 for a three-bedroom.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
39	164	71	4	278	92%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		7,700		7,700	50%



Distinctive Mobility Elements

	Walkscore = 89 (Very Walkable) 600 feet east: Plano Municipal Center and Plano's downtown dining and entertainment destinations
	0.6 mile west: Chisholm Trail, 5.5 mile trail running from Harrington Park to Legacy Drive ⁸
	Bike racks: Located on each floor of the parking garage. Bike racks accommodate 6 bikes.
	180 feet: Bus stop for the DART route 870 (East Plano Flex, Monday to Saturday)

⁸ <http://plano.gov/DocumentCenter/View/363/Chisholm-Trail?bidId=>

Parking Supply

Required Parking: 328

Provided Parking: 337

When planned, the development was subject to Downtown Business/Government zoning, as passed by the Plano City Council in 2002. Based on this zoning⁹, a minimum of 318 spaces were required for the project's residential component and 26 spaces for its retail component, adding up to 344 spaces altogether. The code provided credit for accessible public parking, allowing the developer to count the 16 on-street spaces adjacent to the development on 15th Street, toward this requirement, reducing the off-street parking requirement 328 spaces.

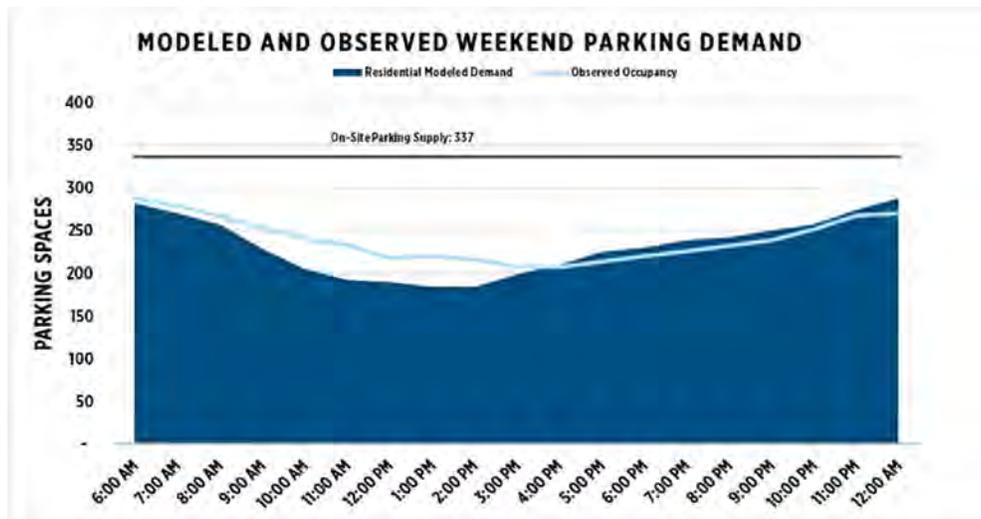
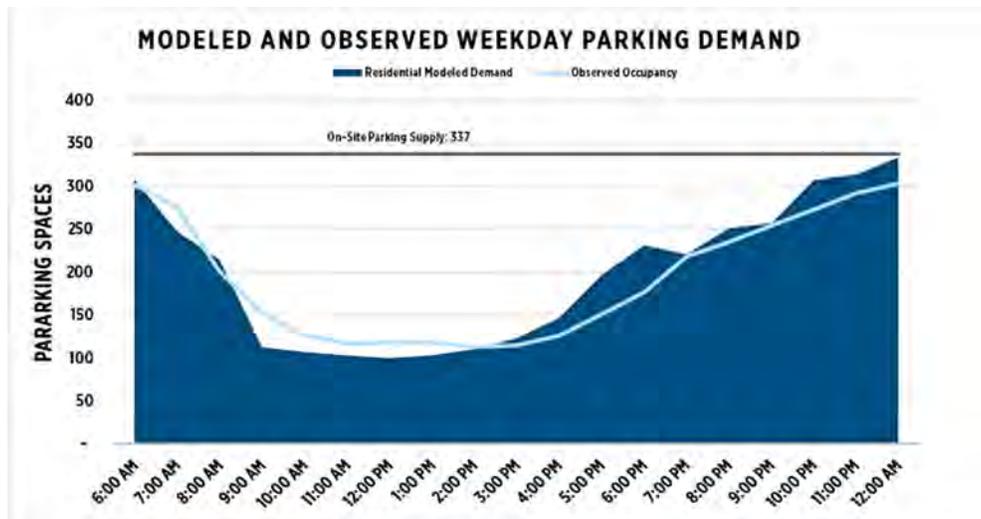
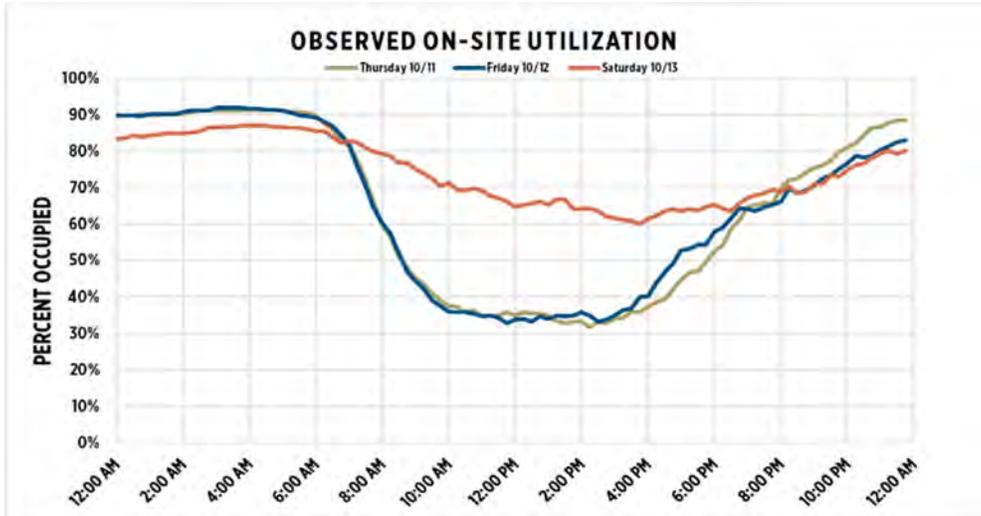
This off-street parking is located in a five-story structure containing 337 spaces – nine more than required by zoning. The facility is accessed via a single entrance off 'I' Avenue. Most of these spaces (313) are reserved for residents and located behind an RFID-activated gate. The other 24 spaces are located outside the gate, and are intended for resident visitors or retail patrons.

Plano Police are allocated 58 spaces in a separately-accessed section of the same garage because this development is a public-private partnership. The City gave the developer land for the project.¹⁰ Retail tenants are provided five covered off-street spaces – two of which are ADA-designated – and accessed from a separate entrance. The spaces set aside for the police and retail tenants were excluded from the utilization analysis on the following page.

⁹ <http://www.plano.gov/DocumentCenter/View/1376/Downtown-BusinessGovernment-BG-2018?bidId=>

¹⁰ <https://www.plano.gov/DocumentCenter/View/2977/DOWNTOWN-PLANO-Vision--Strategy-Update---May-2018?bidId=> & https://www.junction15apartments.com/uploads/properties/resources_pdfs/original/1987/3.18.14plano_retail_brochure.pdf?1395173872

JUNCTION 15



Parking Management

All on-site parking is free, except for reserved spaces made available to residents. Each leaseholder resident is entitled to a free, unreserved parking space within the gated area of the garage. Residents can reserve a specific space for themselves at a cost of \$75 per month, or a discounted rate of \$50/month for a top-floor space. Building representative have noted that, to date, few, if any, leaseholders have elected to pay to reserve a space. They also observed that residents with more than one vehicle often use the visitor spaces outside the gate or park overnight on City streets or publicly available parking lots.

The 16 on-street parking spaces on East 15th Street function as short-term parking in support of retail along this street. Spaces are angled and limited to three-hour stays at all times. Approximately seven spaces are signed exclusively for customers of the retail component despite being in the city-owned right-of-way. Building employees are given passes by the City of Plano to park in the adjacent surface parking lot in Haggard Park.



Parking Utilization

Studied Inventory: 337

Parking utilization was surveyed on October 11th, 12th, and 13th. The charts on the previous page display the observed on-site occupancy across the span of 72 continuous hours. As expected for a predominantly residential development, utilization peaked overnight from 11:00 PM through 6:00 AM, reaching as high as 92% (with just 27 vacant spaces). The occupancy of the facility dropped on weekday mornings to about one-third occupancy. On Saturday, however, the morning decrease in occupancy was more modest, with utilization never going below 60% (135 spaces) at 3:45 PM.

Modeled Parking Demand

Modeled demand mirrors observed patterns remarkably closely on both weekdays and weekends. Observed peak demand, however, was slightly higher than the model projected, for both periods. Nonetheless it is noteworthy that the model, the parking code, and the developer, all were remarkably accurate in anticipating parking needs for this particular development. The result of which is a thriving development that benefits from efficient investments in parking supply.

Brick Row

744 Brick Row, Richardson TX 75081

Development Overview

Brick Row is a predominantly-residential complex located immediately on the east side of the Spring Valley DART Station in Richardson, about a 500-foot walk to the station). The development incorporates five buildings on opposite sides of Brick Row, the project's "main street". Built in 2009, the project contains 577 apartments and 15,495 square feet of retail space. Monthly rents for apartments range from \$920 to \$2,700.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
86	328	155	8	577	96%
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
--		15,495		15,495	66%



Distinctive Mobility Elements

	Walkscore = 59 (Somewhat Walkable) 1-2 miles north: Downtown Richardson, Richardson Heights shopping center, DFW Chinatown Center.
	Direct connection to the Central Trail, which serves all Richardson DART stations and connects to Richardson and regional trail systems.
	None on-site
	260 feet west: Bus stop for DART routes 360 (Forest Lane Station to Lookout & Plano, 7 days a week); 402 (Downtown Carrollton Station to Downtown Garland Station, 7 days a week); 403 (Irving Convention Center Station to Spring Valley Station, 7 days a week); 463 (Addison Transit Center to Downtown Garland Station, 7 days a week); 585 (Forest Lane Station to Spring Valley Station, 7 days a week)

Parking Supply

Required Parking: 970 Provided Parking: 1,036¹¹

Brick Row's parking requirements were determined by the Planned Development Regulations for the Spring Valley Station District Development (City of Richardson Ordinance 4099). 908 spaces were required for the residential portion, and 62 spaces were required for the retail portion, totaling 970 spaces. Ultimately, the developer chose to provide 1,036 spaces on the development site.

Two garages, located within the site's two largest residential buildings, provide 859 spaces. Of these, 798 spaces are reserved for residents, with the remainder available to the public. Two surface lots provide 160 more resident-only spaces, while a 17-space surface lot is maintained for retail customers. Site-abutting streets also provide 110 on-street parking spaces that were included in utilization surveys. While not included as part of the development, these spaces provide a valuable parking resource for the site's retail uses.

Parking Management

Parking is free for residents, unless they prefer a space reserved for their unit. Such spaces are offered for \$40/month, as an optional fee added to residential leases. All other spaces are available on a "first come, first served" basis. Resident parking facilities are accessible only via a key fob. Two key fobs are provided, for free, with an exception for three-bedroom units with three independent roommates. Additional fobs available for a \$75 one-time fee.

Retail and visitor parking is available 24 hours/day in a separate area, uncontrolled by a gate, free of charge. On the north side of Spring Valley Street (closest to the Brick Row development), parking is restricted to a 2-hour limit from 8 AM to 10 PM.

Additional, unrestricted, on-street parking is available along Brick Row and McKamy Park Circle.



Google Streetview © 2017

¹¹ Does not include 110 on-street spaces that abut, but are not a part of the development.

Parking Utilization

Studied Inventory: 1,019¹²

Parking occupancy data was collected at Brick Row's garages and residential lots on August 2nd, 3rd, and 4th. Across this 72-hour span, parking utilization peaked at 67%, occurring during weekday-overnight hours. On Saturdays, peak demand reached a similar 66%. The lowest utilization measured was 46% during the weekday midday period. For much of the weekday periods, from morning through to the early evening, the garage was significantly less than half-full.

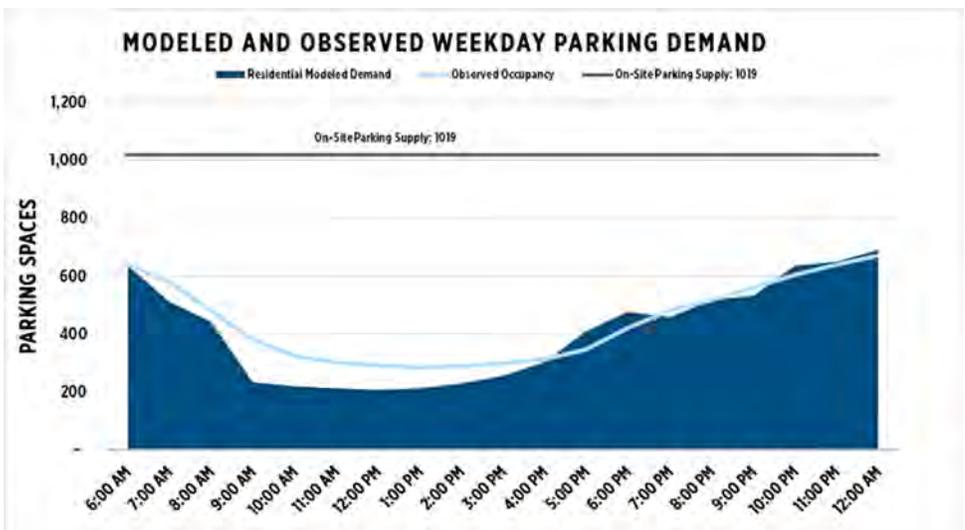
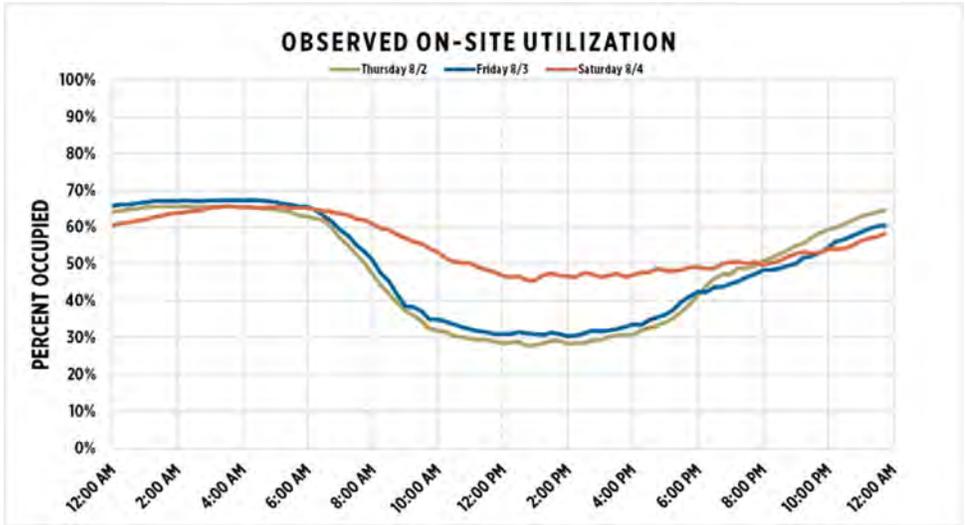
Modeled Parking Demand

The bottom two charts on the following page track demand patterns that industry-standard models would predict for the site. Modeled demand patterns are very similar to those observed during surveys. Both suggest that this development is significantly over-parked relative to demand. Had the developer provided no more parking than was required, there would still be significant excess capacity, during demand peaks. This suggests that a TOD-appropriate shared-parking model would provide a much more reliable source, than either the current development code or developer expectations, for projecting parking needs on similar sites.

Sample occupancy measures were taken for the 110 on-street spaces abutting the site, throughout the same three days. The charts to the right focus on of-site parking supply/demand. But, it is worth noting that utilization of these on-street spaces peaked at 49%, on late morning on Friday, meaning that 60+ spaces of additional, unused parking capacity remains available at most other times.

¹²The retail-customer lot (17 spaces) was not surveyed for this analysis.

BRICK ROW



CityLine 1, 2, and 3

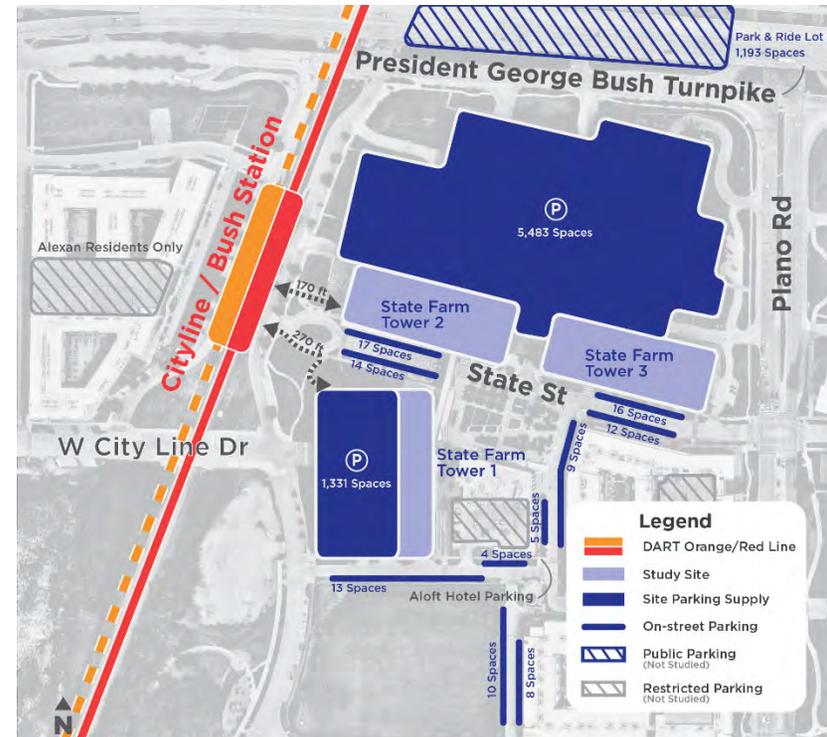
3661 North Plano Road, Richardson, TX 75082

Development Overview

CityLine Towers 1, 2, and 3 anchor a massive mixed-use development immediately east of CityLine/Bush DART Station. The walk from CityLine to the DART station is about 170 feet. The largest tenant of the main towers is a regional flagship office for State Farm Insurance. Other tenants include a wellness center and ground floor retail businesses, including multiple restaurants, a salon, and a convenience store. Additional buildings within walking distance include a hotel, multifamily apartments, and a retail center that includes a supermarket.

Land Use Summary

Studios	One-Bedroom	Two-Bedroom	Three-Bedroom	Total Residential Units	Stated Residential Occupancy
--	--	--	--	--	--
Office Square Footage		Retail/Food/Service Square Footage		Total Non-Residential Square Footage	Stated Non-Residential Occupancy
1,070,000		139,190		1,209,180	99%



Distinctive Mobility Elements

	Walkscore = 39 (Car-Dependent) 0.8 mile south: Spring Creek Nature Area Galatyn Park Station to south, downtown Plano to the north.
	Direct connection to the Central Trail, which serves all Richardson DART stations and connects to Richardson and regional trail systems. 0.6 mile southwest: Spring Creek Trail, a 4.5 mile trail ¹³
	Bike racks: In garage serving Towers 2 and 3 near pedestrian entrances off State Street
	0.1 mile west: Bus stop for the DART route 883 (UT Dallas Shuttle Bus, CityLine/Bush Station to UT Dallas, 7 days a week); 841 (Telecom Corridor FLEX, weekdays); 843 (South Plano FLEX, weekdays)

¹³ <https://www.dallascounty.org/departments/plandev/trails/maps/springcreekrichardson.php>

Parking Supply

Required Parking: 4,031

Provided Parking: 6,814

CityLine's parking requirements were stipulated by Planned Development regulations in City of Richardson Ordinance 4028. The requirement for non-residential uses – one space/300 gross square feet – applied to the site's 1.2 million+ square feet of commercial space translated to a total requirement of 4,031 spaces.

The garage serving Tower 1 is on the south side of State Street and contains 1,331 spaces. The garage serving Towers 2 and 3 is on the north side of State Street with an inventory of 5,483 spaces. All three towers are connected by a skybridge, allowing both garages to serve the parking needs of any building on the site.

Parking Management

The parking garage serving Tower 1 contains three entrances for private vehicles. The parking garage serving Towers 2 and 3 contains seven entrances for private vehicles and a separate ramp for commercial vehicles and freight deliveries. The entrances on the west side of the facility are closed until 10:00 AM on weekdays to prevent DART commuters from parking in the garage serving Tower 2 and 3.

Employees, contractors, and security access-controlled areas of both garages via a chip embedded in their badges. Their vehicles are also registered with security and automatic vehicle identification (AVI) readers attached to toll tags in cars to help expedite enforcement.

Beyond the garage, visitor parking is also provided via free curbside spaces along surrounding streets. On State Street, a prominent low-speed street bisecting the CityLine facilities, curbside parking is limited to two hours (to discourage commuters from parking there). In the evenings, valet services are available for patrons of Jasper's

Restaurant off of State Street, with the service making use of vacated parking capacity in Tower 3 to park vehicles.

DART commuters are accommodated in a park-and-ride lot to the north of CityLine, about a 450-foot walk to the station.



Nelson\Nygaard

Parking Utilization

Studied Inventory: 6,814

Utilization was documented at the garages serving CityLine Towers 1, 2, and 3 on October 11th, 12th, and 13th. Backup counts were made for Tower 1 the following week. The charts on the following page profile utilization across both garages. Utilization peaked at 56%, during the weekday midday period. Evening and weekend utilization never rose above 30%.

Utilization of curbside parking on surrounding streets was sampled throughout the three days as well, peaking at 82% on Thursday at approximately 10:30 AM.

Modeled Parking Demand

The modelled peak demand — 3,419 vehicles — is short of the observed peak by 270 vehicles. This is within the standard buffer of 10% typically added to demand projections when calculating recommended parking supplies. By contrast, the thousands of spaces that remained unoccupied throughout these surveys, suggest that the private sector calculations used to determine the parking supply for this development wildly over-projected supply needs. By comparison, the amount of parking required by the City's zoning code is just 9% higher than observed demand, a much more accurate projection of need that could have significantly reduced development costs.

CITYLINE 1, 2, AND 3

