

**MEMORANDUM**

**To:** Kristen Link, FDG Promenade 3A Associates, LLC

**From:** Cassie Slade, PE, PTOE

**Date:** June 3, 2021

**Project:** Promenade Apartments – Castle Rock, CO Parking

**Subject:** Analysis - Updated

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The Fox Tuttle Transportation Group has completed a review of the proposed Promenade Apartments project in the Town of Castle Rock with respect to peak parking demand. The site is currently vacant and located within the latest master-planned development, The Promenade at Castle Rock, which is on the north end of Town just west of I-25 and just south of Castle Rock Parkway. The project is proposing to construct 300 multi-family units. There are future plans for commercial space on the southeast side of the property (not included in this analysis). The project proposes to have two accesses on Promenade Parkway: one right-in, right-out on the north end and one full movement at the roundabout. It is understood that there will be 526 parking spaces to serve residents, visitors, and employees. This memorandum summarizes our analysis and findings.

**Town of Castle Rock Requirements**

The property for the Promenade Apartments is located within the Promenade at Castle Rock Planned Development Plan (PDP), Amendment No. 1. Per Section 4, 4.5 of the PDP zoning regulations, required parking for the Multi-Family Residential District will be determined during the Site Development Plan review Process.

## ITE Recommendations for Parking Demand

One of leading industry parking resources was reviewed within the context of this project and discussed in this memorandum: Institute of Transportation Engineers' (ITE) *Parking Generation, 5<sup>th</sup> Edition (2019)*. ITE publishes parking generation data for various land uses based on numerous studies and empirical data calculating average peak parking demand. For majority of land uses, ITE provides both urban and suburban parking formulas, near and not near rail transit, to predict peak parking demand. The proposed Promenade Apartments is located within an established suburban environment. The ITE weekday parking demand rates for land use code #220 "Multi-Family (Low-Rise)" were applied.

The Promenade Apartments project proposes to construct 300 apartments. The ITE rates were multiplied by the number of units to calculate the peak parking demand as shown in **Table 1**:

**Table 1. ITE Parking Demand**

Parking Demand Rate Type	Apartments (Urban/Suburban no nearby Transit)	
	ITE Rate per Unit	ITE Parking Demand
Average	1.21	363 spaces
85 <sup>th</sup> Percentile	1.52	456 spaces

Based on the national parking demand rates, the average parking demand for the apartments is calculated to be 363 parking spaces with an 85<sup>th</sup> percentile demand of 456 parking spaces. Compared to the provided parking supply, it is anticipated that there will be between 70 and 163 unoccupied parking spaces during a peak period.

## On-Site Survey of Parking Availability

Fox Tuttle staff gathered parking demand data from other projects that included several apartment complexes within Castle Rock. Staff visited each site in the early morning hours to observe the parking demand firsthand over two days. Parking lots were walked and driven to gather the parking data and take photos. Empty off-street parking spaces were counted between 3:45am and 5:00am to capture the highest parking occupancy of the residential complexes. The actual parking demand was determined by the number of vacant parking spaces within the study period compared to the parking supply. Note that any tandem/on-street parking spaces shown on the recorded Site Development Plans (SDP) were not included

in the analysis of parking demand. This is because it is unknown if those vehicles parked on-street are for the subject apartment complex or for an adjacent development. The vehicles parked on-street were counted during the field visit and are shown in the **Table 2** with a separate rate for informational purposes.

The occupancy rate was equated to the parking demand per number of apartment homes per complex. **On average, the apartment complexes had a parking occupancy rate 83% and an observed peak parking demand of 1.34 parking space per dwelling unit** (1.38 if on-street/tandem spaces are included). The parking demand results are detailed on **Table 2** (refer to the **Appendix**). The field study for parking



**Photo 1: Data Collection in Castle Rock**

demand of peer facilities included parking spaces for visitors in the observations and calculations. It is acknowledged that most likely visitor parking spaces were not occupied in the early morning hours; however, there were vacant spaces that could accommodate visitors had the observation times been later in the day. It is anticipated that some of the observed occupied spaces would be vacant during the day while residents are away at a different location and these same spaces could be utilized by visitors as needed.

The highest observed parking demand rate was 1.46 spaces per unit. If this was applied to the Promenade Apartments, then there would be an anticipated demand of 438 parking spaces.

## **Summary and Recommendations**

The Promenade Apartments project is proposing to construct 300 apartments, located between Castlegate Drive on the West and Promenade Parkway on the East. As per Section 4, 4.5 of the PDP zoning regulations, required parking for the Multi-Family Residential District is to be determined during the Site Development Plan review process, and it is proposed that there will be 526 on-site parking spaces (this does not include 16 shared stalls on the access road). Based on the national ITE parking data, it was estimated that the apartments will have an average parking demand of 363 spaces and an 85<sup>th</sup> percentile parking demand of 456 spaces. Based on local parking data collection, it is anticipated that this complex will have a parking demand of 438 spaces. **In conclusion, the proposed 526 off-street parking spaces was determined to accommodate the peak parking needs.**

**Table 2 - Multi-Family Parking Supply and Demand Data**

No.	Apartment Name	Parking Type	Mixed Uses in Bldg	Number of beds	Number of Units	Number of Beds	Off-Street Parking Supply	Parking Supply Ratio (required to construct)	Parking Demand Observations *	On-Street / Tandem Spaces**	Parking Demand with On-Street**
1	Springs at Castle Rock 3715 Bilberry Street Castle Rock	Surface & Garages	No	1 2 3 studio Total	61 96 18 29 204	61 192 54 29 336	306 surface 43 garages 349	1.71 /unit	274 Off-Street Occupancy (it was assumed that garages were 90% occupied) 79% Parking Occupancy Rate 1.34 demand per unit	18	1.43 demand per unit
2	Avalon at The Meadows 4300 Swanson Way Castle Rock	Surface & Garages	No	1 2 3 studio Total		0 0 0 0 0	124 surface 288 garages 412	1.72 /unit	350 Off-Street Occupancy (it was assumed that garages were 90% occupied) 85% Parking Occupancy Rate 1.46 demand per unit	15	1.53 demand per unit
3	Venue at the Promenade 6200 Castlegate Drive W Castle Rock	Surface & Garages	No	1 2 3 studio Total			388 surface 138 garages 526	1.69 /unit	445 Off-Street Occupancy (it was assumed that garages were 90% occupied) 85% Parking Occupancy Rate 1.43 demand per unit	0	1.43 demand per unit
4	Riverwalk South Bldg. 115 Wilcox Street Castle Rock	Surface & Structure Garage	Yes	1 2 3 studio Total			14 surface 146 structure 160	1.39 /unit	131 Off-Street Occupancy (it was assumed that garages were 90% occupied) 82% Parking Occupancy Rate 1.14 demand per unit	0	1.14 demand per unit
				Average	218		362	1.63 /unit	83% Parking Occupancy Rate 1.34 demand per unit		1.38 demand per unit

\* Tandem spaces (on-street) not included in the supply or demand calculations.

\*\* For Informational Purposes Only. Tandem/ On-street parked vehicles are not typically included in the parking demand calculation since it is unknown if these vehicles are associated with the subject apartment complex or an adjacent property.