

TECHNICAL MEMORANDUM

Project: Redmond City Center – 16135 NE 85th Street

Subject: Updated Revised Lofts Option 1
Trips Generation and Parking **Update**
Tower B (Site Plan Entitlement)

Date: August 19, 2020

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The City of Redmond has provided a second round of comments to the proposed Redmond City Center (RCC) - Tower B Site Plan Entitlement submittal, which were presented in an Excel spreadsheet titled: *LAND-2019_01268_Round 2 Comment Responses Matrix*. Some of the City comments pertain to the applicant's request to utilize tandem parking spaces within the parking garage for office use by managing the parking garage with valet parking services. The City has indicated that tandem spaces for commercial use will likely not be approved. Therefore, the proposed project has re-designed the parking garage layout to remove all tandem parking spaces, and increase the total number of standard-size spaces.

This memorandum supports the Tower B Site Plan Entitlement (SPE) process for "Updated Revised Lofts Option 1," and documents the slight project programs changes and related trip generation, the proposed parking management option with a fully shared parking garage, an updated transportation concurrency application, and an updated transportation impact fee calculation. It supersedes the previous memorandum dated December 10, 2019.¹

To maintain consistency and provide comparable results, this update applies the same methodologies and processes used in all previous and approved analyses for this project. This includes the City of Redmond's Technical Committee's acceptance of the Transportation Management Plan with the office parking demand reduced by 30%, and application of the most current resources to calculate project trip generation and parking demand. These and other analysis assumptions are described herein.

1. Updated Project Program

The analysis herein reflects the latest program developed in August 2020, which is named "Updated Revised Lofts Option 1." Table 1 below compares this new program to the previously-evaluated City-approved programs, which were named Original Lofts Option 1 and Revised Lofts Option 1. It is noted that the previous programs included tandem parking spaces for residential users only. This Updated Revised Lofts Option 1 does not include tandem spaces. The site plan for the project is shown on Figure 1.

¹ *Redmon City Center - 16135 NE 85th Street, Updated Revised Lofts Option 1 - Trip Generation and Parking, Tower B (Site Plan Entitlement)*, December 10, 2019 (Heffron Transportation, Inc.).

Redmond City Center

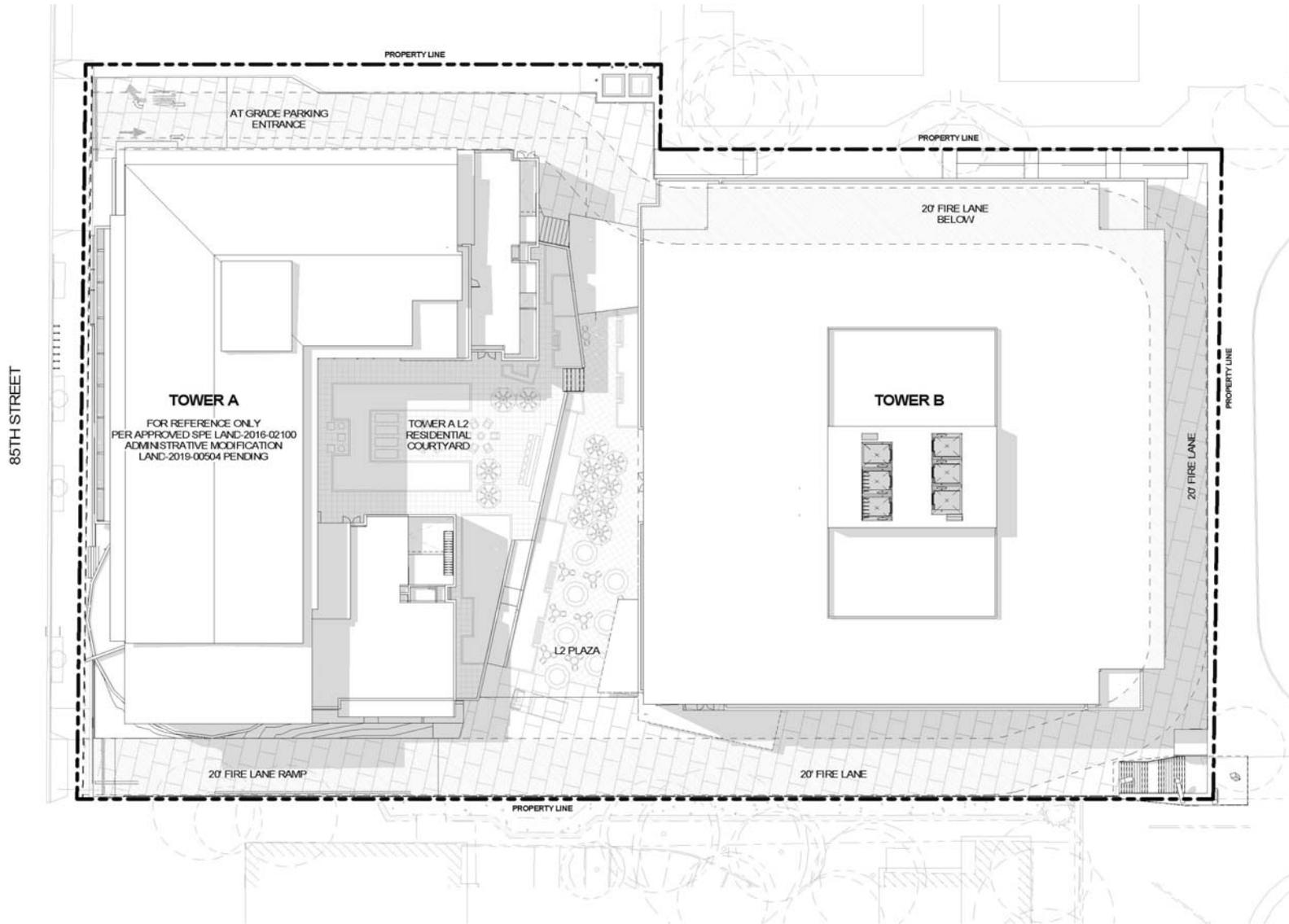
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Table 1. Redmond City Center – Comparison of Project Programs

Type of Use	Approved Original Lofts Option 1 ^a	Approved-Revised Lofts Option 1 ^b	Current Program Updated Revised Lofts Option 1 ^c
Residential (Multifamily)	303 units	303 units	208 units
Supermarket	21,820 sf ^d	0 sf	0 sf
Retail	10,500 sf	5,342 sf	3,092 sf
Office	101,500 sf	104,562 sf	265,694 sf
Parking Spaces	409 spaces	511 spaces	518 spaces
Standard spaces	382 spaces	462 spaces	518 spaces
Tandem spaces	27 spaces	49 spaces	0 spaces
Total Vehicle Capacity	436 spaces	560 spaces	518 spaces

- a. Program evaluated in the Transportation Amendment for the Lofts Option, Heffron Transportation, Inc. December 12, 2016.
- b. Program evaluated in the Revised Program Options - Trip Generation and Traffic Impact Fee Estimates, Heffron Transportation, Inc. October 8, 2019.
- c. Program evaluated herein. Source of program information: Jackson-Main Architects, Cosmos, August 2020.
- d. Square feet = sf. Leasable square footage is provided for supermarket and retail spaces; e. Gross square footage is provided for the office space.





Source: Jackson Main Architects, August 2020

REDMOND CITY CENTER UPDATED REV. LOFTS OPTION 1

Figure 1

Site Plan



2. Project Trip Generation Comparisons

To maintain consistency and provide comparable results, the same methodologies and processes used in the approved analysis options were used for this update. The rates, equations, and methodologies from the Institute of Transportation Engineers (ITE) current *Trip Generation Handbook*² and *Trip Generation Manual*³ were used to estimate the trip generation for the approved Revised Lofts Option 1 and Updated Revised Lofts Option 1. The results presented for the approved Original Lofts Option 1, were derived using previous versions of these same reference manuals. It is also noted that the trip generation for each of the Lofts Options 1 account for trip reductions associated with the approved Transportation Management Plan elements. Baseline vehicle trips, person trips, internal trips, and net vehicle trips were calculated using the same methodology as in the previous analyses.

Table 2 presents estimated vehicle trips for the Updated Revised Lofts Option 1. Trip estimates for the approved programs are shown at the bottom of the table for comparison. All of the trip generation values compared in these tables are the total vehicle trips generated by the proposed land uses, and do not take credit for removal of the existing United States Post Office Building.

As shown, the Updated Revised Lofts Option 1 would generate fewer trips than the City-approved Original Lofts Option 1. Therefore, no off-site analysis should be required for this change in the project program.

Table 2. Estimated Vehicle Trips by the **Updated Revised Lofts Option 1**

Land Use	Assumed Size	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Office	265,694 sf	1,920	163	25	188	31	166	197
Retail	3,092 sf	90	1	1	2	4	3	7
Supermarket	0 sf	0	0	0	0	0	0	0
Apartment	208 units	1,050	18	51	69	52	34	86
Total Updated Rev. Lofts Option 1		3,060	182	77	259	87	203	290
<i>Approved Revised Lofts-Option 1^a</i>		<i>2,480</i>	<i>102</i>	<i>85</i>	<i>187</i>	<i>95</i>	<i>124</i>	<i>219</i>
<i>Approved Original Lofts Option 1^b</i>		<i>4,180</i>	<i>187</i>	<i>157</i>	<i>344</i>	<i>219</i>	<i>260</i>	<i>479</i>

Source: Heffron Transportation, Inc. August 2020. Estimated using procedures documented in the Transportation Technical Report for Redmond City Center, updated with ITE Trip Generation Handbook (3rd Edition 2017) and Trip Generation Manual (10th Edition, 2017). Elements of the approved TMP have been applied.

- a. Program evaluated in the Redmond City Center Revised Program Options - Trip Generation and Traffic Impact Fee Estimates, Heffron Transportation, Inc. October 8, 2019.
- b. Program evaluated in the Transportation Amendment for the Lofts Option, Heffron Transportation, Inc. December 12, 2016.

² Institute of Transportation Engineers, 3rd Edition, 2017.

³ Institute of Transportation Engineers, 10th Edition, September 2017.



3. Parking Conditions

The Updated Revised Lofts Option 1 proposes 518 standard parking spaces. None of the spaces would be reserved during daytime hours, and could be shared among the various users. During typical non-work hours (e.g., from about 6:00 P.M. to 7:00 A.M. on weekdays and on weekends) the lowest level could be gated and designated for residential use if desired.

3.1. Parking Demand

Peak parking demand for the current program was estimated using a similar methodology as was used in the *Transportation Technical Report* and the *Alternative Minimum Parking Requirement*⁴ memo. The methodology is presented below, with detailed calculations presented in Attachments.

Office/Commercial Parking

The proposed office use would be subject to a Transportation Management Plan (TMP) that requires a 30% reduction in single-occupant commuter trips. Programs would be implemented that encourage office employees to commute using transit, walking, and biking modes of travel. These trip reduction measures would also reduce office-related parking demand. Based on rates in the updated *Parking Generation*⁵ with a 30% reduction for the TMP, the peak parking demand for the office is estimated to be 445 vehicles and would occur at about 10:00 A.M. The project's reduced-size retail portion is estimated to generate a peak parking demand of 5 vehicles at about 1:00 P.M. During the 10:00 A.M. hour, the retail demand is estimated to be 3 vehicles.

Residential Parking

Since 2012, King County Metro has examined the relationship among several variables to help better plan parking supply throughout the County. The County recognizes that constructing too much parking supply can result in higher levels of automobile ownership, vehicle travel, congestion, and development costs. Metro compiled information about multifamily residential parking use at more than 200 developments in King County over the winter and spring of 2012, and 75 more buildings in 2017. Parking utilization was recorded on Tuesdays, Wednesdays, and Thursdays between midnight and 5:00 A.M. in each multifamily development studied. Metro then developed a statistical model⁶ to estimate parking use based on building and neighborhood characteristics, including a site's access to transit service. The *King County Right-Size Parking Calculator V2.0* model covers parcels within King County including the City of Redmond and is appropriate to use for this project.

The site location, proposed unit mix, unit sizes, planned number of affordable units (21), and estimated rental rates were entered into the County model. Based on the site-specific parameters, the *Right-Size-Parking* model predicts a parking supply ratio of 0.58 vehicles per unit would be the optimal best fit. (The results from the *Right Size Parking Calculator* are attached.)

The 0.58 vehicles-per-unit rate was applied to the 208 units, which results in a peak overnight demand of 121 vehicles. Residential parking demand is expected to decrease midday on a weekday as residents

⁴ Heffron Transportation, Inc., September 30, 2016.

⁵ Institute of Transportation Engineers, 5th Edition, January 2019.

⁶ King County Metro, <http://www.rightsizeparking.org/>, accessed Feb. 2019. The model was built using regression analysis with a dependent variable of observed vehicles per occupied residential unit (parking/unit ratio) and nine independent variables: unit size, occupied bedrooms, average rent, parking price, parking stalls, percent affordable units, and gravity measures of employment, population, and transit. The resulting model, based on local data, has an R-squared correlation value of 0.85 (85% of the variation observed in parking use can be explained through the nine variables).



Redmond City Center

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leave the garage to commute to work or school. Based on ITE data, it is estimated that midday residential demand would be 54% of the overnight peak, which would be about 65 vehicles.

Total Parking Demand

The cumulative peak parking demand for all uses is estimated at 512 vehicles and would occur at about 10:00 A.M., which coincides with the peak demand for the office use. This cumulative demand would be accommodated by the proposed 518 parking spaces.

3.2. Parking Supply and Management

The Update Revised Lofts Option 1 has a slightly different mix of land uses compared to the approved Revised Lofts Option 1 project: it increases the office space, has slightly less retail space, and has fewer residential units. The proposed uses are conducive to shared parking since the peak demand for the office use and residential use occur at different times of day. The City will not allow tandem spaces to be used for commercial use, so all tandem spaces were removed from the parking garage design.

It should be noted that future transportation paradigm shifts may also reduce overall parking demand. Such paradigm shifts include the extension of Sound Transit's light rail service to Redmond, which could encourage more office employees to commute by non-vehicle modes or allow residents to live without owning a car. Self-driving cars are also expected to vastly reduce parking in the future since they do not need on-site parking. In addition, COVID 19 has shown many employees and employers that they can work from home, and even part time use of that paradigm will reduce parking demand.

As mentioned, the overnight residential peak parking demand would also be accommodated. In the evening, Level P02 could be gated for residents only. The other levels could accommodate guests and office workers in the evening or on weekends, as needed. No parking overspill is expected.

4. Transportation Management Plan

With this Updated Revised Lofts Option 1, the Transportation Management Plan would be enhanced to include a fully shared parking garage. The incentives included in the existing TMP to encourage residents to not own a car, and employees to use non-single-occupancy vehicles (SOV) to commute to work would remain.

5. Transportation Concurrency

The City of Redmond requires new development to apply for a Certificate of Concurrency. The application for the original approved project in 2015 was prepared according to the City of Redmond guidelines using the appropriate land uses and mobility unit rates supplied (based on number of units and building sizes, not by number of trips) by the City of Redmond. That project program resulted in 1,023 mobility units that were to be used in the concurrency evaluation. Preliminary estimates show that the Updated Revised Lofts Option 1 would result in 1,413 mobility units. The City of Redmond Concurrency Application for the Updated Revised Lofts Option 1 is attached.



6. Traffic Impact Fees

The City of Redmond's adopted Transportation Impact Fees through the *Redmond Municipal Code*⁷ 3.10.100 (updated and effective January 1, 2015) have been used to calculate the fee for each program option. The City's rates were updated on January 1, 2020, and depending on the timing of the development's schedule; these fees could change again. The estimated fees for the Updated Revised Lofts Option 1 are shown in Table 3.

Table 3. Traffic Impact Fee Estimate – Updated Revised Lofts Option 1

Land Use	# Units/SF ^a	Rate ^b	Impact Fee
Proposed Multi-Family	208 units	\$4,221.18/unit	\$878,010
Proposed Office	265,694 sf	\$14.99/sf	\$3,982,750
Proposed Retail	3,092 sf	\$19.25/sf	\$59,520
(Removed Post Office)	(12,910 sf) ^c	(\$49.16/sf)	(\$634,660)
Total Fee			\$4,285,620

a. Square feet.

b. City of Redmond Municipal Code. Rates effective January 1, 2020

c. This value represents the building square footage only as a conservative estimate. The actual usable square footage of the specialized areas may also apply.

7. Summary

The Updated Revised Lofts Option 1 is estimated to generate fewer peak hour trips than the approved Original Lofts Option 1 project program. In addition, the Updated Revised Lofts Option 1 is proposed with more parking spaces and capacity than the original approved project program. With the proposed shared parking management efforts, the proposed parking supply would adequately accommodate the peak parking conditions at the site. Based on these results, the analyses presented in the previous *Transportation Technical Report* and other updated analyses would include a more conservative analysis; therefore, no additional on-site or off-site analyses should be required.

Traffic Impact Fees would be paid based on the most current rates at building permit issuance for the Updated Revised Lofts Option 1 - Tower B site plan entitlement (SPE).

Attachment: *King County Right Size Parking Tool* – Results for Updated Revised Lofts Option 1
City of Redmond Transportation Concurrency Application

MMB/mch

RCC Rev Lofts Op-TB SPE 8-2020 Final.docx

⁷ City of Redmond, passed September 15, 2015.



16135 NE 85th St, Redmond, WA



Parking/Unit Ratio
>0.50

1 Parcel Selected

Parking/Unit Ratio
0.58

Building & Parking Specifications

Location Characteristics

Parking Impacts

The preset values below represent subregional (CBD, Urban and Suburban) average/median values (from field work) for building (with no affordable units) and parking specifications. These represent the default values, as a starting point, for which parking use ratios are estimated. Scroll down to view parking optimization estimates and guidance on unbundled and affordable housing options.

	NUMBER OF UNITS	AVERAGE RENT (\$)	RESIDENTIAL AREA (SQ FT)
STUDIOS:	<input type="text" value="4"/>	<input type="text" value="\$1,840"/>	<input type="text" value="483"/>
1 BEDROOMS:	<input type="text" value="174"/>	<input type="text" value="\$2,380"/>	<input type="text" value="590"/>
2 BEDROOMS:	<input type="text" value="28"/>	<input type="text" value="\$3,315"/>	<input type="text" value="880"/>
3+ BEDROOMS:	<input type="text" value="2"/>	<input type="text" value="\$4,025"/>	<input type="text" value="1181"/>
TOTAL:	208	\$2,511	131,594
AFFORDABLE UNITS:	<input type="text" value="21"/>		
PARKING			
PARKING STALLS:	<input type="text" value="121"/>	✓ Right Sized	
PRICE PER STALL (\$/MO):	<input type="text" value="\$175"/>		

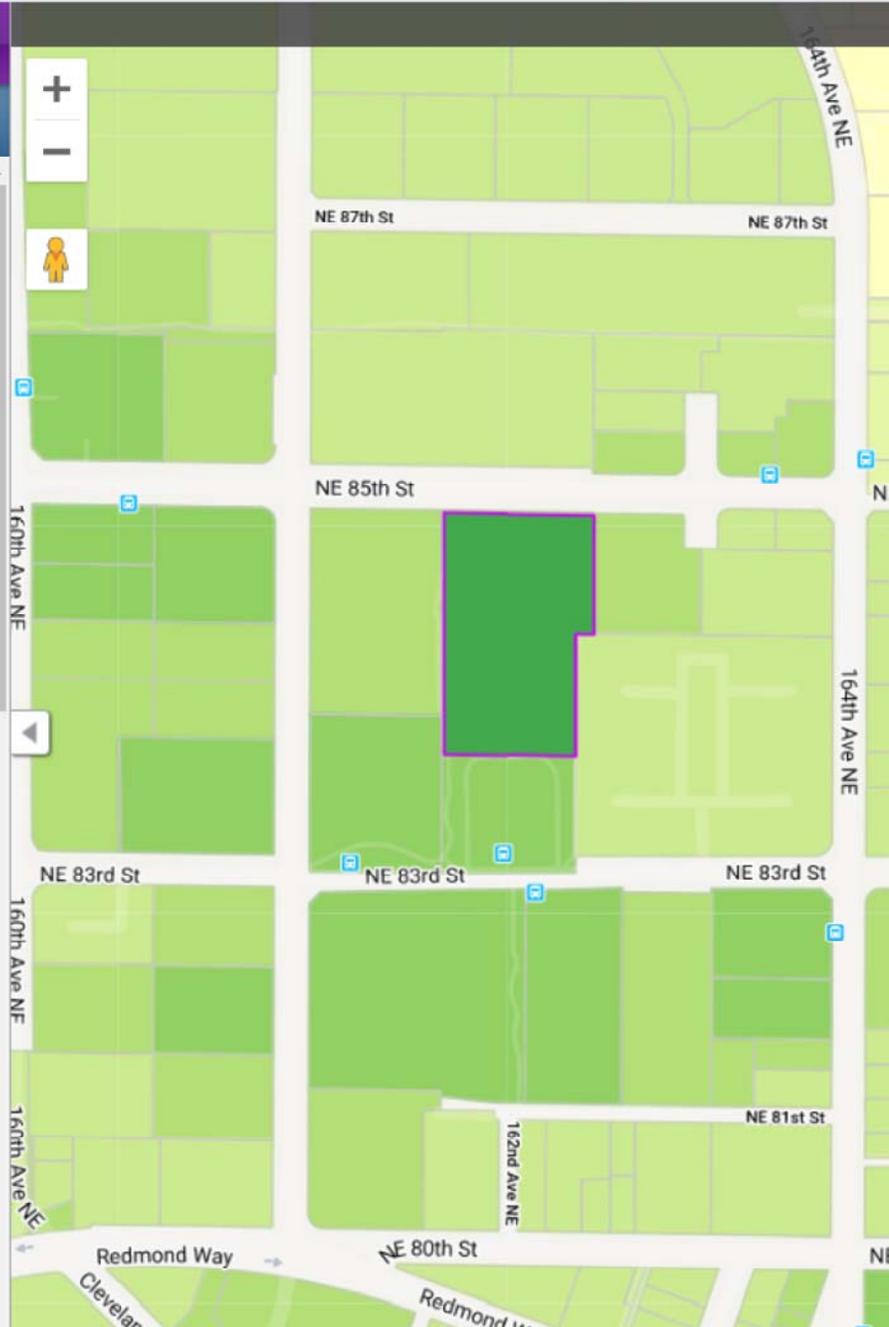
UPDATE **RESET**

Optimized Parking Supply and Market Price

Modeled parking utilization per building is **121 parked cars** and this estimate has a range of **110 - 132 cars** per building.

✓ **121 stalls** is the optimal parking capacity priced at \$175/mo.
TRY THIS

✓ Optimal pricing for 121 stalls is estimated at \$175/mo per stall.



CITY OF REDMOND TRANSPORTATION CONCURRENCY APPLICATION

This application provides the City of Redmond with the information needed to issue a certificate of concurrency for a development. Please complete the entire form and return it to the Redmond Engineering Services Division. After agreement is reached on the mobility unit demand for a development based on the land use type, size of development and table on the back of this application, the City will, if necessary, determine if enough mobility unit supply is available to issue a certificate of concurrency. If determining the mobility unit demand for a development requires an independent calculation a fee for the review will be required, payable at the City Hall Permit Center.

1. Applicant name and address: COSMOS DEVELOPMENT COMPANY
11747 NE FIRST ST, SUITE 300
BELLEVUE, WA 98005

2. Property location:
 - a. Property address: 16135 NE 85th ST, REDMOND, WA
 - b. Development name: REDMOND CITY CENTER
 - c. Assessor's Parcel Number(s): 022-505-9142

3. Type of development permit to be requested: SPE

	Land Use Type (ITE Land Use Code)	Development Units	Mobility Unit Rate (see table on back)	Mobility Unit Demand	Notes
Proposed	RESIDENTIAL (LUC 220)	208 UNITS	1.39	209	DOWNTOWN
	OFFICE (LUC 710)	265,694 SF	4.94	1,313	
	RETAIL (LUC 820)	3,092 SF	6.34	20	
Total Proposed:				1,422	
Existing	POST OFFICE (LUC 732)	12,910 SF	16.19	209	DOWNTOWN
Total Existing:				209	
Net New Mobility Unit Demand (Total Proposed minus Total Existing)				1,413	

Signature of Applicant:  Date: 8.18-2020

For Official Use Only:

Mobility Unit Demand calculation reviewed: _____
Initials Date

Concurrency certificate required: Yes No Mobility Units available: Yes No

Application number: _____