

TECHNICAL MEMORANDUM

Project: Emerald Heights

Subject: Assisted Living Units and Courtyard Independent Living Units
– Traffic & Mitigation Confirmation

Date: June 1, 2018

Author: Michelle M. Brown,  Senior Transportation Engineer
Marni C. Heffron, P.E., P.T.O.E.

This memorandum presents information requested by the City of Redmond transportation review staff relating to the project's Conditional Use Permit application for the following phases of the expansion project: the new Assisted Living Units (ALU) Building and the new Courtyard Independent Living Units (ILU) Building. A *Traffic Impact Analysis* report for the entire Emerald Heights project was completed in June 2010.¹ The information in this memorandum consolidates and supersedes the information provided in previous memoranda prepared by Heffron Transportation, Inc. relating to these phases:

- *Emerald Heights – Assisted Living Units – Revised Traffic & Mitigation Confirmation* (April 12, 2018).
- *Emerald Heights – Courtyard Independent Living Building – Updated Traffic & Mitigation Confirmation* (August 10, 2017).
- *Emerald Heights – Assisted Living Units – Updated Traffic & Mitigation Confirmation* (February 17, 2017).

It should be noted five subsequent memoranda have been prepared by Heffron Transportation, Inc. for this development:

- *Emerald Heights – Assisted Living Units Traffic Confirmation* (September 30, 2016).
- *Emerald Heights – Entrance Gate Traffic Confirmation* (January 14, 2014).
- *Emerald Heights – Phase II Independent Living Units Traffic Confirmation* (October 1, 2012).
- *Traffic Generation Confirmation* (May 30, 2012).
- *Emerald Heights – Fitness Center* (September 2, 2011).

This memorandum compares how many ALUs and ILUs were assumed in the original *Traffic Impact Analysis* for the Emerald Heights project to what is currently proposed, and how the differences affect

¹ *Emerald Heights – Redmond, WA – Traffic Impact Analysis*, Heffron Transportation, Inc., June 4, 2010.

traffic within the study area and related traffic impact fees. Since the ALU Building project also affects the operations at the Corwin Center; a description of the planned renovations for that building is also provided.

1. Proposed Project

1.1. Assisted Living Building (ALU)

When the *Traffic Impact Analysis* was prepared in 2010 for the Emerald Heights project, 56 assisted-living units (ALUs) existed within the Emerald Heights facility.² These 56 ALUs are currently located in the Corwin Center (also referred to as the Health Center). The Corwin Center provides space for 117 units which are identified as: 40 ALUs and 16 memory-care units (for a total of 56 units) and 61 skilled nursing units in 32 rooms (29 rooms have two units and three rooms have one unit each). The original *Traffic Impact Analysis* from 2010 identified that during the Phase I expansion an additional 16 ALUs would be constructed, and that during the Phase II expansion another 14 ALUs would be constructed (a net increase of 30 ALUs). The current permit application proposes to construct 54 ALUs in the new Assisted Living Building. The existing 40 ALUs in the Corwin Center would be removed and no longer be utilized for assisted living, as the space would be repurposed in a future phase of work. The 16 memory-care units would remain in the Corwin Center. A net increase of 14 ALUs is proposed (which is less than what was originally assumed in the 2010 analysis).

1.2. Courtyard Independent Living Building

The original *Traffic Impact Analysis* from 2010 identified that during the Phase I expansion an additional 84 ILUs would be constructed, and that during the Phase II expansion another 46 ILUs would be constructed (a net increase of 130 ILUs, and a total of 420 ILUs proposed). When the 2010 *Traffic Impact Analysis* was prepared for the Emerald Heights project, 290 independent-living units (ILUs) existed within the Emerald Heights facility. These included both independent units and independent cottages. By year 2014, the Trailside ILU project was completed which added 43 ILUs.

There are currently 333 ILUs within Emerald Heights. The Courtyard ILU Building now proposes to add another 42 ILUs for a full buildout of 375 ILUs. This is less than what was originally assumed (420 ILUs) in the 2010 analysis.

² The *Trip Generation* (Institute of Transportation Engineers', 10th Edition September 2017) provides information on Continuing Care Retirement Community (CCRC) (Land Use 255), which provides the closest ITE description to Emerald Heights. On page 417, a table is provided identifying the "Living Accommodations at CCRCs." This table combines the occupied dwelling units and the number of occupied beds to estimate the total number of occupied units on a site. This implies units and beds count equally. The original *Traffic Impact Analysis* for the Emerald Heights project also combined the assisted living units and the memory care and skilled nursing beds as units within the assisted living facility. This is a conservative approach since multiple beds can be located within one room, not indicating the actual capacity. The number of beds as units accounts for the actual capacity of the facility. The memory care and skilled nursing facilities are considered assisted living, thus they are included in the total number of units. This definition of "units" applied in this analysis is consistent with the information listed in the Redmond Municipal Code (RMC) 3.10.030 and 3.10.100 for determining transportation impact fees.

2. Traffic Volumes

When the *Traffic Impact Analysis* was prepared in 2010 for the Emerald Heights project, there were 401 units on the site. Traffic counts conducted in 2009 were summarized to show an existing trip generation of 104 PM peak hour trips (44 in, 60 out) using the Main Entrance Driveway on 176th Avenue NE. A traffic count at this same location in March 2010 showed a trip generation of 108 PM peak hour trips (52 in, 56 out), which confirmed the consistency in the traffic generated by the Emerald Heights community. Currently there are 450 units on the site and a fairly recent count in June 2017 shows 130 site trips (60 in, 70 out) using both the Main Driveway and the exit-only Staff Driveway.

In addition, the traffic volumes along 176th Avenue NE were counted during the PM peak hour. In 2010 there were 82 vehicles (excluding the Emerald Heights site trips) passing the Main Entrance Driveway. The 2017 traffic count showed 83 vehicles (excluding the Emerald Heights site trips) passing the Main Entrance Driveway. In over seven years, the background traffic volumes along 176th Avenue NE traffic have remained about the same. The original report assumed a 2% annual increase in background traffic growth. This growth has not yet occurred in the seven years between the counts along 176th Avenue NE near the site. Therefore, the overall traffic forecast assumptions in the original report remain conservative.

3. Traffic Operations

The original *Traffic Impact Analysis* concluded that the Emerald Heights development would not change the operating levels at any of the study area intersections, including the site access driveways. The current proposal would result in a net increase of 14 ALUs plus 42 ILUs, which is fewer than what was originally assumed for the site's expansion. Therefore, the current application is in line with what was evaluated in the original *Traffic Impact Analysis* and no additional traffic analysis is needed for the proposed expansion project on the site. As a point of reference; based on the trip generation rates used for the original analysis – the additional units are estimated to generate 15 PM peak hour trips (7 in and 8 out).

4. Parking

When the original *Traffic Impact Analysis* was prepared, the Emerald Heights community had 503 parking spaces to accommodate for 401 total resident units, employees, and visitors. The original expansion was estimated to provide another 189 spaces for a total 850 spaces. This was to accommodate a total of 608 total units. Since then, the expansion plans have changed slightly. After the Assisted Living and Courtyard Independent Living Buildings are constructed there will be 506 units on the site and 538 parking spaces, as required by the City of Redmond. The parking areas would include van accessible spaces and areas for electric vehicle parking.

5. Traffic Impact Fees

The City of Redmond imposes traffic impact fees for new developments that would add peak hour trips to the transportation network. As stated in the *Traffic Impact Analysis* and Redmond Municipal Code 3.10;³ the impact fees should be based on the number of additional residential units constructed. The current proposal includes removing the existing 40 ALUs and constructing 54 new ALUs, a net increase of 14 ALUs and an increase of 42 new ILUs in the Courtyard Building. The following

³ City of Redmond Municipal Code, <http://www.codepublishing.com/WA/Redmond/>.

transportation impact fees associated with the current proposals based on the City’s most recent Impact Fee Schedule⁴ would total \$76,618.08 as detailed below:

- The transportation impact fee for the category Congregate Care/Assisted Living in “Rest of City” is \$1,368.18 per unit, applied to the 14-unit increase for ALUs = \$19,154.52.
- The transportation impact fee for the category Retirement Community in “Rest of City” is \$1,368.18 per unit applied to the 42-unit increase for ILUs = \$57,463.56.

6. Conclusion

The original *Traffic Impact Analysis* conducted for the Emerald Heights Master Plan in June 2010 concluded that the Emerald Heights development would not change the operating levels at any of the study area intersections, including the site access driveways with the proposed additions and changes to the site. Recent traffic counts in the study area confirmed the forecasts presented in the original study remain conservative.

As the phases of the master plan are developed, separate transportation evaluations are conducted to ensure the current proposal is within the parameters evaluated within the original traffic study. Each of the phases so far are well within those parameters and have not triggered any additional transportation analysis. This includes the current proposal to construct the new Assisted Living Building (with the removal of the existing ALUs in the Corwin Center) and the new Courtyard Independent Living Building.

A summary of the Emerald Heights’ completed and planned improvements to date are shown on the attached. Also included on this attachment is a summary of the Corwin Center unit changes from existing to after its renovation (which would likely be the next phase of the project).

Each phase of the development is subject to impact fees as residential units are increased. The proposed addition of the Assisted Living Building would remove 40 existing ALUs and construct 54 ALUs, for a 14-ALU increase, and adding 42 ILUs for the Courtyard Building. Emerald Heights would pay a transportation impact fee to the City of \$76,618.08 for these additional units based on 2018 impact fee rates.

When Emerald Heights is ready to renovate the Corwin Center, the planned next phase of development on the site, a confirmation evaluation of traffic impacts and impact fees applied to the additional number of units will also apply.

Attachment – Emerald Heights Unit Summary and Corwin Center Unit Breakdown

MMB/mch

Emerald Heights-IL-AL Traffic Analysis 6-2018.Docx

⁴ City of Redmond, Impact Fee Schedule effective January 1, 2018 through December 31, 2018 per city website.

Emerald Heights

Emerald Heights Unit/Bed Summary								
Unit Type and Location	Previous Total	Added ILU - Trailside	Existing Total	New ALU Building	Future Total	Corwin Remodel	IL Building (Courtyard)	Future Total
	(Yr 2011)	(Yr 2013/2014)	(Yr 2017)	(Yr 2018)	(Yr 2019)	(Yr 2019)	(Yr 2019)	(Yr 2020)
Independent Living Units	266	43	309		309		42	351
Independent Living - cottages	24		24		24			24
New AL Building								
Assisted Living Units				54	54			54
Corwin Center								
Assisted Living Units	40		40	-40	0			0
Memory Care Units	16		16		16			16
Skilled Nursing Units	61		61		61	23		84
Total	407	43	450	14	464	23	42	529

Allowable per code R-6 zone 684 units

Breakdown of Units and Rooms in the Corwin Center					
Existing (Yr 2017)	Assisted Living Units	Memory Care Units	Skilled Nursing Units	Total Units	Skilled Nursing Rooms
Lower Floor	40			40	
Upper floor		16	61	77	32
Total	40	16	61	117	32
After the New AL Building					
After the New AL Building	Assisted Living Units	Memory Care Units	Skilled Nursing Units	Total Units	Skilled Nursing Rooms
Lower Floor	0		0	0	0
Upper floor		16	61	77	32
Total	0	16	61	77	32
After the New AL Building & Corwin Center Renovation					
After the New AL Building & Corwin Center Renovation	Assisted Living Units	Memory Care Units	Skilled Nursing Units	Total Units	Skilled Nursing Rooms
Lower Floor	0		36	36	36
Upper floor		16	48	64	36
Total	0	16	84	100	72

Source: Lawton PMG, May 2018