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Swing Traffic Solutions

October 30, 2020

To: **Shane LaFave, Roers**

From: **Vernon Swing, PE**

Re: **Parking Analysis for 8131 34th Ave – Office/Residential Development, Bloomington, MN**

Per your request, Swing Traffic Solutions, LLC has conducted a parking demand analysis for the proposed development of a 142 unit Multi-Family residential development in Bloomington, MN. The site is located on the east side of 34th Avenue South approximately 850 feet south of American Boulevard E. The currently site includes an existing 48,110 square foot office building and 182 surface parking spaces. The proposed 142 unit residential building, which may be a 55+ independent living only facility, will be built on the east side of the site and the development will result in 76 surface parking spaces, and 202 underground parking spaces. It is expected the office and residential uses will share parking spaces, with the 76 surface spaces dedicated for office use, 73 shared spaces indoors that are dedicated for office during business hours but available to be rented by residents overnight and on weekends, and 129 dedicated indoor residential spaces (see the attached site plan).

The purpose of this study is to estimate peak parking demands for the current and proposed uses, including the opportunity to share parking, and determine if sufficient parking capacity will be provided with the development.

Parking Demand

The parking demand for the proposed 8131 34th Avenue S residential development with the existing office considered two sources *Parking Generation*, 4th Edition, published by ITE, the Institute of Transportation Engineers, and Shared Parking, 3rd Edition published by ULI, the Urban Land Institute. Both documents have gathered data from similar developments across North America and have published statistics regarding the rate of parking by the hour for a variety of development types, office and residential being among them. It is noted ULI has adopted ITE's overall demand rates.

The ITE information indicates the number of parking spaces needed by an office building can be estimated based on the square footage of the facility, and the number of spaces needed by an apartment building can be estimated based on the number of units. In this case the existing 48,110 building has a peak parking space demand of 149 spaces, and the 142 unit Multi-family Mid-rise residential development has a peak demand of 142 spaces. If the residential is a 55+ independent living facility the peak demand is only 87 spaces. In other words, without any parking space sharing, the total demand is 291 spaces assuming the development is a Multi-family residential and only 236 spaces if the residential development is restricted to 55+. If the residential development is 55+ the planned 278 spaces will over park the site by 42 spaces. If the residential development is not age restricted,

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additional parking will be needed or shared parking should be allowed. ITE and ULI provide data regarding shared parking, which has been reviewed and used to calculate the parking demand assuming shared parking is supported, which is summarized in the Table below.

Parking Demand forecasts per ITE	Land Use	Demand
48,110 square foot office	710	149 spaces
142 Mid-Rise Apartments or	221	142 spaces
142 Attached Senior Independent Housing	252	87 spaces

Parking Demand by hour per ITE

TOD	Office (Spaces)	Multi-family (Spaces)	Total (Spaces)
12-4 AM	0	142	142
5:00 AM	0	133	133
6:00 AM	0	118	118
7:00 AM	20	101	121
8:00 AM	72	87	159
9:00 AM	131	78	209
10:00 AM	149	77	**226**
11:00 AM	149	75	224
Noon	127	71	198
1:00 PM	125	70	195
2:00 PM	139	70	209
3:00 PM	140	71	211
4:00 PM	127	82	209
5:00 PM	83	91	174
6:00 PM	30	95	125
7:00 PM	17	100	117
8:00 PM	0	108	108
9:00 PM	0	118	118
10:00 PM	0	128	128
11:00 PM	0	132	132

Parking Demand by hour per ULI

TOD	Office (Spaces)	Multi-family (Spaces)	Total (Spaces)
12-5 AM	0	142	142
6:00 AM	5	135	140
7:00 AM	23	114	137
8:00 AM	75	95	170
9:00 AM	134	78	212
10:00 AM	149	71	**220**
11:00 AM	149	64	213
Noon	127	57	184
1:00 PM	127	57	184
2:00 PM	142	57	199
3:00 PM	142	57	199
4:00 PM	127	64	191
5:00 PM	90	71	161
6:00 PM	38	85	123
7:00 PM	23	100	123
8:00 PM	8	114	122
9:00 PM	5	121	126
10:00 PM	2	135	137
11:00 PM	0	138	138

The information in the Table above shows the peak parking demand, if shared parking is supported, is 226 spaces needed using ITE data or 220 spaces needed using ULI data. As mentioned earlier the proposed development is planning to provide 278 spaces, far exceeding the anticipated demand.

In addition to the state-of-the-art methods from ITE and ULI, the shared parking calculations based on the City of Minneapolis methods has also been reviewed. The results of the shared parking calculation using this method results in a demand for 234 spaces, again far less than the 278 spaces being proposed with this development.

Conclusion

In conclusion, the proposed 8131 residential development along with the existing office use has sufficient parking for the anticipated demand. The parking supplied and shared as part of the overall development exceeds the anticipated needs. Please contact Vernon Swing at vswingtraffic@gmail.com or 612-968-4142 with any questions.

Attachment: ESG Site Plan

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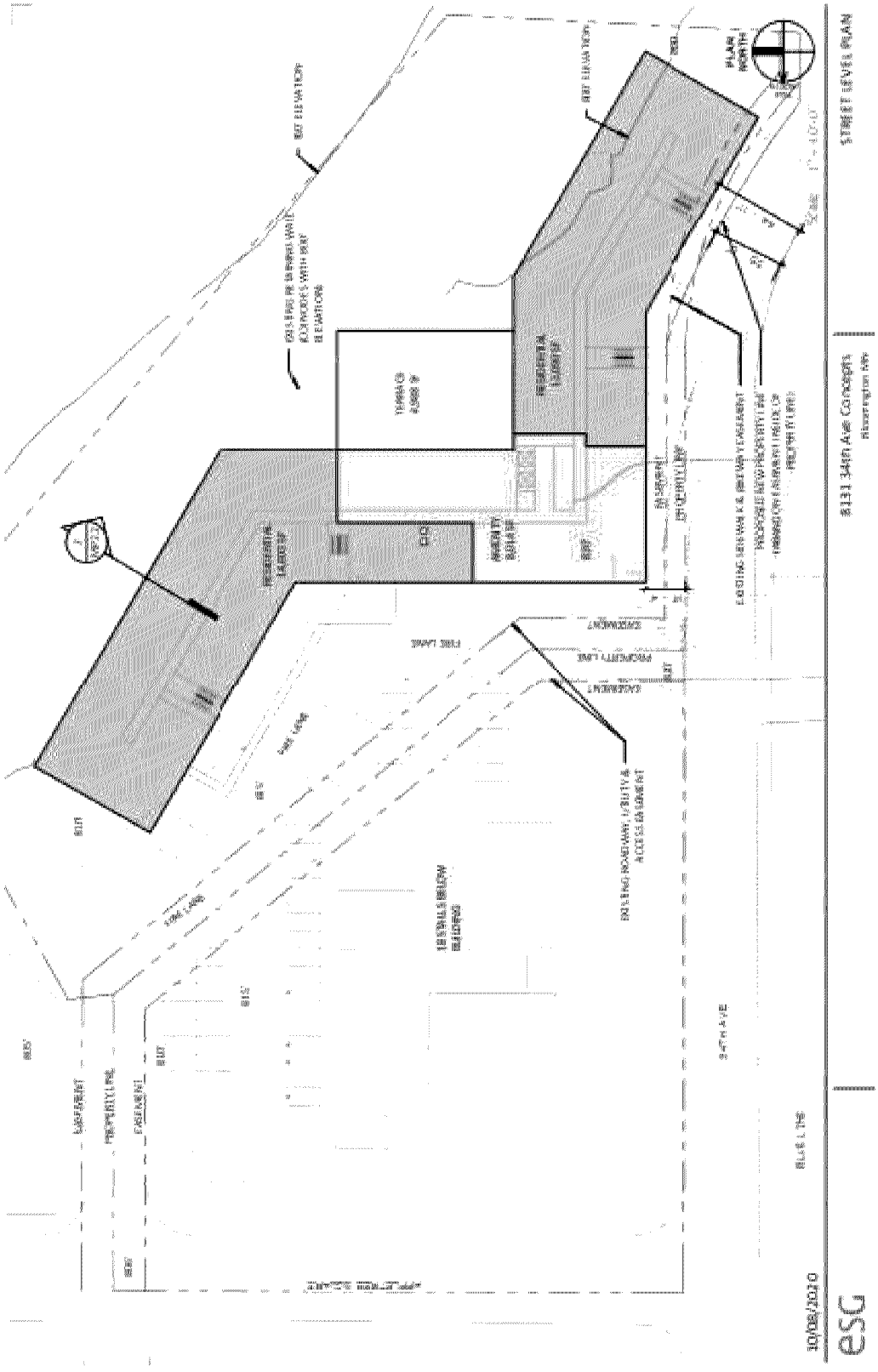

8131 34th Ave S, Bloomington, MN