



MEMORANDUM

TO: Dr. Scott Herrmann
FROM: Lee M. Brown, FAICP, President, Teska Associates, Inc.
SUBJECT: Beeson's Corners Student Projections
DATE: December 9, 2019

In response to your request, Teska Associates has prepared an estimate of increased school enrollment for the Bannockburn School District that may result if the Village of Bannockburn approves the annexation and zoning for the proposed Beeson's Corner mixed use development at the northeast corner of Half Day Road and Waukegan Road.

Methodology

Teska compared the proposed unit mix to two nationally recognized surveys of population estimates for Illinois housing, "Ehlers" and "Rutgers". Both surveys are based on actual census figures of Illinois housing units and are used as standards in the industry.

Summary

If developed as currently proposed, the 60 dwelling units are projected by commonly used models to generate between 5 and 6 elementary school age residents. This range recognizes that location, building type, rent rates, unit sizes, accessibility and market economics are among a long list of factors that affect how many families (with school age children) are attracted to a residential property. As proposed, the Beeson's Corner residential units are comparatively small floor area dwelling units, to be rented at average rates for the region.

School Age Population Estimates Using Rutgers, and Ehlers

There have been two major studies that are used in Illinois that provide population estimates for housing development: Rutgers, which was completed in 2006, and Ehlers which was last updated in 1996. The Rutgers Study, "Residential Demographic Multipliers- Estimates of the Occupants of New Housing" was prepared in June of 2006 by the Center for Urban Policy Research at the Edward J. Bloustein School of Planning and Public Policy. It is an unbiased reference for data on school-age Children and other demographic characteristics used for fiscal analysis. Its source is the 2000 census, now 20 years old, aggregating data for all types of development densities and development environments. Despite the fact that the Rutgers study is now going on fourteen years old, it is used by suburban and urban planners because it is considered to be more reliable than the Ehlers's study.

The Ehlers study, now twenty-four years old, is based primarily on 1990 census data from low density residential environments in suburban Chicago metro. The Ehler's study is often used by

school districts in their impact fee guidelines because of the relatively high estimates of school age residents for single-family home developments. The study was first conducted by Ehler's predecessor, the "Illinois School Consulting Service" for the development of the Naperville "developer donation" (impact fee) which was adopted by most suburban communities and school districts to collect fees in lieu of land for new suburban, largely single-family development.

We contacted the attorney for the petitioner, Mr. Mark Gershon, to confirm the number and types of dwellings currently being proposed for the Beeson's Corner development. Note that the unit count shown below differ from those shown in the market analysis for the project currently posted on the Village of Bannockburn's website. The current mix of dwellings is as follows:

| Apartment Type | Number |
|-----------------------|-----------|
| Studio / "Efficiency" | 3 |
| 1-Bedroom | 26 |
| 2-Bedroom | 27 |
| 3-Bedroom | 4 |
| Total | 60 |

Both the Rutgers Study and the Ehlers study present multipliers for each residential dwelling unit, specific to its building type, ownership, and number of bedrooms. Multiplying the number of dwelling units of a specific type by its associated multiplier, we project the number of students and number of residents by age group, and therefore projection of enrollment at the elementary school and high school levels and total population. Table 1 presents the relevant multipliers for the dwelling unit types proposed in the Beeson's Corner residential units. Table 2 presents the results of Table 1 multipliers applied to the proposed Beeson's Corner development.

Table 1

| Rutgers Study (Multiple Family, Illinois) | | | |
|---|-----------|-------------|-----------------------------|
| UNIT | TOTAL K-8 | HIGH SCHOOL | TOTAL POPULATION MULTIPLIER |
| 1-bed more than \$1,250/mo. rent | 0.020 | 0.010 | 1.310 |
| 2-bed more than \$1,250/mo. rent | 0.120 | 0.050 | 1.980 |
| 3-bed, more than \$1,200/mo. rent | 0.53 | 0.17 | 3.200 |
| Ehlers Study (Multiple Family, Illinois) | | | |
| UNIT | TOTAL K-8 | HIGH SCHOOL | TOTAL POPULATION MULTIPLIER |
| Studio | 0.000 | 0.000 | 1.294 |
| 1-bedroom | 0.003 | 0.001 | 1.758 |
| 2-bedroom | 0.128 | 0.046 | 1.194 |
| 3-bedroom | 0.357 | 0.118 | 3.053 |

Note that the Rutgers Study had insufficient data to develop multipliers for Studio or efficiency units; the 3 proposed studio/efficiency units in the Beeson’s Corner development are counted as 1 bedroom units in the Rutgers projection. The Ehlers study did show Studio/Efficiency units generating no (0.0) school-age children. Utilizing the multipliers from Table 1, the school-age and total population were calculated for the proposed 60-unit mix for the Beeson’s Corner Residences, as shown in Table 2.

Table 2

| | RUTGERS (ILLINOIS) | | | | EHLERS (ILLINOIS) | | |
|---|--------------------|-----------|-------------|------------|-------------------|-------------|------------|
| | TOTAL UNITS | TOTAL K-8 | HIGH SCHOOL | TOTAL POP. | TOTAL K-8 | HIGH SCHOOL | TOTAL POP. |
| BEESON’S CORNER RESIDENCES UNITS MIX | | | | | | | |
| STUDIO | 3 | - | - | 3.93 | 0 | 0 | 3.88 |
| 1-bed | 26 | 0.52 | 0.26 | 34.06 | 0.078 | 0.026 | 45.71 |
| 2-bed | 27 | 3.24 | 1.35 | 53.46 | 3.456 | 1.242 | 51.68 |
| 3- bed | 4 | 2.12 | 0.68 | 12.8 | 1.428 | 0.472 | 12.21 |
| Total (rounded UP) | 60 | 6 | 3 | 105 | 5 | 2 | 114 |

The Rutgers study would project an elementary school-age population of 6 students and a total residential occupancy of 105 persons. The Ehlers study would project a slightly lower projection of 5 elementary students with a slightly higher total residential population of 114 persons.

From a practical standpoint, we prefer to have student population data from comparable local developments to contrast these projections. There are no comparable projects with rental apartments within Bannockburn, nor within the near vicinity. A limited number of school districts within the region are beginning to collect and document student residency in an effort to better predict changes in enrollment. The most proximate and comparable project for which data is regularly collected is the Aloft apartments at the Glen Tower Center in Glenview. The Aloft is a 181 residential unit mix of 1-bedroom and 2-bedroom rental apartments. At its most recent survey, for the fiscal year ending June 30, 2019, the Village of Glenview reports that of these 181 dwellings, 151 were occupied (leaving 30 vacant). These units were occupied by 201 adults, 6 elementary school children, 3 high school children, and one child under 5 years of age; a total of 211 occupants. If we applied the Aloft population characteristics to the number of dwellings proposed for the Beeson’s Corner development, we would predict up to 3 (2.38) elementary students, 2 (1.19) high school students, and 84 total residents. The “reality” of the Aloft, local experience is effectively one half that predicted by either the Ehlers and Rutgers studies. As such, we are confident that the range of 5 to 6 elementary school students from the proposed Beeson’s Corner development is a reasonably conservative estimate.

Student Population Generation and School Impact Fees

Comparison of Bannockburn to Other Neighboring Communities

We have been asked to review how Bannockburn, Lake Forest, Lincolnshire, and Highland Park (the “Communities”)¹:

- (1) Calculate the Student Population Generation, defined below, by a residential project, similar to the proposed Beeson’s Corner, and
- (2) How such calculation affects the formula for calculation of School Impact Fees.

As indicated below, the **Student Population Generation formulas adopted by law by all of the Communities confirm that Beeson’s Corner would result in less than five students being generated for grades K-8.**

I. Impact Fee Summary

School Impact Fees in each of the Communities are essentially established by determining the “**Land Donation,**” that would have been required based on the Student Population Generation from the new development. This Land Donation is determined by multiplying the amount of land a school district requires for each student (typically the recommended number of students per school divided by the acres of the school sites for those schools) by the Student Population Generation. Where the resulting required Land Donation is either not needed or too small to accommodate a new school, as with Beeson’s Corner, the ordinances provide for a cash payment in lieu of the Land Donation or what is known as an “**Impact Fee.**” In summary, the School Impact Fee is the required Land Donation per acre times the fair market value of an acre of land in each of the respective Communities. The fair market value of the land is established by each Community as it has been done by statute in Bannockburn.

To summarize:

Required Land Donation = Student Population Generation x Required Land per Student

School Impact Fee = Required Land Donation/Acre x Fair Market Value of an Acre of Land

II. Beeson’s Corner Student Population Generation

For the purposes of the calculations, the layout of Beeson’s Corner is as follows:

¹ We were also asked to review Deerfield. Our review of the Deerfield codes and conversations with City staff confirmed that Deerfield handles school impact fees by negotiating them with developers on a case-by-case basis. We have requested, but have not yet received, information from Deerfield on their formula for Student Population Generation and negotiating School Impact Fees. We will update this memorandum when we receive and can share such information.

| Apartment Type | Number |
|---------------------|--------|
| Studio/"Efficiency" | 3 |
| 1-Bedroom | 26 |
| 2-Bedroom | 27 |
| 3-Bedroom | 4 |

In Bannockburn, the Village Code establishes student population based on different residential units (see Chapter 205, Attachment A "Table of Estimated Ultimate Population Per Dwelling Unit"). Similar formulas are provided in each of the other Communities. We have compared the resulting anticipated generation of students in K-8th grade (the "Student Population Generation") calculated for Beeson's Corner in each of the Communities in the chart below.

| Students Generated by Beeson's Corner | | | |
|---|-------------------|---------------|-------|
| | Elementary School | Middle School | Total |
| Highland Park | 3.31 | 1.652 | 4.962 |
| Lake Forest | 3.31 | 1.652 | 4.962 |
| Lincolnshire | 3.186 | 1.625 | 4.811 |
| Deerfield ² | N/A | N/A | N/A |
| Bannockburn (High Density Apartment) | 3.031 | 1.629 | 4.66 |

² As indicated previously, Deerfield works separately with developers to negotiate a school impact fee on a case-by-case basis, although it is reasonable to presume they use some loose version of the formula provided. Determining their method of calculation from the final amount of the School Impact Fee is not realistic since we do not know how they value the land, the required land per student or other factors that can be part of such negotiations, such as how much reduction they provide to a project that provides additional benefits to the community through commercial real estate and other revenues or open space and other amenities.

III. Conclusion:

There should be a high level of confidence in the Student Population Generation number for Beeson's Corner given that in each of the Communities the number is very similar (ranging from between 4.66 and 4.962 total students). As indicated in Section I above, in each of the Communities, the Student Population Generation number is then used with the amount of land a school district requires for each student to determine the Land Donation. We have previously provided you with our calculation of the resulting Impact Fee in Bannockburn for Beeson's Corner.