



June 30, 2020

Ann Arbor Planning Commission
301 E Huron St.
Ann Arbor, MI 48103

Dear planning Commissioners,

In consideration of the proposed revised Valhalla site plan recently submitted to planning staff please be advised of the following:

In the Midwest, there are approximately 26.5 million housing units made up of Single-Family Detached Homes (SFDH), Single Family Attached Homes (SFAH) and either (2-4 unit or 5 or more unit) Multi-Family apartment buildings (MF)¹. Two-thirds of the housing units consist of SFDH units, and they use 2,048 trillion British Thermal Units (BTUs) of energy per year. This detached development model uses larger amounts of resources than MF development in every regard: land, money, construction materials and waste, infrastructure, labor, transportation, water, and of course, energy.

Looking at the Midwest energy alone (2018 Data), a SFDH uses notably more energy versus a MF² apartment building. The average energy expense for MF living is 35% less per household member (\$752 vs \$490)¹ and over 55% (over \$1,100) less on average per entire Household (\$2,030 vs. \$903)¹!

For the proposed Valhalla project with over 450 proposed households, that equates to a potential savings of over \$500,000 annually. That equates to a carbon footprint reduction of over 5.6 million lbs. of CO₂e and equivalent to planting almost 66,000 urban trees. And with the project being designed and constructed to meet LEED Silver certification standards, that savings could be 20-30% greater with potential energy efficiency measures.

¹ Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms Table CE1.3 Summary annual household site consumption and expenditures in the Midwest—totals and intensities, 2015 of the Residential Energy Consumption Survey released in May of 2018.

Transportation Narrative – Location Efficiency

Buildings and transportation together account for about 70 percent of energy use in the United States and about 62 percent of greenhouse gas emissions. A home's location and access to transit, a.k.a. "Location Efficiency" are as important to reducing energy use and carbon emissions as are energy-efficiency measures in our homes and vehicles. Location Efficiency of a



project such as the proposed Valhalla site can significantly contribute to a carbon neutral and affordable city.

Housing that is located in a walkable neighborhood near public transit, employment centers, schools, and other amenities allows residents to drive less and thereby reduces transportation costs. Development in locations such as the proposed Valhalla project is deemed to be “Location Efficient”, given a more compact design, higher-density construction and/or inclusion of a diverse mix of uses in the area. If Ann Arbor families can reduce their necessity to drive through better housing and transportation options, then commute times and household energy costs will drop.

An EPA study illustrates two key points about the effect of compact, Location Efficient development on energy consumption:

1. A home's location relative to transportation choices has a large impact on energy consumption. People who live in a more compact, transit-accessible area have more housing and transportation choices compared to those who live in spread-out developments where few or no transportation options exist besides driving. Choosing to live in an area with transportation options not only reduces energy consumption, it also can result in significant savings on home energy and transportation costs.
2. Housing type is also a very significant determinant of energy consumption. Fairly substantial differences are seen in detached versus attached homes, but the most striking difference is the variation in energy use between single-family detached homes and multifamily homes, due to the inherent efficiencies from more compact size and shared walls among units. Moderate energy-efficient building technologies, such as those qualifying for ENERGY STAR performance, also generate household energy savings that are notable but not as significant as the housing location and type.

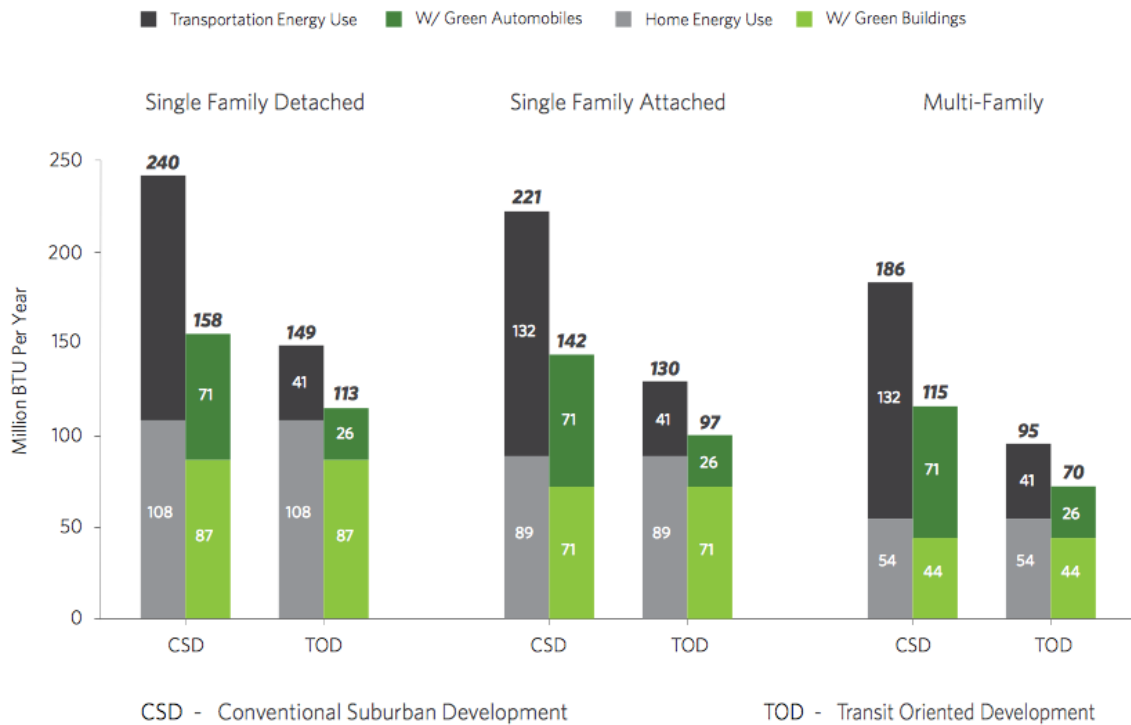
The proposed “Location Efficient” Valhalla project offers several transit options – Routes 24 and 25 with stops nearby at South Main St. and Ann Arbor-Saline Road. Route 64 is a slightly longer distance from the proposed site. This offers residents options outside of driving which would lead to a comparative reduction in carbon emissions.

Ann Arbor prides itself as a bicycle friendly community. The proposed location is VERY bikeable and convenient for most trips. The code requirement per the proposed rezoning of this project requires 91 bike parking spaces, whereas the developer has agreed to provide 544 bike parking



spaces as shown on the submitted site plan. Again, this provides an optimal carbon neutral transit option.

In regards to LEED metrics, the proposed Valhalla location is situated near approximately 20 basic services and community resources including multiple restaurants, coffee shops, bars, grocery store, bank, pharmacy, doctor, dentist, a variety of retail shopping opportunities, fitness, entertainment, schools, church, senior living centers, and public parks all within a half mile walking distance. Many vehicle trips can be eliminated due to close access to these services, and this equates to a reduction in carbon emissions.



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Location Efficiency: Household and Transportation Energy Use by Location

The above figure from a 2011 US EPA study illustrates, an energy-efficient, multifamily home using fuel-efficient vehicles and located in a transit-friendly site uses 70 million BTUs per year — **less than 30 percent** of the 240 million BTUs used by a single-family, detached home without energy-efficient features or cars in an automobile-dependent site. Multiplied over 450 residences, that is a significant reduction in carbon emissions for the proposed Valhalla project.



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Location Efficient sites are well-connected to the larger region and close to amenities such as employment centers, shops, restaurants, schools, and services. A site that has good transportation connections to the rest of the region can attract residents who want to be able to reach more jobs.

Location efficiency can also contribute to or undermine a home's affordability, and these impacts can also extend to a household's financial stability. One analysis of some of the causes behind the last U.S. financial crisis suggests that vehicle ownership and a lack of access to public transportation may be just as predictive of mortgage foreclosure rates as low credit scores and high debt-to-income ratios.

Statistics show that if a family chooses an efficient multifamily home by commuting with car in a transit friendly area, a household can cut their energy and carbon by up to 70%. This efficiency is further increased if a family chooses to walk, bike, or take mass transit. This equates to many more millions of pounds of carbon diverted and equivalent to many more thousands of urban trees planted.

Thank you for consideration of the above in your deliberations regarding the project.

Sincerely,