

**RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND**

Prepared for

The City of Bainbridge Island

Prepared by

Keyser Marston Associates, Inc.

February 2008

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INTRODUCTION

Keyser Marston Associates has prepared a Residential Nexus Analysis for the City of Bainbridge Island, pursuant to a contract with the City. The report has been prepared to assist the City with support for a program that will require certain residential projects to include units affordable at below market rate prices and rent levels.

The City of Bainbridge Island is considering an “inclusionary” type zoning ordinance for the purpose of increasing the production of affordable units for households whose needs are not being met by the marketplace. As proposed, the ordinance would require that residential subdivisions and multi family developments provide a percentage of units to households at or below 80% of Kitsap County median income. Projects that are required to provide affordable units will be offered bonus provisions to offset the burden of the affordable housing requirement.

This report demonstrates an “essential nexus and rough proportionality” between the impact of new market rate units and the need for additional affordable housing (constitutional ‘takings’ analysis), and supports the conclusion that the program is “reasonably necessary as a direct result of” the new market rate units (RCW 82.02.020 tax, fee, or charge prohibition).

Impact Methodology and Models Used

The methodology or analysis procedure for this nexus analysis starts with the sales price (or rental rate) of a market rate residential unit, and moves through a series of linkages to the income of the household that purchased or rented the unit, the disposable income of the household, the annual expenditures on goods and services, the jobs associated with the purchases and delivery of services, the income of the workers doing those jobs, the household income and ultimately, the affordability level of the housing needed by the new worker households. The steps of the analysis from disposable income to jobs generated was performed using the IMPLAN model, a commercially available model widely used for the past 25 years to quantify employment impacts from personal income. From jobs generation by industry, Keyser Marston Associates used its own nexus model to quantify the income of worker households by affordability level.

To illustrate the linkages by looking at a simplified example, we can take an average household that buys a condominium at a certain price. From that price, we can determine the gross income of the household (from mortgage rates and lending practices) and the disposable income of the household. The disposable income, on average, will be used to “purchase” or consume a range of goods and services, such as purchases at the supermarket or services at the bank. Purchases in the local economy in turn generate employment. The jobs generated are at different compensation levels. Some of the jobs are low paying and as a result, even when there is more than one worker in the household, there are some lower- and middle-income households who cannot afford market rate housing on Bainbridge Island.

The IMPLAN model quantifies direct, indirect and induced employment impacts. Direct jobs are generated at establishments that serve new residents directly (i.e. supermarket, bank or school); indirect jobs are created by increased demand at firms which service or supply these establishments (wholesaler, janitorial contractor, accounting firm or any jobs down the service/supply chain from direct jobs); induced jobs are generated when direct and indirect employees spend their wages in the local economy and generate additional jobs. The analysis is presented in a manner that indicates direct impacts alone and all impacts – direct, indirect and induced impacts. Consistent with other nexus analyses that have used the IMPLAN model and adopted programs supported by the analyses, KMA uses all impacts, inclusive of indirect and induced impacts for nexus purposes.

Net New Underlying Assumption

An underlying assumption of the analysis is that households that rent or purchase new units represent new households on Bainbridge Island. If purchasers or renters have relocated from elsewhere on the island, a vacancy has been created that will be filled. An adjustment to new construction of units would be warranted if the island were experiencing demolitions or loss of existing housing inventory. However, the rate of housing unit removal is so low as to not warrant an adjustment or offset.

Since the analysis addresses net new households on the island and the impacts generated by their consumption expenditures, the analysis quantifies net new demands for affordable units to accommodate new worker households. As such, the impact results do not address nor in any way include existing deficiencies in the supply of affordable housing.

Analysis Directives and Guidance

KMA worked under the direction of various members of City staff and representatives from the Community Housing Coalition. These persons participated in discussions and provided guidance on the major discretionary assumptions in the analysis. Their input included directives on the starting point of the analyses regarding the market prices of new units, based on data assembled by the multiple parties, the use of Kitsap County as the appropriate area for various data series (such as median income and affordability levels, employee compensation data). Coordination was also required for presentation of findings in a manner consistent with provisions being proposed for the ordinance.

Analysis Approach – 100 Unit Modules

The analysis uses modules of 100 units – 100 condominiums, 100 single family detached, etc. – to facilitate ease of understanding. This approach enables the output to be expressed in whole numbers of jobs, worker households, and affordable units, rather than the awkward fractions that result from an analysis of a single unit. It is recognized that 100 unit projects are far too

large to be representative of development on Bainbridge Island, but since the results are ultimately applicable to projects of all sizes, we believe the 100 unit approach is still preferable for better communication of the analysis steps.

Disclaimers

The analyses in this report have been prepared using the best and most recent data available. Secondary sources such as the U. S. Census and the Washington State Employment Security Department were extensively used. The IMPLAN model also uses U. S. Census and Department of Commerce Consumer Expenditures surveys, and other similar type secondary sources. (More information on the model may be found in the body of the report and also online at www.implan.com.) Local information on sales prices of real estate and other data was used whenever available and appropriate. While KMA believes these sources of data are sufficiently accurate for the purposes of the analyses, KMA cannot guarantee their accuracy. As a result KMA assumes no liability for conclusions drawn from these sources.

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SECTION I – MARKET RATE UNITS AND DISPOSABLE INCOME

Section I describes the prototypical market rate units that would be subject to affordable housing requirements under an inclusionary housing program, the income of the purchaser households, and the disposable income of the households. Disposable Income is the input to the IMPLAN model described in Section II of this report. These are the initial starting points of the chain of linkages that connect new market rate units to incremental demand for affordable residential units.

The Bainbridge Island affordable housing requirement will be applicable to all residential projects. The typical housing products on Bainbridge Island are attached condominium units and single family detached homes. Prototypes were selected and analyzed for each of these two predominant housing types.

Recent Housing Market Activity

KMA reviewed project information and sales data for recently constructed housing units on Bainbridge Island to gain an understanding of what the market is currently delivering. Table I-1 at the end of this section presents a list of recently sold condominium projects, with information on price and size, and sales price per square foot. The information is from the Northwest Multiple Listing Service and is current through October 2007. Table I-2 presents the same information for recently sold single family detached units. The information in this table is from the Windermere Real Estate Company. Unit sizes and prices for the two housing types are as follows:

- Condominium units range from around 700 square feet to 2,200 square feet in size. Prices per square foot vary from \$298 to \$489, and per unit from \$230,000 to \$864,000. The median condo unit was approximately 1,250 square feet and sold for \$455,000, or \$365 per square foot. The City provided updated pricing information in February 2008, indicating that the median condo unit had dropped to \$446,180.
- Single family detached homes cover a far broader spectrum of unit sizes than do condominiums. Prices around \$500,000 appear to represent the bottom of the activity in 2007, with about a third selling for over \$1 million. The majority of sales prices for individually built units were in the \$200 to low \$300 per square foot range, as shown in Table I-2. The median home was approximately 3,125 square feet and sold for \$820,000, or \$269 per square foot. However, the City provided updated pricing information in February 2008 and selected a sales value of \$680,000 for purposes of the analysis.

Prototypical Units

For the purposes of the analysis, KMA selected condominium and single family detached prototype units typical of Bainbridge Island's new housing stock. KMA and City staff decided to use median sales prices information for new condominium units, from the 2007 Northwest Multiple Listing Services' Closed Sales Report. For Single Family Detached, the City elected to use the Lower Third Benchmark sales price (Table I-2) to be conservative, given the broad range in the pricing of new units.

Profiles of the prototypes and sales prices are as follows:

| | Condominium Units | Single Family Detached Units |
|------------------------|--------------------------|-------------------------------------|
| Size | 1,250 sq.ft. | 2,500 sq. ft. |
| Sales Price per Sq.Ft. | \$357 | \$272 |
| Sales Price Total | \$446,180 | \$680,000 |

Income of Housing Unit Purchasers

The next step in the analysis was to determine the income of the purchasing household of the prototypical unit. To make the determination, typical terms for the purchase of residential units were used — 20% down payment, 30 year fixed rate mortgage, property taxes, and \$200 per month for condo homeowners' association (HOA) dues. The mortgage rate assumption was selected to cover a future average rate, 7% interest, recognizing that at the current time mortgages are available at lower rates. Lesser down payments are also currently achievable, however these terms are not likely to be available over the longer term.

A key assumption is that housing costs run, on average, at about 35% of gross income. In recent years lending institutions have been more willing to accept higher than 35% for all debt as a share of income, but most households have other forms of debt, such as auto loans, student loans, and credit card debt. Looking ahead, most analysts see a return to more conservative lending practices than those of the last few years.

Tables I-3 and I-4 at the end of this section summarize the analysis for the prototypical attached and detached units. The conclusion is that the purchaser of the \$446,180 prototypical condominium unit must have an income of \$97,400 per year, and the purchaser of the \$680,000 detached prototype must have an income of \$137,800 annually. The ratio of sales price to income of the condominium purchasing household is 4.6:1, which is to say that a unit selling for \$460,000 would require a household income of \$100,000, using the assumptions of the analysis. The sales price to income ratio for the single family detached home is 4.9:1.

Disposable Income

The IMPLAN model used in this analysis is driven by disposable household income as the primary upfront input. To arrive at disposable income, gross income for residents of prototypical

units must be adjusted downward to account for taxes and savings. Per KMA correspondence with the producers of the IMPLAN model (Minnesota IMPLAN Group), gross income was adjusted to disposable income for purposes of the model by deducting Federal Income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Other taxes including sales tax, gas tax, and property tax are handled internally within the model. The calculation of disposable income for attached and detached unit prototypes is presented in Table I-5.

Disposable income was estimated at approximately 79% of gross income in the case of the condominium unit owner. The assumption for federal taxes was based on review of data from the Tax Policy Center (a joint venture of the Brookings Institution and the Urban Institute). Per the Tax Policy Center, households earning between \$75,000 and \$100,000 per year, or the residents of our prototypical attached units, will pay about 11.6% of gross income for federal taxes. The employee share of the FICA payroll taxes is 7.65% of gross income (conservatively assuming that all earners in the household are within the \$102,000 ceiling on income subject to social security taxes).

Savings represent another adjustment from gross income to disposable income. Savings including various IRA and 401 K type programs were estimated at 1.3% of gross income based on the projected average for U.S. households per a report titled "*Prospects for the U.S. Economy and Sectors*", sourced to Global Insight, a company that produces forecasts of market and economic data. This savings rate is consistent with a Federal Reserve Bank paper, sourced in the footnote of Table I-5.

The household purchasing the single family detached unit was estimated to have a lower proportion of disposable gross income (76%) because the household is in a higher tax bracket. The savings rates for the attached and detached units were assumed to be the same.

The gross income and disposable income of the households in the new market rate units are summarized below:

| | Condominium Units | Single Family Detached Units |
|------------------------|--------------------------|-------------------------------------|
| Gross Household Income | \$97,420 | \$137,800 |
| Percent Disposable | 79% | 76% |
| Disposable Income | \$ 79,930 | \$ 104,730 |

Summary

Table I-6 summarizes the key assumptions and steps from the market rate residential price of condominium and single family detached units, to the annual income of the purchaser household, to the disposable income of the household. The disposable income, used to consume goods and services, is the generator of jobs and ultimately of the demand for more affordable housing for worker households.

**TABLE I-1
MARKET SALE PRICES - CONDOMINIUM PROJECTS (PER MLS)
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| <u>Address</u> | <u>Date</u> | <u>Bd.</u> | <u>Ba.</u> | <u>Bldg.SF</u> | <u>Lot Size</u> | <u>Price</u> | <u>\$/SF</u> |
|-------------------------------|-------------|------------|------------|----------------|-----------------|--------------|--------------|
| 300 NE High School Rd #218 | 6/5/07 | 1 | 1 | 708 | | \$229,950 | \$325 |
| 300 NE High School Rd #203 | 8/24/07 | 1 | 1 | 708 | | \$235,000 | \$332 |
| 300 NE High School Rd #320 | 7/17/07 | 1 | 1 | 708 | | \$235,000 | \$332 |
| 300 NE High School Rd #314 | 6/21/07 | 1 | 1 | 687 | | \$245,000 | \$357 |
| 180 Harbor Square Lp B-417 | 8/21/07 | 1 | 1 | 712 | | \$289,000 | \$406 |
| 300 NE High School Rd #306 | 6/14/07 | 2 | 1 | 974 | | \$290,000 | \$298 |
| 145 Ferncliff Ave NE # D237 | 9/28/07 | 1 | 2 | 712 | | \$295,000 | \$414 |
| 300 NE High School Rd #200 | 3/29/07 | 2 | 2 | 941 | | \$310,000 | \$329 |
| 145 Ferncliff Ave NE # D336 | 8/30/07 | 1 | 1 | 712 | | \$315,000 | \$442 |
| 300 NE High School Rd #324 | 2/26/07 | 2 | 1 | 955 | | \$329,000 | \$345 |
| 300 NE High School Rd #400 | 5/30/07 | 2 | 1 | 941 | | \$335,000 | \$356 |
| 300 NE High School Rd #408 | 5/25/07 | 2 | 1 | 987 | | \$337,000 | \$341 |
| 155 Ferncliff Ave NE # D241 | 1/3/07 | 1 | 1.5 | 868 | | \$348,000 | \$401 |
| 115 Hall Brothers Lp NW #1 | 4/4/07 | 2 | 1.5 | 1,179 | | \$373,000 | \$316 |
| 115 Hall Brothers Lp NW #9 | 9/20/07 | 3 | 1.75 | 1,290 | | \$399,000 | \$309 |
| 115 Hall Brothers Lp NW #8 | 7/24/07 | 3 | 1.75 | 1,225 | | \$410,000 | \$335 |
| 155 Ferncliff Ave # D234 | 1/5/07 | 2 | 2 | 1,296 | | \$455,000 | \$351 |
| 144 Hall Brothers Lp NW #30 | 9/6/07 | 2 | 2 | 1,247 | | \$455,000 | \$365 |
| 168 Hall Brothers Lp NW #21 | 3/30/07 | 2 | 2 | 1,247 | | \$455,000 | \$365 |
| 144 Hall Brothers Lp NW #31 | 3/29/07 | 2 | 2 | 1,247 | | \$455,000 | \$365 |
| 144 Hall Brothers Lp NW #32 | 7/31/07 | 2 | 2 | 1,247 | | \$465,000 | \$373 |
| 144 Hall Brothers Lp NW #29 | 4/25/07 | 2 | 2 | 1,247 | | \$470,000 | \$377 |
| 120 Hall Brothers Lp NW #15 | 2/28/07 | 2 | 2 | 1,219 | | \$470,000 | \$386 |
| 180 Harbor Square Lp NE B-223 | 7/17/07 | 2 | 2.5 | 1,478 | | \$495,000 | \$335 |
| 722 NE Vineyard Ln #L-102 | 1/16/07 | 2 | 2.5 | 1,657 | | \$495,000 | \$299 |
| 742 NE Vineyard Ln #L-104 | 1/04/07 | 2 | 2.5 | 1,657 | | \$495,000 | \$299 |
| 732 NE Vineyard Ln #L-103 | 1/26/07 | 2 | 2.5 | 1,657 | | \$505,642 | \$305 |
| 120 Hall Brothers Lp NW #16 | 3/12/07 | 2 | 2 | 1,210 | | \$530,000 | \$438 |
| 157 Harbor Square Lp NE | 6/1/07 | 2 | 2 | 1,640 | | \$550,000 | \$335 |
| 120 Hall Brothers Lp NW #17 | 7/9/07 | 2 | 2 | 1,285 | | \$560,000 | \$436 |
| 846 NE Vineyard Ln #ELM | 1/10/07 | 2 | 2.5 | 1,542 | | \$565,986 | \$367 |
| 836 NE Vineyard Ln #DHLIA | 2/23/07 | 2 | 2.5 | 1,542 | | \$585,816 | \$380 |
| 120 Hall Brothers Lp NW #18 | 2/8/07 | 2 | 2 | 1,226 | | \$600,000 | \$489 |
| 145 Ferncliff Ave NE # D335 | 8/3/07 | 2 | 2 | 1,337 | | \$610,000 | \$456 |
| 856 NE Vineyard Ln #GAMAY | 2/14/07 | 3 | 2.5 | 2,007 | | \$686,483 | \$342 |
| 156 Hall Brothers Lp NW #28 | 2/12/07 | 3 | 2 | 1,935 | | \$805,000 | \$416 |
| 610 NE Vineyard Ln #A-304 | 4/20/07 | 2 | 1.75 | 2,205 | | \$813,776 | \$369 |
| 132 Hall Brothers Lp NW #38 | 8/9/07 | 3 | 2 | 1,935 | | \$845,000 | \$437 |
| 620 NE Vineyard Ln #B-302 | 9/17/07 | 3 | 2 | 2,182 | | \$863,661 | \$396 |
| AVERAGE: | | 1.9 | 1.8 | 1,271 | | \$466,829 | \$367 |
| MEDIAN: | | 2.0 | 2.0 | 1,247 | | \$455,000 | \$365 |

Source: MLS Northwest Reports, October 2007.

**TABLE I-2
MARKET SALE PRICES - SINGLE-FAMILY DETACHED PROJECTS (PER WINDERMERE)
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| <u>Address</u> | <u>Sale Date</u> | <u>Bd.</u> | <u>Ba.</u> | <u>Bldg.SF</u> | <u>Lot Size</u> | <u>Price</u> | <u>\$/SF</u> |
|-------------------------------|------------------|------------|------------|----------------|-----------------|------------------|--------------|
| 1882 Parkview Dr NE | 9/26/06 | 4 | 2.5 | 2,436 | 0.17 | \$510,012 | \$209 |
| 6217 NE Tolo Road | 2/23/06 | 3 | 2.5 | 2,299 | 0.56 | \$520,500 | \$226 |
| 5224 Lynwood Center Rd NE | 8/11/06 | 3 | 3 | 2,600 | 1.38 | \$539,500 | \$208 |
| 12 Ananda Pl NE | 8/18/06 | 3 | 3 | 1,928 | | \$555,000 | \$288 |
| 10245 Lot 5 Ruddy Duck Ln | 9/19/07 | 3 | 2.5 | 1,860 | 0.23 | \$559,000 | \$301 |
| 8751 NE Rosario Pl | 6/23/06 | 4 | 2.5 | 2,700 | 0.36 | \$564,500 | \$209 |
| 9657 NE North Town LP | 6/15/06 | 4 | 2.75 | 2,660 | 0.13 | \$589,000 | \$221 |
| 1849 NE Virginia Ct | 11/21/06 | 3 | 2.5 | 2,340 | 0.27 | \$589,950 | \$252 |
| 2492 Soundview Dr NE | 5/25/07 | 4 | 2.75 | 2,470 | 0.32 | \$595,500 | \$241 |
| 2017 Belfair Ave NE | 12/29/06 | 4 | 4 | 3,569 | 0.55 | \$599,880 | \$168 |
| Lot A Fieldstone Ln | 10/20/06 | 3 | 2.5 | 2,597 | | \$649,000 | \$250 |
| 8673 NE Rosario Pl | 9/6/07 | 4 | 2.5 | 2,993 | 0.28 | \$649,950 | \$217 |
| 15177 Skogen Ln NE | 5/31/06 | 3 | 2.75 | 2,531 | 0.68 | \$650,000 | \$257 |
| 876 NE Vineyard Ln #IRIS | 8/13/07 | 3 | 2.5 | 2,007 | n/a | \$689,000 | \$343 |
| 98 Beachcrest Dr NE | 8/04/06 | 4 | 2.5 | 2,978 | 0.89 | \$737,383 | \$248 |
| 12556 Kallgren Rd NE | 5/31/06 | 4 | 3.5 | 3,552 | 1.13 | \$755,000 | \$213 |
| 9826 Pine St | 10/31/06 | 4 | 3 | 3,100 | 1.00 | \$764,000 | \$246 |
| 7421 Olsen Farm Ln | 12/14/06 | 3 | 2.5 | 2,630 | 0.47 | \$785,000 | \$298 |
| 9737 NE Charisma Cir | 6/15/06 | 4 | 3.5 | 3,515 | 0.40 | \$789,000 | \$224 |
| 12588 NE Winter View Ln | 12/08/06 | 4 | 2.5 | 3,278 | 1.25 | \$792,500 | \$242 |
| 97 Beachcrest Dr NE | 9/19/06 | 4 | 2.5 | 2,978 | 0.89 | \$850,000 | \$285 |
| 8815 Woodbank Dr NE | 9/28/07 | 2 | 3 | 2,963 | 0.40 | \$895,000 | \$302 |
| 5072 McDonald Ave NE | 9/26/06 | 4 | 3.5 | 3,738 | 1.00 | \$897,500 | \$240 |
| 8228 Hansen Rd NE | 11/28/06 | 4 | 2.5 | 4,231 | 0.48 | \$929,000 | \$220 |
| 3773 Pleasant Beach Dr NE | 7/25/06 | 3 | 3.5 | 3,056 | 0.24 | \$938,000 | \$307 |
| 9421 Sands Rd NE | 8/03/06 | 3 | 3.5 | 3,089 | 1.50 | \$938,000 | \$304 |
| 284 Wood Ave SW | 8/25/06 | 3 | 3.5 | 3,148 | 0.13 | \$949,000 | \$301 |
| 6533 Fletcher Bay Rd NE | 7/3/07 | 4 | 3.25 | 3,240 | 2.23 | \$969,000 | \$299 |
| 6710 NE Dapple Ct | 6/21/06 | 3 | 3.25 | 3,950 | | \$977,881 | \$248 |
| 6473 Haley Loop #Lot15 | 10/19/06 | 3 | 2.5 | 3,645 | 1.23 | \$1,050,000 | \$288 |
| 4940 Rose Ave | 7/31/06 | 4 | 3.5 | 3,636 | 0.91 | \$1,095,000 | \$301 |
| xxx Stetson Ridge NE #Lot | 7/26/06 | 4 | 3.75 | 4,146 | 1.23 | \$1,106,000 | \$267 |
| 11315 Blue Heron Ln NE | 7/31/06 | 4 | 4.5 | 3,692 | 1.06 | \$1,126,060 | \$305 |
| xxx Stetson Ridge #Lot14 | 6/09/06 | 4 | 2.75 | 4,035 | 1.23 | \$1,132,899 | \$281 |
| 4900 Rose Ave NE | 12/08/06 | 4 | 3 | 3,872 | 0.91 | \$1,145,000 | \$296 |
| 11021 NE Boulder Pl | 2/27/06 | 4 | 3.5 | 4,325 | 2.00 | \$1,170,000 | \$271 |
| 13055 Trail Heights Ct NE | 7/16/07 | 4 | 4.5 | 4,788 | 0.76 | \$1,594,875 | \$333 |
| 9325 NE South Beach Dr | 12/20/06 | 4 | 5 | 4,000 | 0.28 | \$1,950,000 | \$488 |
| 9237 Allens Cove Ln | 7/25/06 | 3 | 3.5 | 4,796 | 0.52 | \$1,999,000 | \$417 |
| 10374 NE County Club Rd | 9/28/06 | 4 | 5 | 5,632 | 1.10 | \$2,322,000 | \$412 |
| AVERAGE: | | 3.6 | 3.1 | 3,275 | 0.78 | \$922,947 | \$276 |
| MEDIAN: | | 4.0 | 3.0 | 3,124 | 0.72 | \$821,250 | \$269 |
| LOWER THIRD BENCHMARK* | | | | 2,500 | | \$680,000 | \$272 |

Source: Windermere, City of Bainbridge Island.
* Not statistically derived

**TABLE I-3
 CONDOMINIUM UNITS
 SALES PRICE TO INCOME RATIO
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA**

| | | <u>Prototype Condo Unit</u> |
|-----------------------------|-------------------------|---------------------------------|
| Sales Price ¹ | \$357 /SF | \$446,180 |
| Mortgage Payment | | |
| Downpayment @ 20% | | \$89,236 |
| Loan Amount | | \$356,944 |
| Interest Rate | | 7.0% |
| Term of Mortgage | | 30 years |
| Annual Mortgage Payment | | \$28,500 |
| Other Costs | | |
| HOA Dues | \$200 per month | \$2,400 |
| Property Taxes ¹ | 0.8168% 89% sales price | \$3,200 |
| Total Annual Housing Cost | | <hr/> \$34,100 |
| % of Income Spent on Hsg | | 35% |
| Annual Income Required | | \$97,400 |
| Sales Price to Income Ratio | | 4.6 |

¹ City of Bainbridge Island, February 14, 2008.

**TABLE I-4
SINGLE FAMILY
SALES PRICE TO INCOME RATIO
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| | | Prototype Single Family Unit |
|-----------------------------|-------------------------|---|
| Sales Price ¹ | \$272 /SF | \$680,000 |
| Mortgage Payment | | |
| Downpayment @ 20% | | \$136,000 |
| Loan Amount | | \$544,000 |
| Interest Rate | | 7.0% |
| Term of Mortgage | | 30 years |
| Annual Mortgage Payment | | \$43,430 |
| Property Taxes ¹ | 0.8168% 86% sales price | \$4,800 |
| Total Annual Housing Cost | | <hr/> \$48,230 |
| % of Income Spent on Hsg | | 35% |
| Annual Income Required | | \$137,800 |
| Sales Price to Income Ratio | | 4.9 |

¹ City of Bainbridge Island, February 14, 2008.

TABLE I-5
DISPOSABLE INCOME ¹
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA

| | <u>Residents of Prototypical Condo Units</u> | <u>Residents of Prototypical SFD Units</u> |
|---|--|--|
| Gross Income | 100% | 100% |
| (Less) Average Federal Income Tax Rate ² | 11.6% | 15.3% |
| (Less) FICA Tax Rate ³ | 7.65% | 7.65% |
| (Less) Savings ⁴ | 1.3% | 1.3% |
| | <hr/> | <hr/> |
| <i>Disposable Income ¹</i> <i>(Input to IMPLAN model)</i> | 79% | 76% |

Notes:

- ¹ As defined within the IMPLAN model. Includes all income except income taxes and savings.
- ² Per the Urban-Brookings Tax Policy Center (joint venture between the Brookings Institution and the Urban Institute). Single Family tax rate based on the AGI class 100k-200k; Condo based on AGI class 75k-100k.
- ³ Conservatively assumes all earners in each household will be below the ceiling applicable to social security taxes, currently \$102,000.
- ⁴ Projected based on the forecast of average U.S. household savings rate included in the RREEF publication: *Prospects for the US Economy and Property Sectors*. Page 7. November 8, 2006. Savings rate is consistent with the average U.S. household savings rate in 2000 per Maki, Dean M. and Palumbo, Michael G. Federal Reserve System Working Paper No. 2001-21. *Disentangling the Wealth Effect: A Cohort Analysis of Household Savings in the 1990s*. April 2001.

**TABLE I-6
RESIDENTIAL HOUSEHOLD SUMMARY
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| | <u>Per Unit</u> | <u>Per 100 Units</u> |
|--|---------------------------|--------------------------|
| Condominium Market Rate Prototype | | |
| Units | | 100 Units |
| Building Sq.Ft. (net saleable area) | 1,250 | 125,000 |
| Sales Price | \$446,180 | \$44,618,000 |
| Sales Price to Income Ratio ¹ | 4.6 | 4.6 |
| Gross Household Income | \$97,400 | \$9,740,000 |
| Disposable Household Income ² | 79% of gross \$76,950 | \$7,695,000 |
| Single Family Market Rate Prototype | | |
| Units | | 100 Units |
| Building Sq.Ft. (net saleable area) | 2,500 | 250,000 |
| Sales Price | \$680,000 | \$68,000,000 |
| Sales Price to Income Ratio ¹ | 4.9 | 4.9 |
| Gross Household Income | \$137,800 | \$13,780,000 |
| Disposable Household Income ² | 76% of gross \$104,730 | \$10,473,000 |

Notes:

¹ See Tables I-4 and I-5

² Estimated income available after deduction of federal income, payroll taxes and savings. (Per discussions with the Minnesota IMPLAN group, sales tax and property tax are not deducted from disposable household income). See Table I-6.

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SECTION II – THE IMPLAN MODEL

Consumer spending by residents of new housing units will create jobs, particularly in sectors such as restaurants, health care, and retail that are driven by the expenditures of residents. The widely used economic analysis tool, IMPLAN (IMPact Analysis for PLANning), was used to quantify these new jobs by industry sector.

IMPLAN Model Description

The IMPLAN model is an economic analysis software package commercially available through the Minnesota IMPLAN Group. IMPLAN was originally developed by the U.S. Forest Service, the Federal Emergency Management Agency, and the U.S. Department of the Interior Bureau of Land Management and has been in use since 1979 and refined over time. It has become a widely used tool for analyzing economic impacts from a broad range of applications from major construction projects to natural resource programs.

IMPLAN is based on an input-output accounting of commodity flows within an economy from producers to intermediate and final consumers. The model establishes a matrix of supply chain relationships between industries and also between households and the producers of household goods and services. Assumptions about the portion of inputs or supplies for a given industry likely to be met by local suppliers, and the portion supplied from outside the region or study area, are derived internally within the model using data on the industrial structure of the region.

The output or result of the model is driven by tracking how changes in purchases for final use (final demand) filter through the supply chain. Industries that produce goods and services for final demand or consumption must purchase inputs from other producers, which in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle. This allows the user to identify how a change in demand for one industry will affect a list of over 500 other industry sectors. The projected response of an economy to a change in final demand can be viewed in terms of economic output, employment, or income.

Data sets are available for each county and state, so the model can be tailored to the specific economic conditions of the region being analyzed. This analysis utilized the data set for Kitsap County, which is consistent with the wage and income data used elsewhere in the analysis. This assumes that the spending patterns (including retail, education, medical services, government services, etc) of Kitsap County are reflective of the spending habits of new Bainbridge Island residents and reflects the share of their expenditures that occur in Kitsap County.

Economic impacts estimated using the IMPLAN model are divided into three categories:

- *Direct Impacts* – are associated with the direct final demand changes. A relevant example is restaurant employment created when households in new residential buildings

spend money dining out. Employment at the restaurant would be considered a direct impact.

- *Indirect Impacts* – are those associated with industries down the supply chain from the industry experiencing the direct impact. With the restaurant example, indirect impacts would include employment at food wholesalers, kitchen suppliers, and producers of agricultural products.
- *Induced Impacts* – are generated by the household spending induced by direct and indirect employment. Again using the restaurant example, induced impacts would include employment generated when restaurant, food wholesaler, and kitchen suppliers spend their earnings in the local economy.

We have summarized the results of the analysis for direct impacts only, and for all direct, indirect, and induced impacts.

Application of the IMPLAN Model to Estimate Job Growth

IMPLAN was applied to link household consumption expenditures to job growth occurring within the region. Employment generated by the consumer spending of residents was analyzed for our prototypical 100-unit buildings. The IMPLAN model distributed spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate direct, indirect, and induced employment generated. Job creation, driven by increased demand for products and services, was projected for each of the industries which will serve the new households. The employment generated by this new household spending is summarized below.

| Jobs Generated per 100 Units | Condominium Units | Single Family Detached Units |
|-------------------------------------|--------------------------|-------------------------------------|
| Disposable Income | \$7,696,000 | \$10,473,000 |
| Direct Impacts Only | 41.0 | 55.9 |
| Direct, Indirect, and Induced Jobs | 69.3 | 94.4 |

Table II-1 provides a detailed summary of employment generated by industry. The table shows industries sorted by projected employment. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of employment.

**TABLE II-1
 IMPLAN MODEL OUTPUT
 EMPLOYMENT GENERATED
 RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
 BAINBRIDGE ISLAND, WA**

| | Per 100 Market Rate Units | | | | | |
|---|---------------------------|------------|------------------------|------------------------------------|------------|------------------------|
| | Direct Impacts Only | | | Direct, Indirect & Induced Impacts | | |
| | Condos | SFD | % of Jobs ³ | Condos | SFD | % of Jobs ³ |
| Disposable Income of New Residents¹ (after taxes & savings) | 7,695,000 | 10,473,000 | | 7,695,000 | 10,473,000 | |
| Employment Generated by Industry ² | | | | | | |
| Food services and drinking places | 5.4 | 7.4 | 13% | 7.5 | 10.2 | 11% |
| Offices of physicians- dentists- and other health | 3.4 | 4.7 | 8% | 4.5 | 6.1 | 6% |
| Religious organizations | 2.3 | 3.2 | 6% | 3.0 | 4.0 | 4% |
| Social assistance- except child day care services | 2.2 | 3.0 | 5% | 2.7 | 3.7 | 4% |
| Private households | 1.9 | 2.6 | 5% | 2.3 | 3.2 | 3% |
| Hospitals | 1.5 | 2.0 | 4% | 1.9 | 2.6 | 3% |
| Automotive repair and maintenance- except car wash | 1.3 | 1.7 | 3% | 1.7 | 2.3 | 2% |
| Food and beverage stores | 1.3 | 1.7 | 3% | 1.8 | 2.4 | 3% |
| General merchandise stores | 1.2 | 1.7 | 3% | 1.8 | 2.4 | 3% |
| Motor vehicle and parts dealers | 1.1 | 1.5 | 3% | 1.5 | 2.1 | 2% |
| Miscellaneous store retailers | 1.1 | 1.5 | 3% | 1.5 | 2.0 | 2% |
| Civic- social- professional and similar organizations | 1.1 | 1.4 | 3% | 1.8 | 2.5 | 3% |
| Other amusement- gambling- and recreation | 1.0 | 1.4 | 3% | 1.3 | 1.8 | 2% |
| Wholesale trade | 0.9 | 1.2 | 2% | 1.4 | 2.0 | 2% |
| Nonstore retailers | 0.8 | 1.1 | 2% | 1.2 | 1.7 | 2% |
| Elementary and secondary schools | 0.7 | 1.0 | 2% | 0.9 | 1.2 | 1% |
| Other educational services | 0.7 | 0.9 | 2% | 0.9 | 1.2 | 1% |
| Nonstore retailers | 0.7 | 0.9 | 2% | 0.9 | 1.3 | 1% |
| Building material and garden supply stores | 0.7 | 0.9 | 2% | 1.0 | 1.3 | 1% |
| Sporting goods- hobby- book and music stores | 0.6 | 0.8 | 1% | 0.8 | 1.1 | 1% |
| Other ambulatory health care services | 0.6 | 0.8 | 1% | 0.7 | 1.0 | 1% |
| Child day care services | 0.5 | 0.7 | 1% | 0.0 | 0.0 | 0% |
| Other Federal Government enterprises ⁴ | 0.5 | 0.7 | 1% | 0.8 | 1.0 | 1% |
| Monetary authorities and depository credit intermediaries | 0.5 | 0.7 | 1% | 0.8 | 1.1 | 1% |
| Insurance carriers | 0.5 | 0.6 | 1% | 0.7 | 1.0 | 1% |
| Grantmaking and giving and social advocacy organizations | 0.5 | 0.6 | 1% | 0.0 | 0.0 | 0% |
| Clothing and clothing accessories stores | 0.4 | 0.6 | 1% | 0.0 | 0.0 | 0% |
| Fitness and recreational sports centers | 0.4 | 0.6 | 1% | 1.8 | 2.4 | 3% |
| Health and personal care stores | 0.4 | 0.6 | 1% | 0.0 | 0.0 | 0% |
| State & Local Education | 0.0 | 0.0 | 0% | 2.4 | 3.2 | 3% |
| State & Local Non-Education | 0.0 | 0.0 | 0% | 2.3 | 3.1 | 3% |
| Other Industries | 6.9 | 9.4 | 17% | 19.6 | 26.7 | 28% |
| | 41.0 | 55.9 | 100% | 69.3 | 94.4 | 100% |

¹ The IMPLAN model tracks how increases in consumer spending creates jobs in the local economy. See Tables I-4 to I-7 for estimates of the disposable income available to residents of 100 prototypical market rate units.

² For Industries representing more than 1% of total employment.

³ Applies to both condominium and single family and units.

⁴ Reflects a downward adjustment to the IMPLAN model output to conservatively reflect impacts to federal government employment.

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SECTION III – THE KMA NEXUS MODEL

This section presents a summary of the analysis linking the employment growth associated with residential development, or the output of the IMPLAN model (see Section II), to the estimated number of lower income housing units required in each of four income categories.

Analysis Approach and Framework

The analysis approach was to examine the employment growth for industries related to consumer spending by residents of the 100-unit residential building modules. Then, through a series of linkage steps, the number of employees was converted to households and housing units by affordability level. The findings are expressed in terms of numbers of households related to the 100-unit building modules.

The analysis addressed the affordable unit demand associated with both condominium and single family detached units on Bainbridge Island. The table below shows the 2007 Kitsap County income limits for the four income categories, ranging from less than 50% of Area Median Income to 95% - 120% of AMI, that were evaluated.

| | Household Size | | | | | |
|----------------------|----------------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 + |
| Income Limits | | | | | | |
| 50% of Median | \$23,000 | \$26,300 | \$29,550 | \$32,850 | \$35,500 | \$38,100 |
| 80% of Median | \$36,800 | \$42,050 | \$47,300 | \$52,550 | \$56,750 | \$60,950 |
| 95% of Median | \$43,700 | \$49,900 | \$56,150 | \$62,400 | \$67,400 | \$72,400 |
| 120% of Median | \$55,200 | \$63,100 | \$70,950 | \$78,850 | \$85,150 | \$91,450 |

The analysis was conducted using a model that KMA developed and has applied for similar evaluations in many other jurisdictions. The model inputs are all local data to the extent possible, and are fully documented in the following description.

Analysis Steps

Tables III-1 through III-4 at the end of this section present a summary of the nexus analysis steps for the condominium and single-family detached prototype units. Following is a description of each step of the analysis.

Step 1 – Estimate of Total New Employees

The first step in Table III-1 commenced with the total number of employees associated with the new market rate units. The employment figures applied here were estimated based on household expenditures of new residents using the IMPLAN model (see Section II). The 100-unit condominium building is associated with 41 direct impact jobs and 69 new direct, indirect,

and induced jobs. The prototype single-family detached development is associated with 56 direct impact jobs and 94 new direct, indirect, and induced jobs.

Step 2 – Adjustment from Employees to Employee Households

This step (Table III-1) converted the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers must be reduced. The workers-per-worker-household ratio eliminated from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.58 workers per worker household (from the U. S. Census 2000) was used in the analysis. The number of jobs was divided by 1.58 to determine the number of worker households. (Average workers per total households is a lower ratio because all households are counted in the denominator, not just worker households; using average workers per total households produces greater demand for housing units.)

Step 3 – Occupational Distribution of Employees

The occupational breakdown of employees was the first step to arrive at income level. The output from the IMPLAN model provided the number of employees by industry sector. The IMPLAN output was paired with data from the Department of Labor, Bureau of Labor Statistics 2006 Occupational Employment Survey (OES) to estimate the occupational composition of employees for each industry sector.

Pairing of OES and IMPLAN data was accomplished by matching IMPLAN industry sector codes with the four-digit North American Industry Classification System Code (NAICS) used in the OES. Each IMPLAN industry sector is associated with one or more NAICS code, with matching NAICS codes ranging from two to five digits. Employment for IMPLAN sectors with multiple matching NAICS codes was distributed among the matching codes based on the distribution of employment among those industries at the national level. Employment for IMPLAN sectors where matching NAICS codes were only at the two- or three-digit level of detail was distributed using a similar approach, among all of the corresponding four-digit NAICS codes falling under the broader two- or three-digit categories.

National-level employment totals for each industry within the OES were pro-rated to match the employment distribution projected using the IMPLAN model. Occupational composition within each industry was held constant. The result is the estimated occupational mix of employees.

As shown on Table III-1, new jobs will be distributed across a variety of occupational categories. The three largest occupational categories based on total impacts are office and administrative support (16%), sales (13%), and food preparation and serving (12%).

The numbers in Step #3 (Table III-1) indicate both the percentage of total employee households and the number of employee households by occupation associated with our hypothetical 100-unit market rate residential buildings.

Step 4 - Estimates of Employee Households Meeting the Lower Income Definitions

In this step, occupation was translated to income based on recent Kitsap County wage and salary information from the Washington State Employment Security Department. The wage and salary information shown in Appendix Tables 2 and 4 provided the income inputs to the model. This step in the analysis calculated the number of employee households that fall into each income category for each household size.

Individual *employee* income data was used to calculate the number of *households* that fall into the income categories by assuming that multiple earner households are, on average, formed of individuals with similar incomes. Employee households not falling into one of the major occupation categories per Appendix Tables 1 and 3 were assumed to have the same income distribution as the major occupation categories.

Step 5 - Estimate of Household Size Distribution

In this step, household size distribution was input into the model in order to estimate the income and household size combinations that meet the income definitions established by the City. The household size distribution utilized in the analysis is that of worker households in Kitsap County derived using a combination of Census sources.

Step 6 - Estimate of Households that meet Size and Income Criteria

For this step KMA built a cross-matrix of household size and income to establish probability factors for the two criteria in combination. For each occupational group a probability factor was calculated for each income and household size level, and multiplied by the number of households. Table III-2 shows the result after completing Steps #4, #5, and #6. The calculated number of households that meet size and income criteria shown are for the under 50% of AMI category generated by the market rate condominium building. Table III-3 shows results for the under 50% AMI category generated by market rate detached units. The methodology was repeated for each income tier, resulting in a total count of worker households generated by our 100-unit prototypical buildings.

Summary Findings

Table III-4 indicates the results of the analysis for each of the four lower income categories for the two-prototypical 100-unit projects. The table presents the number of households in each affordability category and the total number over 120% of Area Median Income.

According to Table III-4, approximately 80% of new worker households have incomes below 120% of AMI, with most of these households earning less than 80% of AMI. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, employment is concentrated in lower paid occupations including administrative, retail sales, and food preparation.

Many of the higher-paying occupations in Kitsap County are not directly tied to consumer spending within Kitsap and therefore have a miniscule representation in the analysis. Technology firms and the U.S. Navy, for example, largely serve consumers beyond Kitsap.

In summary, for every 100 market rate condominium units, there are 21.49 households earning 120% of AMI or less generated through the direct consumption of the homebuyers and 34.89 households generated through the direct, indirect, and induced consumption of the homebuyers. For every 100 market rate detached units, 29.24 households earning up to 120% AMI are generated through the direct consumption of the homebuyers and 47.48 including the indirect and induced consumption.

Inclusionary Percentages Supported

Table III-5 translates the nexus results into inclusionary percentages. The inclusionary percentages are calculated by dividing the number of affordable units by the total number of units (market rate plus affordable). (Note that the draft Bainbridge ordinance calculates the inclusionary percentage as a percent of market rate units only excluding bonus units.) KMA calculated the inclusionary percentages assuming a program that assists households earning up to 120% AMI and one that assists households earning up to 80% of AMI. For condominiums, the percentages up to 80% AMI range from 14% to 22%, depending on whether indirect and induced impacts are considered. For single family units, the percentages range from 19% to 29%.

**TABLE III-1
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

PER 100 UNITS OF RESIDENTIAL HOUSING

| | Per 100 Market Rate Units | | | |
|---|---------------------------|---------------|------------------------------------|---------------|
| | Direct Impacts Only | | Direct, Indirect & Induced Impacts | |
| | Condo | Single Family | Condo | Single Family |
| Step 1 - Employees ¹ | 41 | 56 | 69 | 94 |
| Step 2 - Adjustment for Number of Households (1.58) | 26 | 35 | 44 | 60 |
| Step 3 - Occupation Distribution ² | | | | |
| Management Occupations | 3% | 3% | 4% | 4% |
| Business and Financial Operations | 3% | 3% | 4% | 4% |
| Computer and Mathematical | 1% | 1% | 1% | 1% |
| Architecture and Engineering | 0% | 0% | 1% | 1% |
| Life, Physical, and Social Science | 0% | 0% | 1% | 1% |
| Community and Social Services | 3% | 3% | 2% | 2% |
| Legal | 0% | 0% | 1% | 1% |
| Education, Training, and Library | 3% | 3% | 5% | 5% |
| Arts, Design, Entertainment, Sports, and Media | 1% | 1% | 1% | 1% |
| Healthcare Practitioners and Technical | 8% | 8% | 6% | 6% |
| Healthcare Support | 5% | 5% | 4% | 4% |
| Protective Service | 1% | 1% | 2% | 2% |
| Food Preparation and Serving Related | 15% | 15% | 12% | 12% |
| Building and Grounds Cleaning and Maintenance | 6% | 6% | 6% | 6% |
| Personal Care and Service | 5% | 5% | 4% | 4% |
| Sales and Related | 14% | 14% | 13% | 13% |
| Office and Administrative Support | 15% | 15% | 16% | 16% |
| Farming, Fishing, and Forestry | 0% | 0% | 0% | 0% |
| Construction and Extraction | 0% | 0% | 2% | 2% |
| Installation, Maintenance, and Repair | 4% | 4% | 4% | 4% |
| Production | 2% | 2% | 2% | 2% |
| Transportation and Material Moving | 6% | 6% | 6% | 6% |
| Other / Not Identified | <u>2%</u> | <u>2%</u> | <u>4%</u> | <u>4%</u> |
| Totals | 100% | 100% | 100% | 100% |
| Management Occupations | 0.9 | 1.2 | 1.6 | 2.2 |
| Business and Financial Operations | 0.7 | 1.0 | 1.6 | 2.2 |
| Computer and Mathematical | 0.2 | 0.3 | 0.4 | 0.6 |
| Architecture and Engineering | 0.1 | 0.1 | 0.3 | 0.4 |
| Life, Physical, and Social Science | 0.1 | 0.2 | 0.3 | 0.4 |
| Community and Social Services | 0.7 | 0.9 | 1.0 | 1.4 |
| Legal | 0.1 | 0.2 | 0.3 | 0.4 |
| Education, Training, and Library | 0.9 | 1.2 | 2.0 | 2.7 |
| Arts, Design, Entertainment, Sports, and Media | 0.4 | 0.5 | 0.6 | 0.8 |
| Healthcare Practitioners and Technical | 2.0 | 2.7 | 2.7 | 3.7 |
| Healthcare Support | 1.4 | 1.9 | 1.8 | 2.5 |
| Protective Service | 0.3 | 0.3 | 0.7 | 1.0 |
| Food Preparation and Serving Related | 3.9 | 5.2 | 5.4 | 7.3 |
| Building and Grounds Cleaning and Maintenance | 1.7 | 2.3 | 2.6 | 3.5 |
| Personal Care and Service | 1.4 | 1.9 | 1.9 | 2.6 |
| Sales and Related | | 4.9 | 5.5 | 7.5 |
| Office and Administrative Support | 4.0 | 5.5 | 7.2 | 9.9 |
| Farming, Fishing, and Forestry | 0.0 | 0.0 | 0.0 | 0.1 |
| Construction and Extraction | 0.1 | 0.1 | 1.0 | 1.3 |
| Installation, Maintenance, and Repair | 1.2 | 1.6 | 1.9 | 2.6 |
| Production | 0.4 | 0.6 | 0.8 | 1.0 |
| Transportation and Material Moving | 1.4 | 2.0 | 2.5 | 3.3 |
| Other / Not Identified | <u>4.2</u> | <u>0.8</u> | <u>1.7</u> | <u>2.4</u> |
| Totals | 26.0 | 35.4 | 44.0 | 59.9 |

Notes:

¹ Estimated employment generated by household expenditures within 100 prototypical market rate units. Employment estimates are based on the IMPLAN Group's economic model, IMPLAN, for Kitsap County. See Table II-1.

² See Appendix Tables 1, 2, 3, and 4 for additional information from which the percentage distributions were derived.

TABLE III-2

**VERY LOW INCOME EMPLOYEE HOUSEHOLDS¹ GENERATED - CONDO
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

PER 100 MARKET RATE CONDO UNITS

| | <u>Direct Impacts Only</u> | <u>Direct, Indirect & Induced Impacts</u> |
|---|--------------------------------|---|
| Step 4, 5, & 6 - Very Low Income Households¹ within Major Occupation Categories² | | |
| Management | - | - |
| Business and Financial Operations | - | - |
| Computer and Mathematical | - | - |
| Architecture and Engineering | - | - |
| Life, Physical and Social Science | - | - |
| Community and Social Services | 0.01 | 0.02 |
| Legal | - | - |
| Education Training and Library | 0.02 | 0.03 |
| Arts, Design, Entertainment, Sports, & Media | - | - |
| Healthcare Practitioners and Technical | - | - |
| Healthcare Support | 0.15 | 0.19 |
| Protective Service | - | - |
| Food Preparation and Serving Related | 1.07 | 1.49 |
| Building Grounds and Maintenance | 0.17 | 0.26 |
| Personal Care and Service | 0.28 | 0.39 |
| Sales and Related | 0.62 | 0.87 |
| Office and Admin | 0.20 | 0.33 |
| Farm, Fishing, and Forestry | - | - |
| Construction and Extraction | - | - |
| Installation Maintenance and Repair | - | - |
| Production | - | - |
| Transportation and Material Moving | 0.20 | 0.30 |
| Total Very Low Income Households - Major Occupations | 2.73 | 3.89 |
| Very Low Income Households ¹ - "all other" occupations | 0.26 | 0.51 |
| Total Very Low Income Households¹ | 2.99 | 4.41 |

¹ Includes households earning from zero through 50% of Kitsap County Median Income.

² See Appendix Tables 1 and 3 for additional information on Major Occupation Categories.

TABLE III-3

**VERY LOW INCOME EMPLOYEE HOUSEHOLDS¹ GENERATED - SINGLE FAMILY
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

PER 100 MARKET RATE SINGLE FAMILY UNITS

| | <u>Direct Impacts Only</u> | <u>Direct, Indirect & Induced Impacts</u> |
|---|--------------------------------|---|
| Step 4, 5, & 6 - Very Low Income Households¹ within Major Occupation Categories² | | |
| Management | - | - |
| Business and Financial Operations | - | - |
| Computer and Mathematical | - | - |
| Architecture and Engineering | - | - |
| Life, Physical and Social Science | - | - |
| Community and Social Services | 0.02 | 0.03 |
| Legal | - | - |
| Education Training and Library | 0.03 | 0.04 |
| Arts, Design, Entertainment, Sports, & Media | - | - |
| Healthcare Practitioners and Technical | - | - |
| Healthcare Support | 0.20 | 0.25 |
| Protective Service | - | - |
| Food Preparation and Serving Related | 1.46 | 2.03 |
| Building Grounds and Maintenance | 0.24 | 0.36 |
| Personal Care and Service | 0.39 | 0.54 |
| Sales and Related | 0.85 | 1.19 |
| Office and Admin | 0.28 | 0.45 |
| Farm, Fishing, and Forestry | - | - |
| Construction and Extraction | - | - |
| Installation Maintenance and Repair | - | - |
| Production | - | - |
| Transportation and Material Moving | 0.27 | 0.41 |
| Total Very Low Income Households - Major Occupations | 3.72 | 5.30 |
| Very Low Income Households ¹ - "all other" occupations | 0.35 | 0.70 |
| Total Very Low Income Households¹ | 4.06 | 6.00 |

¹ Includes households earning from zero through 50% of Kitsap County Median Income.

² See Appendix Tables 1 and 3 for additional information on Major Occupation Categories.

**TABLE III-4
IMPACT ANALYSIS SUMMARY
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

**RESIDENTIAL UNIT DEMAND IMPACTS
PER 100 MARKET RATE UNITS**

| | Per 100 Market Rate Units | | | | | |
|----------------------------------|---------------------------|-----------|-------------------------|------------------------------------|-----------|-------------------------|
| | Direct Impacts Only | | | Direct, Indirect & Induced Impacts | | |
| | Condo Units | SFD Units | % of Total ¹ | Condo Units | SFD Units | % of Total ¹ |
| Number of New Households | | | | | | |
| Under 50% Median Income | 2.99 | 4.06 | 11% | 4.41 | 6.00 | 10% |
| 50% to 80% Median Income | 10.95 | 14.91 | 42% | 17.18 | 23.39 | 39% |
| 80% to 95% Median Income | 3.70 | 5.03 | 14% | 6.21 | 8.46 | 14% |
| 95% to 120% Median Income | 3.85 | 5.24 | 15% | 7.08 | 9.64 | 16% |
| Subtotal through 120% of Median | 21.49 | 29.24 | 83% | 34.88 | 47.48 | 79% |
| Over 120% of Median Income | 4.54 | 6.18 | 17% | 9.09 | 12.38 | 21% |
| Total Employee Households | 26.03 | 35.43 | 100% | 43.98 | 59.85 | 100% |

Notes:

¹ Percentages are the same for Condos and Single Family.

**TABLE III-5
 INCLUSIONARY REQUIREMENT SUPPORTED
 EMPLOYEE HOUSEHOLDS GENERATED
 RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
 BAINBRIDGE ISLAND, WA**

| | <u>Direct Impacts Only</u> | <u>Direct, Indirect & Induced Impacts</u> |
|---|--------------------------------|---|
| THROUGH 80% AMI | | |
| Supported Inclusionary Requirement - Per 100 Market Rate Units | | |
| Condo | 14 Units | 22 Units |
| Single Family | 19 Units | 29 Units |
| Supported Inclusionary Requirement Excluding Bonus Units ¹ | | |
| Condo | 14% | 22% |
| Single Family | 19% | 29% |
| THROUGH 120% AMI | | |
| Supported Inclusionary Requirement - Per 100 Market Rate Units | | |
| Condo | 21 Units | 35 Units |
| Single Family | 29 Units | 47 Units |
| Supported Inclusionary Requirement Excluding Bonus Units ¹ | | |
| Condo | 21% | 35% |
| Single Family | 29% | 47% |

Notes:

¹ Consistent with the draft Bainbridge inclusionary ordinance, requirements are calculated as a percent of market rate units.

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APPENDIX A: SUPPORTING TABLES

**APPENDIX TABLE A-1
2006 NATIONAL RESIDENT SERVICES WORKER DISTRIBUTION BY OCCUPATION
DIRECT EMPLOYMENT IMPACTS WITHIN KITSAP COUNTY
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| Major Occupations (2% or more) | 2006 National Resident Services Occupation Distribution ¹ |
|---|---|
| Management occupations | 3.5% |
| Business and financial operations occupations | 2.8% |
| Community and social services occupations | 2.5% |
| Education, training, and library occupations | 3.4% |
| Healthcare practitioners and technical occupations | 7.7% |
| Healthcare support occupations | 5.4% |
| Food preparation and serving related occupations | 14.8% |
| Building and grounds cleaning and maintenance occupations | 6.4% |
| Personal care and service occupations | 5.5% |
| Sales and related occupations | 13.9% |
| Office and administrative support occupations | 15.5% |
| Installation, maintenance, and repair occupations | 4.5% |
| Transportation and material moving occupations | 5.6% |
| All Other Resident Services Related Occupations | <u>8.6%</u> |
| INDUSTRY TOTAL | 100.0% |

¹ Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

APPENDIX TABLE A-2
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|---|-------------------------------------|--|--------------------------------------|
| Page 1 of 4 | | | |
| <i>Management occupations</i> | | | |
| Chief executives | \$146,000 | 4.5% | 0.2% |
| General and operations managers | \$109,900 | 34.1% | 1.2% |
| Sales managers | \$132,400 | 4.7% | 0.2% |
| Administrative services managers | \$85,300 | 4.1% | 0.1% |
| Financial managers | \$97,300 | 6.4% | 0.2% |
| Food service managers | \$74,000 | 7.2% | 0.2% |
| Medical and health services managers | \$100,200 | 7.5% | 0.3% |
| Social and community service managers | \$80,700 | 7.0% | 0.2% |
| Managers, all other | \$95,100 | 4.4% | 0.2% |
| All other Management Occupations | <u>\$95,100</u> | <u>20.0%</u> | <u>0.7%</u> |
| | Weighted Mean Annual Wage | \$101,800 | 100.0% |
| <i>Business and financial operations occupations</i> | | | |
| Claims adjusters, examiners, and investigators | \$59,800 | 5.9% | 0.2% |
| Training and development specialists | \$52,800 | 4.9% | 0.1% |
| Human resources, training, and labor relations specialists, all other | \$64,200 | 7.9% | 0.2% |
| Management analysts | \$66,700 | 4.2% | 0.1% |
| Business operations specialists, all other | \$67,700 | 20.3% | 0.6% |
| Accountants and auditors | \$68,500 | 14.7% | 0.4% |
| Loan officers | \$55,500 | 5.2% | 0.1% |
| All Other Business and financial operations occupations (Avg. All Categories) | <u>\$64,500</u> | <u>36.7%</u> | <u>1.0%</u> |
| | Weighted Mean Annual Wage | \$64,500 | 100.0% |
| <i>Community and social services occupations</i> | | | |
| Substance abuse and behavioral disorder counselors | \$36,200 | 5.3% | 0.1% |
| Educational, vocational, and school counselors | \$55,700 | 5.9% | 0.2% |
| Mental health counselors | \$41,600 | 6.9% | 0.2% |
| Rehabilitation counselors | \$35,100 | 10.8% | 0.3% |
| Child, family, and school social workers | \$42,000 | 13.7% | 0.3% |
| Medical and public health social workers | \$53,200 | 6.4% | 0.2% |
| Mental health and substance abuse social workers | \$45,900 | 8.4% | 0.2% |
| Social and human service assistants | \$25,300 | 24.6% | 0.6% |
| Community and social service specialists, all other | \$44,300 | 6.7% | 0.2% |
| All Other Community and social services occupations (Avg. All Categories) | <u>\$38,400</u> | <u>11.1%</u> | <u>0.3%</u> |
| | Weighted Mean Annual Wage | \$38,400 | 100.0% |

APPENDIX TABLE A-2
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|--|-------------------------------------|--|--------------------------------------|
| Page 2 of 4 | | | |
| <i>Education, training, and library occupations</i> | | | |
| Vocational education teachers, postsecondary | \$54,900 | 4.5% | 0.2% |
| Preschool teachers, except special education | \$38,300 | 16.3% | 0.5% |
| Elementary school teachers, except special education | \$52,691 | 9.8% | 0.3% |
| Middle school teachers, except special and vocational education | \$51,724 | 4.3% | 0.1% |
| Secondary school teachers, except special and vocational education | \$54,638 | 6.8% | 0.2% |
| Self-enrichment education teachers | \$32,300 | 9.0% | 0.3% |
| Teachers and instructors, all other | \$44,600 | 9.4% | 0.3% |
| Teacher assistants | \$26,949 | 18.0% | 0.6% |
| All Other Education, training, and library occupations (Avg. All Categories) | <u>\$40,700</u> | <u>21.8%</u> | <u>0.7%</u> |
| Weighted Mean Annual Wage | \$40,700 | 100.0% | 3.4% |
| <i>Healthcare practitioners and technical occupations</i> | | | |
| Registered nurses | \$40,200 | 27.9% | 2.2% |
| Dental hygienists | \$87,200 | 5.1% | 0.4% |
| Licensed practical and licensed vocational nurses | \$40,200 | 11.9% | 0.9% |
| All Other Healthcare practitioners and technical occupations (Avg. All Categories) | <u>\$45,500</u> | <u>55.1%</u> | <u>4.3%</u> |
| Weighted Mean Annual Wage | \$45,500 | 100.0% | 7.7% |
| <i>Healthcare support occupations</i> | | | |
| Home health aides | \$20,200 | 21.1% | 1.1% |
| Nursing aides, orderlies, and attendants | \$24,300 | 35.3% | 1.9% |
| Dental assistants | \$30,800 | 11.9% | 0.6% |
| Medical assistants | \$29,700 | 15.3% | 0.8% |
| Healthcare support workers, all other | \$30,500 | 4.1% | 0.2% |
| All Other Healthcare support occupations (Avg. All Categories) | <u>\$25,400</u> | <u>12.2%</u> | <u>0.7%</u> |
| Weighted Mean Annual Wage | \$25,400 | 100.0% | 5.4% |
| <i>Food preparation and serving related occupations</i> | | | |
| First-line supervisors/managers of food preparation and serving workers | \$37,200 | 6.8% | 1.0% |
| Cooks, fast food | \$19,100 | 5.8% | 0.9% |
| Cooks, restaurant | \$22,200 | 7.7% | 1.1% |
| Food preparation workers | \$21,100 | 7.3% | 1.1% |
| Bartenders | \$26,400 | 5.2% | 0.8% |
| Combined food preparation and serving workers, including fast food | \$19,700 | 21.9% | 3.3% |
| Counter attendants, cafeteria, food concession, and coffee shop | \$19,600 | 4.4% | 0.7% |
| Waiters and waitresses | \$23,000 | 21.8% | 3.2% |
| Dishwashers | \$18,600 | 4.7% | 0.7% |
| All Other Food preparation and serving related occupations (Avg. All Categories) | <u>\$22,600</u> | <u>14.2%</u> | <u>2.1%</u> |
| Weighted Mean Annual Wage | \$22,600 | 100.0% | 14.8% |

Sources: U.S. Bureau of Labor Statistics, Washington State Employment Security Department, Minnesota IMPLAN Group
 Prepared by: Keyser Marston Associates, Inc.
 \\Sf-fs1\wp\10\10405\001\APNDX - Kitsap Direct.xls; Ap tb2 Compensation; 3/12/2008; hgr

APPENDIX TABLE A-2
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|--|-------------------------------------|--|--------------------------------------|
| Page 3 of 4 | | | |
| <i>Building and grounds cleaning and maintenance occupations</i> | | | |
| Janitors and cleaners, except maids and housekeeping cleaners | \$26,400 | 45.3% | 2.9% |
| Maids and housekeeping cleaners | \$21,300 | 15.2% | 1.0% |
| Landscaping and groundskeeping workers | \$27,300 | 27.2% | 1.7% |
| All Other Building and grounds cleaning and maintenance occupations (Avg. All Cat) | <u>\$25,800</u> | <u>12.3%</u> | <u>0.8%</u> |
| Weighted Mean Annual Wage | \$25,800 | 100.0% | 6.4% |
| <i>Personal care and service occupations</i> | | | |
| First-line supervisors/managers of personal service workers | \$38,500 | 4.2% | 0.2% |
| Nonfarm animal caretakers | \$20,300 | 4.8% | 0.3% |
| Amusement and recreation attendants | \$19,400 | 7.8% | 0.4% |
| Hairdressers, hairstylists, and cosmetologists | \$28,400 | 13.5% | 0.7% |
| Child care workers | \$20,300 | 16.1% | 0.9% |
| Personal and home care aides | \$21,300 | 20.4% | 1.1% |
| Fitness trainers and aerobics instructors | \$35,100 | 9.6% | 0.5% |
| Recreation workers | \$26,000 | 7.2% | 0.4% |
| All Other Personal care and service occupations (Avg. All Categories) | <u>\$24,900</u> | <u>16.4%</u> | <u>0.9%</u> |
| Weighted Mean Annual Wage | \$24,900 | 100.0% | 5.5% |
| <i>Sales and related occupations</i> | | | |
| First-line supervisors/managers of retail sales workers | \$48,300 | 9.8% | 1.4% |
| Cashiers | \$24,600 | 30.7% | 4.3% |
| Counter and rental clerks | \$26,000 | 4.8% | 0.7% |
| Retail salespersons | \$27,500 | 39.4% | 5.5% |
| All Other Sales and related occupations (Avg. All Categories) | <u>\$28,800</u> | <u>15.4%</u> | <u>2.1%</u> |
| Weighted Mean Annual Wage | \$28,800 | 100.0% | 13.9% |
| <i>Office and administrative support occupations</i> | | | |
| First-line supervisors/managers of office and administrative support workers | \$50,700 | 5.8% | 0.9% |
| Bookkeeping, accounting, and auditing clerks | \$34,900 | 7.7% | 1.2% |
| Customer service representatives | \$30,600 | 7.7% | 1.2% |
| Receptionists and information clerks | \$22,700 | 9.2% | 1.4% |
| Stock clerks and order fillers | \$27,800 | 9.7% | 1.5% |
| Executive secretaries and administrative assistants | \$40,400 | 5.5% | 0.9% |
| Medical secretaries | \$32,600 | 4.7% | 0.7% |
| Secretaries, except legal, medical, and executive | \$33,500 | 7.4% | 1.1% |
| Office clerks, general | \$27,000 | 13.1% | 2.0% |
| All Other Office and administrative support occupations (Avg. All Categories) | <u>\$31,800</u> | <u>29.2%</u> | <u>4.5%</u> |
| Weighted Mean Annual Wage | \$31,800 | 100.0% | 15.5% |

APPENDIX TABLE A-2
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|---|-------------------------------------|--|--------------------------------------|
| <i>Installation, maintenance, and repair occupations</i> | | | |
| First-line supervisors/managers of mechanics, installers, and repairers | \$69,600 | 8.2% | 0.4% |
| Automotive body and related repairers | \$43,100 | 10.2% | 0.5% |
| Automotive service technicians and mechanics | \$44,100 | 29.2% | 1.3% |
| Bus and truck mechanics and diesel engine specialists | \$48,500 | 4.2% | 0.2% |
| Maintenance and repair workers, general | \$38,200 | 16.6% | 0.7% |
| All Other Installation, maintenance, and repair occupations (Avg. All Categories) | <u>\$45,900</u> | <u>31.5%</u> | <u>1.4%</u> |
| Weighted Mean Annual Wage | \$45,900 | 100.0% | 4.5% |
| <i>Transportation and material moving occupations</i> | | | |
| Bus drivers, school | \$33,800 | 6.3% | 0.3% |
| Driver/sales workers | \$27,700 | 8.1% | 0.4% |
| Truck drivers, heavy and tractor-trailer | \$38,100 | 13.0% | 0.7% |
| Truck drivers, light or delivery services | \$28,300 | 11.2% | 0.6% |
| Parking lot attendants | \$21,300 | 5.7% | 0.3% |
| Cleaners of vehicles and equipment | \$23,000 | 11.9% | 0.7% |
| Laborers and freight, stock, and material movers, hand | \$26,800 | 13.8% | 0.8% |
| Packers and packagers, hand | \$21,400 | 6.4% | 0.4% |
| All Other Transportation and material moving occupations (Avg. All Categories) | <u>\$28,100</u> | <u>23.7%</u> | <u>1.3%</u> |
| Weighted Mean Annual Wage | \$28,100 | 100.0% | 5.6% |
| | | | 91.4% |

¹ Hourly paid employees are assumed to be employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week and 52 weeks per year.

² Occupation percentages are based on the 2006 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on 2006 Occupational Employment Survey data for the Bremerton-Silverdale MSA (Kitsap County) updated by the Washington State Employment Security Department to 2007 wage levels.

³ Including occupations representing 4% or more of the major occupation group.

**APPENDIX TABLE A-3
 2006 NATIONAL RESIDENT SERVICES WORKER DISTRIBUTION BY OCCUPATION
 DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS WITHIN KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA**

| Major Occupations (2% or more) | 2006 National Resident Services Occupation Distribution ¹ |
|---|--|
| Management occupations | 3.7% |
| Business and financial operations occupations | 3.6% |
| Community and social services occupations | 2.3% |
| Education, training, and library occupations | 4.6% |
| Healthcare practitioners and technical occupations | 6.2% |
| Healthcare support occupations | 4.2% |
| Food preparation and serving related occupations | 12.3% |
| Building and grounds cleaning and maintenance occupations | 5.9% |
| Personal care and service occupations | 4.4% |
| Sales and related occupations | 12.6% |
| Office and administrative support occupations | 16.5% |
| Construction and extraction occupations | 2.2% |
| Installation, maintenance, and repair occupations | 4.4% |
| Transportation and material moving occupations | 5.6% |
| All Other Resident Services Related Occupations | <u>11.6%</u> |
| INDUSTRY TOTAL | 100.0% |

¹ Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

APPENDIX TABLE A-4
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|---|-------------------------------------|--|--------------------------------------|
| Page 1 of 4 | | | |
| <i>Management occupations</i> | | | |
| Chief executives | \$146,000 | 4.6% | 0.2% |
| General and operations managers | \$109,900 | 31.4% | 1.2% |
| Sales managers | \$132,400 | 4.3% | 0.2% |
| Administrative services managers | \$85,300 | 4.3% | 0.2% |
| Financial managers | \$97,300 | 6.9% | 0.3% |
| Food service managers | \$74,000 | 5.5% | 0.2% |
| Medical and health services managers | \$100,200 | 5.6% | 0.2% |
| Property, real estate, and community association managers | \$62,700 | 6.2% | 0.2% |
| Social and community service managers | \$80,700 | 5.3% | 0.2% |
| Managers, all other | \$95,100 | 5.1% | 0.2% |
| All other Management Occupations | <u>\$95,100</u> | <u>20.9%</u> | <u>0.8%</u> |
| | Weighted Mean Annual Wage | 100.0% | 3.7% |
| <i>Business and financial operations occupations</i> | | | |
| Claims adjusters, examiners, and investigators | \$59,800 | 5.8% | 0.2% |
| Compliance officers, except agriculture, construction, health and safety, and transpc | \$52,300 | 4.1% | 0.1% |
| Training and development specialists | \$52,800 | 4.0% | 0.1% |
| Human resources, training, and labor relations specialists, all other | \$64,200 | 6.5% | 0.2% |
| Management analysts | \$66,700 | 4.9% | 0.2% |
| Business operations specialists, all other | \$67,700 | 19.9% | 0.7% |
| Accountants and auditors | \$68,500 | 16.7% | 0.6% |
| Loan officers | \$55,500 | 5.2% | 0.2% |
| All Other Business and financial operations occupations (Avg. All Categories) | <u>\$64,000</u> | <u>32.9%</u> | <u>1.2%</u> |
| | Weighted Mean Annual Wage | 100.0% | 3.6% |
| <i>Community and social services occupations</i> | | | |
| Substance abuse and behavioral disorder counselors | \$36,200 | 4.7% | 0.1% |
| Educational, vocational, and school counselors | \$55,700 | 7.3% | 0.2% |
| Mental health counselors | \$41,600 | 5.9% | 0.1% |
| Rehabilitation counselors | \$35,100 | 9.9% | 0.2% |
| Child, family, and school social workers | \$42,000 | 15.7% | 0.4% |
| Medical and public health social workers | \$53,200 | 5.5% | 0.1% |
| Mental health and substance abuse social workers | \$45,900 | 7.0% | 0.2% |
| Social and human service assistants | \$25,300 | 23.1% | 0.5% |
| Community and social service specialists, all other | \$44,300 | 6.8% | 0.2% |
| All Other Community and social services occupations (Avg. All Categories) | <u>\$38,800</u> | <u>14.1%</u> | <u>0.3%</u> |
| | Weighted Mean Annual Wage | 100.0% | 2.3% |

APPENDIX TABLE A-4
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|--|-------------------------------------|--|--------------------------------------|
| Page 2 of 4 | | | |
| <i>Education, training, and library occupations</i> | | | |
| Preschool teachers, except special education | \$38,300 | 9.3% | 0.4% |
| Elementary school teachers, except special education | \$52,691 | 14.1% | 0.6% |
| Middle school teachers, except special and vocational education | \$51,724 | 6.1% | 0.3% |
| Secondary school teachers, except special and vocational education | \$54,638 | 9.8% | 0.4% |
| Self-enrichment education teachers | \$32,300 | 5.8% | 0.3% |
| Teachers and instructors, all other | \$44,600 | 8.6% | 0.4% |
| Teacher assistants | \$26,949 | 16.3% | 0.7% |
| All Other Education, training, and library occupations (Avg. All Categories) | <u>\$42,300</u> | <u>29.9%</u> | <u>1.4%</u> |
| Weighted Mean Annual Wage | \$42,300 | 100.0% | 4.6% |
| <i>Healthcare practitioners and technical occupations</i> | | | |
| Registered nurses | \$40,200 | 27.9% | 1.7% |
| Dental hygienists | \$87,200 | 4.9% | 0.3% |
| Licensed practical and licensed vocational nurses | \$40,200 | 11.6% | 0.7% |
| All Other Healthcare practitioners and technical occupations (Avg. All Categories) | <u>\$45,400</u> | <u>55.6%</u> | <u>3.4%</u> |
| Weighted Mean Annual Wage | \$45,400 | 100.0% | 6.2% |
| <i>Healthcare support occupations</i> | | | |
| Home health aides | \$20,200 | 20.0% | 0.8% |
| Nursing aides, orderlies, and attendants | \$24,300 | 35.3% | 1.5% |
| Dental assistants | \$30,800 | 11.9% | 0.5% |
| Medical assistants | \$29,700 | 15.5% | 0.6% |
| Healthcare support workers, all other | \$30,500 | 4.4% | 0.2% |
| All Other Healthcare support occupations (Avg. All Categories) | <u>\$25,500</u> | <u>13.0%</u> | <u>0.5%</u> |
| Weighted Mean Annual Wage | \$25,500 | 100.0% | 4.2% |
| <i>Food preparation and serving related occupations</i> | | | |
| First-line supervisors/managers of food preparation and serving workers | \$37,200 | 6.9% | 0.8% |
| Cooks, fast food | \$19,100 | 5.7% | 0.7% |
| Cooks, restaurant | \$22,200 | 7.6% | 0.9% |
| Food preparation workers | \$21,100 | 7.4% | 0.9% |
| Bartenders | \$26,400 | 5.4% | 0.7% |
| Combined food preparation and serving workers, including fast food | \$19,700 | 22.0% | 2.7% |
| Counter attendants, cafeteria, food concession, and coffee shop | \$19,600 | 4.5% | 0.5% |
| Waiters and waitresses | \$23,000 | 21.6% | 2.6% |
| Dishwashers | \$18,600 | 4.7% | 0.6% |
| All Other Food preparation and serving related occupations (Avg. All Categories) | <u>\$22,600</u> | <u>14.3%</u> | <u>1.8%</u> |
| Weighted Mean Annual Wage | \$22,600 | 100.0% | 12.3% |

APPENDIX TABLE A-4
AVERAGE ANNUAL COMPENSATION, 2007
RESIDENT SERVICES WORKER OCCUPATIONS
DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS - KITSAP COUNTY
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|---|-------------------------------------|--|--------------------------------------|
| Page 3 of 4 | | | |
| <i>Building and grounds cleaning and maintenance occupations</i> | | | |
| Janitors and cleaners, except maids and housekeeping cleaners | \$26,400 | 46.9% | 2.8% |
| Maids and housekeeping cleaners | \$21,300 | 14.1% | 0.8% |
| Landscaping and groundskeeping workers | \$27,300 | 26.8% | 1.6% |
| All Other Building and grounds cleaning and maintenance occupations (Avg. All Cat) | <u>\$25,900</u> | <u>12.1%</u> | <u>0.7%</u> |
| Weighted Mean Annual Wage | \$25,900 | 100.0% | 5.9% |
| <i>Personal care and service occupations</i> | | | |
| First-line supervisors/managers of personal service workers | \$38,500 | 4.3% | 0.2% |
| Nonfarm animal caretakers | \$20,300 | 4.5% | 0.2% |
| Ushers, lobby attendants, and ticket takers | \$20,700 | 4.1% | 0.2% |
| Amusement and recreation attendants | \$19,400 | 7.7% | 0.3% |
| Hairdressers, hairstylists, and cosmetologists | \$28,400 | 13.3% | 0.6% |
| Child care workers | \$20,300 | 16.6% | 0.7% |
| Personal and home care aides | \$21,300 | 18.5% | 0.8% |
| Fitness trainers and aerobics instructors | \$35,100 | 9.9% | 0.4% |
| Recreation workers | \$26,000 | 7.7% | 0.3% |
| All Other Personal care and service occupations (Avg. All Categories) | <u>\$24,800</u> | <u>13.7%</u> | <u>0.6%</u> |
| Weighted Mean Annual Wage | \$24,800 | 100.0% | 4.4% |
| <i>Sales and related occupations</i> | | | |
| First-line supervisors/managers of retail sales workers | \$48,300 | 9.1% | 1.1% |
| Cashiers | \$24,600 | 28.5% | 3.6% |
| Counter and rental clerks | \$26,000 | 4.8% | 0.6% |
| Retail salespersons | \$27,500 | 36.5% | 4.6% |
| Sales representatives, wholesale and manufacturing, except technical and scientific | \$53,600 | 4.3% | 0.5% |
| All Other Sales and related occupations (Avg. All Categories) | <u>\$30,100</u> | <u>16.8%</u> | <u>2.1%</u> |
| Weighted Mean Annual Wage | \$30,100 | 100.0% | 12.6% |
| <i>Office and administrative support occupations</i> | | | |
| First-line supervisors/managers of office and administrative support workers | \$50,700 | 5.8% | 0.9% |
| Bookkeeping, accounting, and auditing clerks | \$34,900 | 7.7% | 1.3% |
| Customer service representatives | \$30,600 | 8.4% | 1.4% |
| Receptionists and information clerks | \$22,700 | 7.6% | 1.3% |
| Stock clerks and order fillers | \$27,800 | 7.9% | 1.3% |
| Executive secretaries and administrative assistants | \$40,400 | 6.1% | 1.0% |
| Secretaries, except legal, medical, and executive | \$33,500 | 8.0% | 1.3% |
| Office clerks, general | \$27,000 | 13.7% | 2.3% |
| All Other Office and administrative support occupations (Avg. All Categories) | <u>\$32,100</u> | <u>34.7%</u> | <u>5.7%</u> |
| Weighted Mean Annual Wage | \$32,100 | 100.0% | 16.5% |

**APPENDIX TABLE A-4
 AVERAGE ANNUAL COMPENSATION, 2007
 RESIDENT SERVICES WORKER OCCUPATIONS
 DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS - KITSAP COUNTY
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA**

| Occupation ³ | 2007 Avg. Compensation ¹ | % of Total Occupation Group ² | % of Total Resident Services Workers |
|---|--|--|--|
| <i>Construction and extraction occupations</i> | | | |
| First-line supervisors/managers of construction trades and extraction workers | \$67,600 | 8.9% | 0.2% |
| Carpenters | \$47,300 | 15.6% | 0.3% |
| Construction laborers | \$43,900 | 15.1% | 0.3% |
| Operating engineers and other construction equipment operators | \$41,700 | 5.6% | 0.1% |
| Electricians | \$53,900 | 8.8% | 0.2% |
| Painters, construction and maintenance | \$42,400 | 4.7% | 0.1% |
| Plumbers, pipefitters, and steamfitters | \$54,400 | 6.5% | 0.1% |
| All Other Construction and extraction occupations (Avg. All Categories) | <u>\$50,000</u> | <u>34.9%</u> | <u>0.8%</u> |
| Weighted Mean Annual Wage | \$50,000 | 100.0% | 2.2% |
| <i>Installation, maintenance, and repair occupations</i> | | | |
| First-line supervisors/managers of mechanics, installers, and repairers | \$69,600 | 8.2% | 0.4% |
| Automotive body and related repairers | \$43,100 | 8.2% | 0.4% |
| Automotive service technicians and mechanics | \$44,100 | 23.9% | 1.1% |
| Bus and truck mechanics and diesel engine specialists | \$48,500 | 4.0% | 0.2% |
| Maintenance and repair workers, general | \$38,200 | 21.9% | 1.0% |
| All Other Installation, maintenance, and repair occupations (Avg. All Categories) | <u>\$45,500</u> | <u>33.7%</u> | <u>1.5%</u> |
| Weighted Mean Annual Wage | \$45,500 | 100.0% | 4.4% |
| <i>Transportation and material moving occupations</i> | | | |
| Bus drivers, school | \$33,800 | 6.5% | 0.4% |
| Driver/sales workers | \$27,700 | 7.1% | 0.4% |
| Truck drivers, heavy and tractor-trailer | \$38,100 | 14.2% | 0.8% |
| Truck drivers, light or delivery services | \$28,300 | 12.5% | 0.7% |
| Parking lot attendants | \$21,300 | 4.4% | 0.2% |
| Cleaners of vehicles and equipment | \$23,000 | 9.5% | 0.5% |
| Laborers and freight, stock, and material movers, hand | \$26,800 | 16.5% | 0.9% |
| Packers and packagers, hand | \$21,400 | 6.2% | 0.3% |
| All Other Transportation and material moving occupations (Avg. All Categories) | <u>\$28,600</u> | <u>23.1%</u> | <u>1.3%</u> |
| Weighted Mean Annual Wage | \$28,600 | 100.0% | 5.6% |
| | | | 88.4% |

¹ Hourly paid employees are assumed to be employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week and 52 weeks per year.

² Occupation percentages are based on the 2006 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on 2006 Occupational Employment Survey data for the Bremerton-Silverdale MSA (Kitsap County) updated by the Washington State Employment Security Department to 2007 wage levels.

³ Including occupations representing 4% or more of the major occupation group.

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APPENDIX B: RENTAL UNITS NEXUS ANALYSIS

INTRODUCTION

This Appendix to the Residential Nexus Analysis report has been prepared by Keyser Marston Associates for the City of Bainbridge Island, pursuant to a contract with the City. In this Appendix, KMA presents the findings of a residential nexus analysis for new market rate rental units. The Appendix is designed to be read in conjunction with the main report, as all background and general explanatory information is contained in the body of the main report. This is not intended as a stand alone document.

This Appendix demonstrates an “essential nexus and rough proportionality” between the impact of new market rate rental units and the need for additional affordable housing (constitutional ‘takings’ analysis), and supports the conclusion that the program is “reasonably necessary as a direct result of” the new market rate units (RCW 82.02.020 tax, fee, or charge prohibition).

Recent Rental Market Activity

KMA reviewed project information and recent asking rents for apartment units on Bainbridge Island. Appendix Table B-1 at the end of this section presents a list of apartment projects, with information on rents and size, and rents per square foot. The information is from the Windermere Real Estate Company (provided in September 2007) and Sound Community Ventures (March 2007).

The information provided to Keyser Marston Associates suggests that a two-bedroom rental unit on Bainbridge Island ranges from 760 square feet to 1,150 square feet, and from \$750 per month to \$1,425 per month. The average two bedroom unit is around 1,000 square feet and \$1,000 per month. We would expect new apartment units to command a premium over these rent levels.

Prototypical Units

For the purposes of the analysis, KMA selected a rental prototype typical of what might be built on Bainbridge. Through discussions with the City and the Community Housing Coalition, it was determined that the two bedroom units at Lynwood Commons best approximates the current rental market. Again, we would expect an apartment project starting construction today (Winter 2008) would have to achieve higher rents to be feasible. The rental prototype, based on Lynwood Commons, is at follows:

| | Rental Units |
|-----------------|---------------------|
| Size | 950 sq.ft. |
| Rent per Sq.Ft. | \$1.16 |
| Rent per Month | \$1,100 |

Income of Renters

The next step in the analysis was to determine the income of the renting household of the prototypical unit. To make the determination, we assume that 30% of gross income is spent on rent. Appendix Table B-2 at the end of this section summarizes the analysis for the prototypical rental unit. The conclusion is that the renter of the \$1,100 apartment unit earns \$44,000 per year.

Disposable Income

The IMPLAN model used in this analysis is driven by disposable household income as the primary upfront input. To arrive at disposable income, gross income for residents of prototypical units must be adjusted downward to account for taxes and savings. Per KMA correspondence with the producers of the IMPLAN model (Minnesota IMPLAN Group), gross income was adjusted to disposable income for purposes of the model by deducting Federal Income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Other taxes including sales tax, gas tax, and property tax are handled internally within the model. The calculation of disposable income for the rental unit prototype is presented in Appendix Table B-3.

Disposable income was estimated at approximately 83% of gross income in the case of the market rate renter. The assumption for federal taxes was based on review of data from the Tax Policy Center (a joint venture of the Brookings Institution and the Urban Institute). Per the Tax Policy Center, households earning between \$40,000 and \$50,000 per year, or the residents of our prototypical rental units, will pay about 8.5% of gross income for federal taxes. The employee share of the FICA payroll taxes is 7.65% of gross income.

Savings represent another adjustment from gross income to disposable income. Savings including various IRA and 401 K type programs were estimated at 1.3% of gross income based on the projected average for U.S. households per a report "*Prospects for the U.S. Economy and Sectors*", by Global Insight, a company that produces forecasts of market and economic data. This savings rate is consistent with a Federal Reserve Bank paper, sourced in the footnote of Appendix Table B-3.

The gross income and disposable income of the households in the new market rate rental units are summarized below:

| | Rental Units |
|------------------------|---------------------|
| Gross Household Income | \$44,000 |
| Percent Disposable | 83% |
| Disposable Income | \$ 36,520 |

Summary

Appendix Table B-4 summarizes the key assumptions and steps from the market rate rental unit, to the annual income of the renting household, to the disposable income of the household. The disposable income, used to consume goods and services, is the generator of jobs and ultimately of the demand for more affordable housing for worker households.

**APPENDIX TABLE B-1
 RENTAL RATES
 RESIDENTIAL NEXUS ANALYSIS
 BAINBRIDGE ISLAND, WA**

| | <u>Unit Mix</u> | <u>Ba.</u> | <u>Bldg.SF</u> | <u>Rent</u> | <u>\$/SF</u> | |
|--------------------------------|-----------------|------------|----------------|----------------|---------------|-----------------------------------|
| TORMEY LANE | | | | | | |
| 1 Bedroom | | 1 | 670 | \$800 | \$1.19 | New Apartments |
| 2 Bedroom | | 1 | 900 | \$925 | \$1.03 | Source: Windermere |
| 3 Bedroom | | 2 | <u>1,100</u> | <u>\$1,200</u> | <u>\$1.09</u> | |
| | | | 890 | \$975 | \$1.10 | |
| CARMELIA APARTMENTS | | | | | | |
| 1 Bedroom Townhouse | | | 1,000 | \$1,050 | \$1.05 | Source: Windermere |
| 2 Bedroom | | 1 | 850 | \$950 | \$1.12 | |
| Three Bedroom | | 2 | <u>1,000</u> | <u>\$1,250</u> | <u>\$1.25</u> | |
| | | | 950 | \$1,083 | \$1.14 | |
| EAGLES NEST | | | | | | |
| 1 Bedroom | | | 735 | \$675 | \$0.92 | Source: Sound Community Ventures. |
| 1 Bedroom | | | 875 | \$725 | \$0.83 | |
| 2 Bedroom | | | <u>975</u> | <u>\$750</u> | <u>\$0.77</u> | |
| | | | 862 | \$717 | \$0.83 | |
| ISLAND HOMESTEAD | | | | | | |
| 2 Bedroom | | | 995 | \$995 | \$1.00 | Source: Sound Community Ventures. |
| 2 Bedroom | | | 1,040 | \$1,225 | \$1.18 | |
| 2 Bedroom | | | <u>1,150</u> | <u>\$1,425</u> | <u>\$1.24</u> | |
| | | | 1,062 | \$1,215 | \$1.14 | |
| LYNWOOD COMMONS | | | | | | |
| Studio | | | 650 | \$750 | \$1.15 | Source: Sound Community Ventures. |
| 1 Bedroom | | | 732 | \$850 | \$1.16 | |
| 1 Bedroom | | | 750 | \$875 | \$1.17 | |
| 2 Bedroom | | | 980 | \$1,100 | \$1.12 | |
| 2 Bedroom | | | 950 | \$1,100 | \$1.16 | |
| 2 Bedroom | | | 1,050 | \$1,200 | \$1.14 | |
| 3 Bedroom | | | <u>1,279</u> | <u>\$1,300</u> | <u>\$1.02</u> | |
| | | | 913 | \$1,025 | \$1.12 | |
| QUAY BAINBRIDGE | | | | | | |
| 1 Bedroom | | | 762 | \$650 | \$0.85 | Source: Sound Community Ventures. |
| 2 Bedroom | | | 906 | \$750 | \$0.83 | |
| 2 Bedroom | | | 1,068 | \$800 | \$0.75 | |
| 3 Bedroom | | | <u>1,134</u> | <u>\$900</u> | <u>\$0.79</u> | |
| | | | 968 | \$775 | \$0.80 | |
| WESTERN VIEW TERRACE | | | | | | |
| 2 Bedroom | | | 760 | \$750 | \$0.99 | Source: Sound Community Ventures. |
| ISLAND CROSSING | | | | | | |
| 1 Bedroom | | | 700 | \$995 | \$1.42 | Source: Sound Community Ventures. |
| HARBOR SQUARE | | | | | | |
| 1 Bedroom | | | 712 | \$1,150 | \$1.62 | Source: Sound Community Ventures. |
| AVERAGE, 2 BEDROOM UNIT | | | | | | |
| | | | 969 | \$998 | \$1.03 | |

APPENDIX TABLE B-2
RENTAL UNITS
ANNUAL RENT TO INCOME RATIO
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA

| | | | <u>Prototype Rental Unit</u> |
|---|------------|--------|----------------------------------|
| Market Rent | | | |
| Monthly | \$1.16 /SF | 950 SF | \$1,100 |
| Annual | | | \$13,200 |
| % of Income Spent on Rent (excludes utilities) | | | 30% |
| Annual Household Income Required | | | \$44,000 |
| Annual Rent to Income Ratio | | | 3.3 |

Source: City of Bainbridge Island.

**APPENDIX TABLE B-3
DISPOSABLE INCOME ¹
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| | Residents of Prototypical Rental Units |
|---|---|
| Gross Income | 100% |
| (Less) Average Federal Income Tax Rate ² | 8.5% |
| (Less) FICA Tax Rate ³ | 7.65% |
| (Less) Savings ⁴ | 1.3% |
| <i>Disposable Income ¹</i> | 83% |
| <i>(Input to IMPLAN model)</i> | |

Notes:

- ¹ As defined within the IMPLAN model. Includes all income except income taxes and savings.
- ² Per the Urban-Brookings Tax Policy Center (joint venture between the Brookings Institution and the Urban Institute).
- ³ Conservatively assumes all earners in each household will be below the ceiling applicable to social security taxes, currently \$102,000.
- ⁴ Projected based on the forecast of average U.S. household savings rate included in the RREEF publication: Prospects for the US Economy and Property Sectors. Page 7. November 8, 2006. Savings rate is consistent with the average U.S. household savings rate in 2000 per Maki, Dean M. and Palumbo, Michael G. Federal Reserve System Working Paper No. 2001-21. Disentangling the Wealth Effect: A Cohort Analysis of Household Savings in the 1990s. April 2001.

**APPENDIX TABLE B-4
RESIDENTIAL HOUSEHOLD SUMMARY
RESIDENTIAL NEXUS ANALYSIS
BAINBRIDGE ISLAND, WA**

| | | <u>Per Unit</u> | <u>Per 100 Units</u> |
|--|-----------------------|-----------------|--------------------------|
| Apartment Prototype | | | |
| Units | | | 100 Units |
| Building Sq.Ft. (net rentable or salable area) | | 950 | 95,000 |
| Rent | | | |
| Monthly | | \$1,100 | \$110,000 |
| Annual | | \$13,200 | \$1,320,000 |
| Gross Household Income | 30% allocated to rent | \$44,000 | \$4,400,000 |
| Disposable Household Income ¹ | 83% of gross | \$36,520 | \$3,652,000 |

Notes:

¹ Estimated income available after deduction of federal income, payroll taxes and savings. (Per discussions with the Minnesota IMPLAN group, sales tax and property tax are not deducted from disposable household income). See Table B2.

SECTION II – THE IMPLAN MODEL

Consumer spending by residents of new rental units will create jobs, particularly in sectors such as restaurants, health care, and retail that are most directly driven by the expenditures of residents. The widely used economic analysis tool, IMPLAN (IMpact Analysis for PLANning), was used to quantify these new jobs by industry sector. Please see Section II of the main report for more information about the IMPLAN model.

Application of the IMPLAN Model to Estimate Job Growth

IMPLAN was applied to link household consumption expenditures to job growth occurring within the region. Employment generated by the consumer spending of residents was analyzed for our prototypical 100-unit buildings. The IMPLAN model distributed spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate direct, indirect, and induced employment generated. Job creation, driven by increased demand for products and services, was projected for each of the industries which will serve the new households. The employment generated by this new household spending is summarized below.

| Jobs Generated per 100 Units | Rental Units |
|-------------------------------------|---------------------|
| Disposable Income | \$3,652,000 |
| Direct Impacts Only | 19.5 |
| Direct, Indirect, and Induced Jobs | 32.9 |

Appendix Table B-5 provides a detailed summary of employment generated by industry. The table shows industries sorted by projected employment. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of employment.

**APPENDIX TABLE B-5
EMPLOYMENT GENERATED
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

| | Per 100 Market Rate Units | | | |
|---|---------------------------|-----------|------------------------------------|-----------|
| | Direct Impacts Only | | Direct, Indirect & Induced Impacts | |
| | Rentals | % of Jobs | Rentals | % of Jobs |
| Disposable Income of New Residents¹ (after taxes & savings) | 3,652,000 | | 3,652,000 | |
| Employment Generated by Industry² | | | | |
| Food services and drinking places | 2.6 | 13% | 3.5 | 11% |
| Offices of physicians- dentists- and other health | 1.6 | 8% | 2.1 | 6% |
| Religious organizations | 1.1 | 6% | 1.4 | 4% |
| Social assistance- except child day care services | 1.0 | 5% | 1.3 | 4% |
| Private households | 0.9 | 5% | 1.1 | 3% |
| Hospitals | 0.7 | 4% | 0.9 | 3% |
| Automotive repair and maintenance- except car wash | 0.6 | 3% | 0.8 | 2% |
| Food and beverage stores | 0.6 | 3% | 0.8 | 3% |
| General merchandise stores | 0.6 | 3% | 0.8 | 3% |
| Motor vehicle and parts dealers | 0.5 | 3% | 0.7 | 2% |
| Miscellaneous store retailers | 0.5 | 3% | 0.7 | 2% |
| Civic- social- professional and similar organizations | 0.5 | 3% | 0.9 | 3% |
| Other amusement- gambling- and recreation | 0.5 | 3% | 0.6 | 2% |
| Wholesale trade | 0.4 | 2% | 0.7 | 2% |
| Nonstore retailers | 0.4 | 2% | 0.6 | 2% |
| Elementary and secondary schools | 0.3 | 2% | 0.4 | 1% |
| Other educational services | 0.3 | 2% | 0.4 | 1% |
| Nonstore retailers | 0.3 | 2% | 0.4 | 1% |
| Building material and garden supply stores | 0.3 | 2% | 0.5 | 1% |
| Sporting goods- hobby- book and music stores | 0.3 | 1% | 0.4 | 1% |
| Other ambulatory health care services | 0.3 | 1% | 0.4 | 1% |
| Child day care services | 0.3 | 1% | 0.0 | 0% |
| Other Federal Government enterprises ³ | 0.2 | 1% | 0.4 | 1% |
| Monetary authorities and depository credit intermediaries | 0.2 | 1% | 0.4 | 1% |
| Insurance carriers | 0.2 | 1% | 0.3 | 1% |
| Grantmaking and giving and social advocacy organizations | 0.2 | 1% | 0.0 | 0% |
| Clothing and clothing accessories stores | 0.2 | 1% | 0.0 | 0% |
| Fitness and recreational sports centers | 0.2 | 1% | 0.8 | 3% |
| Health and personal care stores | 0.2 | 1% | 0.0 | 0% |
| State & Local Education | 0.0 | 0% | 1.1 | 3% |
| State & Local Non-Education | 0.0 | 0% | 1.1 | 3% |
| Other Industries | 3.3 | 17% | 9.3 | 28% |
| | 19.5 | 100% | 32.9 | 100% |

¹ The IMPLAN model tracks how increases in consumer spending creates jobs in the local economy. See Appendix Table B-3 for estimates of the disposable income available to residents of 100 prototypical market rate units.

² For Industries representing more than 1% of total employment.

³ Reflects a downward adjustment to the IMPLAN model output to conservatively reflect impacts to federal government employment.

SECTION III – THE KMA NEXUS MODEL

This section presents a summary of the analysis linking the employment growth associated with residential development, or the output of the IMPLAN model (see Section II), to the estimated number of lower income housing units required in each of four income categories.

Analysis Approach and Framework

The analysis approach was to examine the employment growth for industries related to consumer spending by residents of the 100-unit residential building modules. Then, through a series of linkage steps, the number of employees was converted to households and housing units by affordability level. The findings are expressed in terms of numbers of households related to the 100-unit building modules.

The analysis addressed the affordable unit demand associated with both condominium and single family detached units on Bainbridge Island. The table below shows the Kitsap County income limits for the four income categories, ranging from less than 50% of Area Median Income to 95% - 120% of AMI, that were evaluated.

| | Household Size | | | | | |
|----------------------|----------------|----------|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 + |
| Income Limits | | | | | | |
| 50% of Median | \$23,000 | \$26,300 | \$29,550 | \$32,850 | \$35,500 | \$38,100 |
| 80% of Median | \$36,800 | \$42,050 | \$47,300 | \$52,550 | \$56,750 | \$60,950 |
| 95% of Median | \$43,700 | \$49,900 | \$56,150 | \$62,400 | \$67,400 | \$72,400 |
| 120% of Median | \$55,200 | \$63,100 | \$70,950 | \$78,850 | \$85,150 | \$91,450 |

The analysis was conducted using a model that KMA developed and has applied for similar evaluations in many other jurisdictions. The model inputs are all local data to the extent possible, and are fully documented in the following description. Please see Section III of the main report for a complete description of the nexus model.

Appendix Table B-6 presents the total number of new households generated by the new rental housing. KMA converted the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers must be reduced. The workers-per-worker-household ratio eliminated from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.58 workers per worker household (from the U. S. Census 2000) was used in the analysis. The number of jobs was divided by 1.58 to determine the number of worker households. (Average workers per total households is a lower ratio because all households are counted in the denominator, not just worker households; using average workers per total households produces greater demand for housing units.)

Appendix Table B-7 indicates the results of the analysis for each of the four lower income categories for the prototypical 100-unit rental project. The table presents the number of households in each affordability category and the total number over 120% of Area Median Income.

According to Appendix Table B-7, approximately 80% of new worker households have incomes below 120% of AMI, with most of these households earning less than 80% of AMI. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, employment is concentrated in lower paid occupations including administrative, retail sales, and food preparation.

Many of the higher-paying occupations in Kitsap County are not directly tied to consumer spending within Kitsap and therefore have a miniscule representation in the analysis. Technology firms and the U.S. Navy, for example, largely serve consumers beyond Kitsap.

In summary, for every 100 market rate rental units, there are 12.35 households earning less than 120% of AMI generated through the direct consumption of the homebuyers and 20.87 households generated through the direct, indirect, and induced consumption of the homebuyers.

Inclusionary Percentages Supported

Appendix Table B-8 translates the nexus results into inclusionary percentages. The inclusionary percentages are calculated by dividing the number of affordable units by the total number of market rate units. KMA calculated the inclusionary percentages assuming a program that assists households earning up to 120% AMI and one that assists households earning up to 80% of AMI. For rentals, the percentages range from 7% to 17% of units, depending on which income levels are considered and whether it includes indirect and induced impacts.

**APPENDIX TABLE B-6
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

PER 100 UNITS OF RESIDENTIAL HOUSING

| | Per 100 Market Rate Units | |
|---|---------------------------|------------------------------------|
| | RENTALS | |
| | Direct Impacts Only | Direct, Indirect & Induced Impacts |
| Step 1 - Employees ¹ | 19 | 33 |
| Step 2 - Adjustment for Number of Households (1.58) | 12 | 21 |
| Step 3 - Occupation Distribution ² | | |
| Management Occupations | 3% | 4% |
| Business and Financial Operations | 3% | 4% |
| Computer and Mathematical | 1% | 1% |
| Architecture and Engineering | 0% | 1% |
| Life, Physical, and Social Science | 0% | 1% |
| Community and Social Services | 3% | 2% |
| Legal | 0% | 1% |
| Education, Training, and Library | 3% | 5% |
| Arts, Design, Entertainment, Sports, and Media | 1% | 1% |
| Healthcare Practitioners and Technical | 8% | 6% |
| Healthcare Support | 5% | 4% |
| Protective Service | 1% | 2% |
| Food Preparation and Serving Related | 15% | 12% |
| Building and Grounds Cleaning and Maintenance | 6% | 6% |
| Personal Care and Service | 5% | 4% |
| Sales and Related | 14% | 13% |
| Office and Administrative Support | 15% | 16% |
| Farming, Fishing, and Forestry | 0% | 0% |
| Construction and Extraction | 0% | 2% |
| Installation, Maintenance, and Repair | 4% | 4% |
| Production | 2% | 2% |
| Transportation and Material Moving | 6% | 6% |
| Other / Not Identified | <u>2%</u> | <u>4%</u> |
| Totals | 100% | 100% |
| Management Occupations | 0.4 | 0.8 |
| Business and Financial Operations | 0.3 | 0.8 |
| Computer and Mathematical | 0.1 | 0.2 |
| Architecture and Engineering | 0.0 | 0.1 |
| Life, Physical, and Social Science | 0.1 | 0.1 |
| Community and Social Services | 0.3 | 0.5 |
| Legal | 0.1 | 0.1 |
| Education, Training, and Library | 0.4 | 1.0 |
| Arts, Design, Entertainment, Sports, and Media | 0.2 | 0.3 |
| Healthcare Practitioners and Technical | 1.0 | 1.3 |
| Healthcare Support | 0.7 | 0.9 |
| Protective Service | 0.1 | 0.3 |
| Food Preparation and Serving Related | 1.8 | 2.6 |
| Building and Grounds Cleaning and Maintenance | 0.8 | 1.2 |
| Personal Care and Service | 0.7 | 0.9 |
| Sales and Related | | 2.6 |
| Office and Administrative Support | 1.9 | 3.4 |
| Farming, Fishing, and Forestry | 0.0 | 0.0 |
| Construction and Extraction | 0.0 | 0.5 |
| Installation, Maintenance, and Repair | 0.6 | 0.9 |
| Production | 0.2 | 0.4 |
| Transportation and Material Moving | 0.7 | 1.2 |
| Other / Not Identified | <u>2.0</u> | <u>0.8</u> |
| Totals | 12.4 | 20.9 |

Notes:

¹ Estimated employment generated by household expenditures within 100 prototypical market rate units. Employment estimates are based on the IMPLAN Group's economic model, IMPLAN, for Kitsap County. See Table Appendix Table B5

² See Appendix Tables A1, A2, A3, and A4 for additional information from which the percentage distributions were derived.

**APPENDIX TABLE B-7
IMPACT ANALYSIS SUMMARY
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

**RESIDENTIAL UNIT DEMAND IMPACTS
PER 100 MARKET RATE UNITS**

| | Per 100 Market Rate Units | | | |
|----------------------------------|---------------------------|------|------------------------------------|------|
| | RENTALS | | | |
| | Direct Impacts Only | | Direct, Indirect & Induced Impacts | |
| Number of New Households | | | | |
| Under 50% Median Income | 1.42 | 11% | 2.09 | 10% |
| 50% to 80% Median Income | 5.20 | 42% | 8.15 | 39% |
| 80% to 95% Median Income | 1.76 | 14% | 2.95 | 14% |
| 95% to 120% Median Income | 1.83 | 15% | 3.36 | 16% |
| Subtotal through 120% of Median | 10.20 | 83% | 16.56 | 79% |
| Over 120% of Median Income | 2.16 | 17% | 4.32 | 21% |
| Total Employee Households | 12.35 | 100% | 20.87 | 100% |

**APPENDIX TABLE B-8
EMPLOYEE HOUSEHOLDS GENERATED
RESIDENTIAL NEXUS ANALYSIS - KITSAP CO.
BAINBRIDGE ISLAND, WA**

SUPPORTED INCLUSIONARY REQUIREMENT

| | <u>Direct Impacts Only</u> | <u>Direct, Indirect & Induced Impacts</u> |
|---|--------------------------------|---|
| THROUGH 80% AMI | | |
| Supported Inclusionary Requirement - Per 100 Market Rate Units | 7 Units | 10 Units |
| Supported Inclusionary Requirement Excluding Bonus Units ¹ | 7% | 10% |
| THROUGH 120% AMI | | |
| Supported Inclusionary Requirement - Per 100 Market Rate Units | 10 Units | 17 Units |
| Supported Inclusionary Requirement Excluding Bonus Units ¹ | 10% | 17% |

Notes:

¹ Consistent with the draft Bainbridge inclusionary ordinance, percentages are calculated as a percent of market rate units.