



MEMORANDUM

DATE: May 12, 2009

TO: Colin Cooper, Hillsboro Current Planning Supervisor

FROM: Bill Reid, Principal
JOHNSON REID, LLC

SUBJECT: AmberGlen Community Retail Capacity Analysis

During the course of AmberGlen Community Plan discussions with process advisory groups, the role of commercial retail development as a key ingredient to the success of the plan has been discussed. Questions remain, however, as stakeholder comments have pointed to some concern about the quantity and types of retail commercial appropriate for the AmberGlen plan. Specifically, concern has been expressed along the following lines:

- Too much commercial space would be unsupported by the AmberGlen plan and risk the entire community; and
- Retail categories that are redundant to nearby, existing commercial types would unacceptably dilute the market and again risk the community plan.

To address the above concerns, the City of Hillsboro asked JOHNSON REID to provide an analysis of commercial capacity for the AmberGlen Community Plan. Resulting analysis in this memorandum addresses the following questions in sequence:

1. What commercial retail capacity opportunity exists in present-day Hillsboro?
2. How much commercial retail demand is created by AmberGlen Community residents?
3. Of current and future commercial retail capacity, what types are most appropriate for the AmberGlen Community?

WHAT COMMERCIAL RETAIL CAPACITY OPPORTUNITY EXISTS IN PRESENT-DAY HILLSBORO?

To determine the existence of capacity for additional retail development in Hillsboro, a “Retail Gap” analysis was conducted for the incorporated City area. A Retail Gap analysis comprises the following calculation:

$$(\text{Hillsboro Resident Commercial Spending}) - (\text{Hillsboro Retail Business Revenues}) = \text{City Retail Gap}$$

For any particular year, 2008 for this analysis, potential commercial retail capacity or “gap” exists if resident spending exceeds reported retail sales by local businesses. In that case, Hillsboro residents are shopping or dining outside of the city because of a lack of commercial choices in Hillsboro or superior offerings elsewhere. This “gap” represents commercial activity potentially retained within Hillsboro if additional and/or more diverse retail commercial capacity existed for residents.

Alternatively, negative retail “gap” denotes commercial categories where Hillsboro businesses are successfully attracting spending by residents of other communities in excess of spending potential by Hillsboro residents. “Negative” in this case is somewhat of a misnomer because it does denote commercial success. However, for this analysis, negative “gap” represents commercial categories with limited potential for additional development because significant development and sales already exist in excess of local spending.

Figure 1 on the following page provides a detailed comparison of resident spending, local sales, and “gap.”



FIGURE 1: RETAIL SPENDING AND GAP BY CATEGORY \$MIL (2008)

	Resident Expenditures 1/	Retail Sales 2/	Retail Opportunity
Total Retail Sales	\$1,460.2	\$1,464.0	(\$3.8)
Motor Vehicle and Parts Dealers	\$294.6	\$321.8	(\$27.2)
Automotive Dealers	254.3	255.8	(1.6)
Other Motor Vehicle Dealers	18.8	42.4	(23.6)
Automotive Parts/Accsrs, Tire Stores	21.5	23.6	(2.0)
Furniture and Home Furnishings Stores	\$36.0	\$16.2	\$19.9
Furniture Stores	20.1	8.9	11.1
Home Furnishing Stores	16.0	7.3	8.7
Electronics and Appliance Stores	\$36.6	\$29.8	\$6.8
Appliances, TVs, Electronics Stores	27.8	25.9	1.8
Household Appliances Stores	5.6	5.5	0.1
Radio, Television, Electronics Stores	22.1	20.4	1.7
Computer and Software Stores	7.5	3.9	3.6
Camera and Photographic Equipment Stores	1.4	0.0	1.4
Building Material, Garden Equip Stores	\$145.2	\$136.0	\$9.3
Building Material and Supply Dealers	133.4	134.7	(1.3)
Home Centers	53.4	68.5	(15.0)
Paint and Wallpaper Stores	2.9	3.4	(0.5)
Hardware Stores	11.6	0.0	11.6
Other Building Materials Dealers	65.5	62.9	2.7
Building Materials, Lumberyards	22.7	21.4	1.3
Lawn, Garden Equipment, Supplies Stores	11.8	1.2	10.5
Outdoor Power Equipment Stores	1.7	0.0	1.7
Nursery and Garden Centers	10.1	1.2	8.8
Food and Beverage Stores	\$177.6	\$203.2	(\$25.6)
Grocery Stores	160.9	196.0	(35.1)
Supermarkets, Grocery (Ex Conv) Stores	153.0	190.4	(37.4)
Convenience Stores	7.9	5.7	2.2
Specialty Food Stores	5.1	2.1	3.0
Beer, Wine and Liquor Stores	11.6	5.0	6.6
Health and Personal Care Stores	\$59.4	\$21.6	\$37.8
Pharmacies and Drug Stores	51.3	15.9	35.4
Cosmetics, Beauty Supplies, Perfume Stores	1.9	0.0	1.9
Optical Goods Stores	2.6	3.0	(0.4)
Other Health and Personal Care Stores	3.6	2.6	0.9
Gasoline Stations	\$155.0	\$96.6	\$58.4
Gasoline Stations With Conv Stores	116.7	31.4	85.3
Other Gasoline Stations	38.3	65.2	(26.9)
Clothing and Clothing Accessories Stores	\$73.0	\$188.7	(\$115.7)
Clothing Stores	52.5	178.6	(126.2)
Men's Clothing Stores	3.5	7.8	(4.3)
Women's Clothing Stores	13.2	12.5	0.7
Childrens, Infants Clothing Stores	3.0	4.2	(1.2)
Family Clothing Stores	28.2	148.5	(120.2)
Clothing Accessories Stores	1.2	0.2	1.0
Other Clothing Stores	3.4	5.5	(2.1)
Shoe Stores	9.8	1.8	8.0
Jewelry, Luggage, Leather Goods Stores	10.7	8.3	2.5
Jewelry Stores	9.9	8.1	1.8
Luggage and Leather Goods Stores	0.8	0.1	0.7
Sporting Goods, Hobby, Book, Music Stores	\$31.3	\$43.7	(\$12.4)
Sporting Goods, Hobby, Musical Inst Stores	21.3	33.3	(12.0)
Sporting Goods Stores	11.2	22.1	(10.9)
Hobby, Toys and Games Stores	6.5	4.6	1.9
Sew/Needlework/Piece Goods Stores	1.6	3.8	(2.2)
Musical Instrument and Supplies Stores	2.1	2.8	(0.7)
Book, Periodical and Music Stores	10.0	10.4	(0.5)
Book Stores and News Dealers	6.6	1.9	4.7
Book Stores	6.3	1.9	4.4
News Dealers and Newsstands	0.3	0.0	0.3
Prerecorded Tapes, CDs, Record Stores	3.4	8.5	(5.1)
General Merchandise Stores	\$178.4	\$195.7	(\$17.3)
Department Stores Excl Leased Depts	85.7	57.9	27.8
Other General Merchandise Stores	92.7	137.8	(45.0)
Warehouse Clubs and Super Stores	79.6	116.3	(36.8)
All Other General Merchandise Stores	13.2	21.4	(8.3)
Miscellaneous Store Retailers	\$37.8	\$45.5	(\$7.7)
Florists	2.6	2.7	(0.2)
Office Supplies, Stationery, Gift Stores	15.5	18.8	(3.3)
Office Supplies and Stationery Stores	8.7	14.4	(5.7)
Gift, Novelty and Souvenir Stores	6.7	4.4	2.3
Used Merchandise Stores	3.4	4.2	(0.9)
Other Miscellaneous Store Retailers	16.4	19.8	(3.4)
Non-Store Retailers	\$91.5	\$31.1	\$60.4
Electronic Shopping, Mail-Order Houses	67.6	25.6	42.0
Vending Machine Operators	3.7	0.0	3.7
Direct Selling Establishments	20.2	5.5	14.7
Foodservice and Drinking Places	\$143.8	\$134.2	\$9.5
Full-Service Restaurants	66.2	42.2	24.0
Limited-Service Eating Places	58.4	80.4	(21.9)
Special Foodservices	12.0	6.8	5.2
Drinking Places -Alcoholic Beverages	7.1	4.8	2.3

□ In 2008, Hillsboro residents spent a total of \$1.460 billion within and outside of Hillsboro. The average household in Hillsboro spent approximately \$49,278 on retail goods according to data from Claritas, Inc, a statistical data and research consulting firm and the U.S. Census Bureau.

□ Hillsboro-located commercial retail businesses reported an estimated \$1.464 billion in sales in 2008.

□ Overall, Hillsboro consumer retail businesses attracted \$3.8 million in spending in excess of resident spending potential.

Total retail sales figures indicate that across all categories of retail commercial, additional retail capacity may not exist. However, examination of detailed, individual retail category information determines many types of commercial opportunity do exist based on a lack of local sales relative to resident spending.

Categories of retail spending where additional commercial space capacity likely exists are slightly shaded and denoted by positive “gap” opportunity estimates in Figure 1 to the left. Categories of additional commercial opportunity include:

- All categories of furniture and furnishings;
- Most categories of electronics and appliance stores;
- Many hardware and gardening/outdoor stores;
- Convenience, specialty food, and beverage stores;
- Drug stores, cosmetics and personal care;
- Clothing and apparel stores;
- Book stores and periodicals; *and*
- Restaurants and dining.

Findings do indicate some capacity for department store retail, but we find the estimate likely results from a sales data misattribution to “Clothing Stores” and “Family Clothing Stores” by Claritas, Inc., the data provider.



Source: Claritas, Inc.

1/ Data from the Consumer Expenditure Survey which reflects expenditures made by Hillsboro residents.

2/ Business revenues for Hillsboro-located firms in 2008.

HOW MUCH COMMERCIAL RETAIL DEMAND IS CREATED BY AMBERGLEN COMMUNITY RESIDENTS?

In addition to potential, existing capacity demonstrated in Figure 1 on the previous page, residents of the AmberGlen Community can be expected to drive demand for commercial retail offerings within the community itself. Figure 2 below provides a detailed analysis of total commercial retail spending driven by community residents and resulting and potential commercial space demand at full build-out. Two build-out scenarios were considered given currently unknown final residential unit counts for the community plan: 4,000 households, and 6,000 households.

FIGURE 2: COMMERCIAL RETAIL SPENDING AND SPACE DEMAND SUPPORTED IN THE AMBERGLEN COMMUNITY \$MIL (2008)

Retail Commercial Category (NAICS)	Per Household Spending 1/	Hillsboro Retail Spending \$mil (AmberGlen Households)		Sales Support Factor 2/	Supported Retail Demand (SF) 3/ (AmberGlen Households)	
		4,000	6,000		4,000	6,000
441 Motor Vehicles and Parts Dealers	\$9,091	\$36.4	\$54.5	\$171	234,000	351,000
442 Furniture and Home Furnishings Stores	\$1,112	\$4.4	\$6.7	\$213	23,000	34,500
443 Electronics and Appliance Stores	\$1,128	\$4.5	\$6.8	\$246	20,200	30,300
444 Building Materials and Garden Equipment	\$4,481	\$17.9	\$26.9	\$157	125,200	187,800
445 Food and Beverage Stores	\$5,480	\$21.9	\$32.9	\$384	62,800	94,300
446 Health and Personal Care Stores	\$1,833	\$7.3	\$11.0	\$283	28,500	42,800
448 Clothing and Clothing Accessories Stores	\$2,254	\$9.0	\$13.5	\$267	37,200	55,700
451 Sporting Goods, Hobby, Book and Music Stores	\$966	\$3.9	\$5.8	\$240	17,700	26,600
452 General Merchandise Stores	\$5,504	\$22.0	\$33.0	\$171	141,700	212,500
453 Miscellaneous Store Retailers	\$1,166	\$4.7	\$7.0	\$236	21,700	32,600
722 Foodservices and Drinking Places	\$4,435	\$17.7	\$26.6	\$290	67,200	100,900
Totals/Weighted Averages	\$37,450	\$149.8	\$224.7		779,200	1,169,000
Non-Automotive, Non-General Merchandise	\$22,855	\$91.4	\$137.1		403,500	605,500

	Capture	Community-Captured Spending (SF)	
If AmberGlen Residents Spent:	75%	302,600	454,100
	50%	201,800	302,800
	25%	100,900	151,400

1/ Claritas, Inc. based on the U.S. Department of Commerce Consumer Expenditure Survey (CES)

2/ 2007 Dollars & Cents of Shopping Centers, Urban Land Institute

3/ Implicitly assumes a structural vacancy rate of 10% for commercial space

SOURCE: JOHNSON REID, LLC

- At full build-out, AmberGlen Community residents are estimated to spend between \$149.8 million (4,000 households) and \$224.7 million (6,000 households) on commercial retail offers annually in current dollars.
- Excluding automobile sales/parts and general merchandise because of incompatible formats (auto-dependent, typically large format), AmberGlen Community residents are estimated to spend between \$91.4 million (4,000 households) and \$137.1 million (6,000 households) at likely community plan-consistent commercial offerings annually in current dollars.
- Community-consistent commercial type demand translates into resident-supported commercial space demand ranging from 403,500 square feet (4,000 households) to 605,500 square feet (6,000 households).

Although resident-supported demand for commercial space is estimated between 403,500 and 605,500 square feet, the figures are very aggressive for AmberGlen community planning purposes. Although retail offerings may be compelling at AmberGlen, it is of course unreasonable to assume residents would spend all of their disposable income on-site. The bottom of Figure 2 provides resident-supported commercial demand at the AmberGlen Community if a local spending capture adjustment is made.

- Rather optimistically, if 75% of annual resident spending were captured within the community, between 302,600 and 454,100 square feet could be supported.
- Far more conservative, but more sustainable, would be a 25% capture rate for local resident spending resulting in supportable commercial retail space demand ranging from 100,900 to 151,400 square feet.



We would note that the above estimates of community-supportable retail space demand assume AmberGlen Community residents alone substantiate documented retail space need. It is also true that daytime population (employment and commuter stops) as well as non-resident spending (park visitors, community visitors, etc.) would also add to demand for commercial offerings on-site. However, such offerings would be more destination-oriented in nature and may not be planned for accommodation due to desire for transit-oriented development, pedestrian and bicycle orientation with limited automobile traffic conflicts. Accordingly, we would view the estimates in the bottom of Figure 2 as a sustainable commercial retail base case for the community.

WHAT TYPES OF COMMERCIAL RETAIL CAPACITY ARE MOST APPROPRIATE FOR THE AMBERGLEN COMMUNITY?

Planning Policy and Commercial Implications

As the AmberGlen Community Plan is revisited and commercial use designations are considered, planning guidelines for the district, though policy in nature, must be understood for their impact upon the viability and orientation of achievable commercial development on-site. Several factors in community planning will specifically indicate the orientation of commercial offerings on-site:

- *Commercial Destination?:* The nexus of Walker and Cornell, The Streets at Tanasbourne, the Tanasbourne commercial center, the planned Kaiser Permanente Westside Medical Center, and nearby medical office uses will continue to prove strong attractors for the nearby AmberGlen Community. A split diamond interchange at 185th & Sunset Highway further cements the district as a potential visitor destination. It is therefore highly plausible that the distinctive high-density residential development pattern ringing a centerpiece park will pose significant commercial gravity in support of higher base commercial development estimates expressed at the bottom of Figure 2.
- *Self-Sustaining Community?:* Alternatively, significant traffic access to and through the AmberGlen Community, if not thoughtfully planned, will result in pedestrian conflicts and noise that may impact the viability of various residential forms and urban-oriented commercial development intended for the district. Accordingly, policy preference may legitimately be expressed in terms of less dependence and accommodation for automobile-oriented visits, though supportable commercial development will be in the lower range of estimates at the bottom of Figure 2.
- *Daytime District or 16-Hour District?:* A key determinant in urban district success will be the offering of shopping, dining and entertainment for a full day duration. In other words, residents of high-density districts come to expect a reasonably wide variety of amenities nearby and at a variety of times during the day. This, in turn, places greater emphasis on the need for entertainment-oriented commerce to succeed in the district to maintain other later-evening dining and retail opportunities. A 16-hour district, however, will in turn be more of an attractor to outside residents and traffic and must be considered.
- *Aggregation of Commercial Amenity?:* The immediate access and visibility of the north end of the Community area along Walker poses a strength for attracting commercial retail development associated with and supported by higher-density residential development nearby and spreading south along the designated park space. The advantage will be earlier viability for appropriately scaled and oriented commercial development as visitor traffic will help substantiate feasibility of space. However, it must also be acknowledged that aggregation of commercial space to the north along Walker comes at the cost of convenience for residents further from the commercial core, particularly to the south and at the distant end of the park. The result is diminishing, if not negligible, positive impact of commercial aggregation at the north end of the park.
- *Dispersion of Commercial Amenity?:* Commercial development spread throughout the plan, or at least dispersed instead of one aggregation at the north end, will be far more convenient for residents of planned residential development and likely enhance viability of residential forms as a result. A longer, thin park also enhances pedestrian access to commercial opportunity in buildings across the



park. Alternatively, dispersed commercial retail has lower retail gravity, typically has higher risk associated, and therefore frequently poses higher financial risk to commercial development viability. Basic Urban Commercial Retail Orientation

In our study¹ of urban amenities and their impact upon mixed-use redevelopment in centers throughout the Portland Metro area, JOHNSON REID found a menu of commercial amenities common to nearly all districts studied. Further analysis indicated which commercial offerings actually have measurable impact upon residential purchase decisions. However, the mere common presence of the various amenities does certainly indicate district resident preferences for shopping and services in higher-density environments. Figure 3 below, taken from the Urban Living Infrastructure study, indicates the types of retail common to districts and their general descriptions.

FIGURE 3: COMMERCIAL RETAIL OFFERINGS COMMON TO PORTLAND METRO URBAN RESIDENTIAL DISTRICTS

#	Observed Urban Amenity	Description
1	Bakery	Gourmet or organic bakery for on-site or off-site consumption
2	Bar or Pub	A bar, pub or tavern specifically for on-site alcoholic beverages
3	Bicycle Shop	A retailer of new, used, and specialty bicycles and repair services
4	Book Shop	Independent or specialty secular bookshop possibly with café
5	Boutique Shop	Specialty/boutique retailer, typically clothes, baby items, or personal care
6	Brewpub	Alcoholic beverages served with on-site beer and/or spirits made
7	Bistro	Bistro or small sit-down restaurant - desserts and coffee featured
8	Coffee/Esspresso	Coffee and espresso drinks with some on-site pastry/food sales
9	Fitness Gym	Private membership fitness/training centers or gyms
10	Garden Store	Garden supply, flower sales and garden art
11	Cinema	Single-screen downtown marquee cinema
12	Music Shop	Local/independent music shop, typically non-mainstream music
13	Gourmet/Exotic Restaurant	Unique full-service restaurant with specialty/chef-driven cuisine
14	Spa	Full-service spa, typically offering massage, aromatherapy, etc.
15	Specialty Grocer	Grocers with mix of traditional, organics, specialty, and deli/prepared
16	Wine Bar or Shop	On-site wine consumption, extensive selection for off-site, limited food

SOURCE: JOHNSON REID, LLC

With the possible exception of a specialty grocer (New Seasons, Whole Foods, etc.), cinema or a larger, destination brewpub, the vast majority of individual retail commercial offerings identified in other districts were smaller (10,000 square feet or smaller) and neighborhood or community-oriented, not regional retail in orientation even though districts such as Sellwood, Multnomah Village and others in aggregate have become shopping destinations due to the eclectic nature of the districts. In other words, limited parking, convenient to pedestrians and transit, and strong likely patronization of nearby residents were common. Analysis by JOHNSON REID, in fact, identified that commercial amenities most strongly impact residential redevelopment viability if they are within 1.5 blocks (330 feet) of the residential project.

CONCLUSIONS

JOHNSON REID conducted analysis and provided resulting discussion to answer three key questions regarding commercial retail need and capacity in support of revisiting the AmberGlen Community Plan. Each question, followed by a summary of findings is provided below:

1. What commercial retail capacity opportunity exists in present-day Hillsboro?

Although we find that Hillsboro overall is a retail destination for residents and non-residents, we also find that five traditional store-oriented retail categories (Furniture/Home Furnishings, Electronics/Appliances, Building Materials/Garden, Health/Personal Care, Dining/Beverage Services)

¹ "Urban Living Infrastructure: Marginal Impact of Selected Urban Amenities on Residential Pricing" for the Metro Transit-Oriented Development Program, 2007.



demonstrate measurable retail “gap” whereby City residents are patronizing these categories outside of the City of Hillsboro and likely signal commercial opportunity under broadly positive financial conditions. Details of all specific retail and service categories identified to have current opportunity are found in Figure 1.

2. How much commercial retail demand is created by AmberGlen Community residents?

We find that if commercial retail configuration in the AmberGlen Community Plan aims to capture up to 50% of resident spending – optimistically – supported retail space in the community ranges from roughly 201,800 square feet (4,000 residential units) to 302,800 square feet (6,000 residential units).

More conservatively, if on-site commercial offerings capture at least 25% of community resident spending, the community can support between 101,000 square feet (4,000 residential units) and 151,400 (6,000 residential units).

The above commercial space estimates only reflect support by AmberGlen Community residents and do not assume support from non-residents (daytime traffic, destination shopping, etc.). Estimates are intended as a sustainable basis of commercial need and additional space demand would be determined by policy decisions by the City regarding the destination nature of the district and resulting traffic accommodation.

3. Of current and future commercial retail capacity, what types are most appropriate for the AmberGlen Community?

Before final commercial orientation can be determined, we find that policy questions should be settled regarding the desired format of commerce in relation to AmberGlen Community residential plans and transportation plans. Specifically:

- Is the Community a Destination (Higher Commercial) or Self-Sustaining (Lower Commercial)?
- Is the Community a Daytime District (Lower Commerce, Lower Residential Viability) or a 16-Hour District (Higher Commerce, Higher Residential Viability)?
- Is Commercial Aggregated (Higher Commercial Space and Viability, Likely Lower Residential Viability Impact) or Dispersed (Lower Commercial Space and Viability, Likely Higher Residential Viability Impact)?

The following resulting matrix summarizes policy choice and likely feasibility impact regarding the orientation of commercial space planned at the AmberGlen Community.

FIGURE 4: COMMERCIAL SPACE POLICY & LIKELY VIABILITY IMPACT MATRIX

Commercial Orientation	Commercial Viability		Residential Viability	
	Enhanced	Reduced	Enhanced	Reduced
Destination	✓			Traffic Planning Key
Self-Sustained		✓		Traffic Planning Key
Daytime		✓		✓
16-Hour	✓		✓	
Aggregated	✓			✓
Dispersed		✓	✓	

It was also found that a common menu of commercial retail offerings is found in other downtown-type urban centers in the Portland metro area, the majority of which are smaller-oriented retail individually following a neighborhood or community center pattern (Figure 3). In aggregate, however, such as Sellwood or Multnomah Village, smaller commercial offerings are identified as a distinct, whole destination shopping district for non-resident households.



CONCLUSIONS

Ultimately, commercial retail policy orientation and configuration preferences must generally be decided to then determine specifics of commerce and residential interface in the AmberGlen Community Plan.

However, concurrent with this retail analysis is a financial analysis and comparison between mid-rise and high-rise mixed-use project viability. The impact of park space amenity as well as different retail commercial (urban living infrastructure) amenity upon the viability of mid-rise or high-rise forms has been explored. Please refer to that related memorandum by JOHNSON REID, LLC for detailed findings.



MEMORANDUM

DATE: May 14, 2009

TO: Colin Cooper, Hillsboro Current Planning Supervisor

FROM: Bill Reid, Principal
JOHNSON REID, LLC

SUBJECT: Viability Comparison of Mid-Rise & High-Rise Residential Development

An emerging concern during the AmberGlen Community Plan process has been the ultimate viability of high-rise residential development as originally planned and the need for greater emphasis on mid-rise residential development in the plan. While the intention of either is certainly a planning policy decision, the economics of high-density residential development and its potential difficulties in a suburban environment - rather than an urban, city center environment - will certainly factor into the actual realization of intended forms.

Accordingly, the City of Hillsboro has retained JOHNSON REID to provide an analysis of the economic viability of high-density residential (re)development in the AmberGlen Community Plan. Findings from economic analysis are intended to inform planning policy decisions for the community moving forward, as well as to understand what public involvement may be required in the future to help overcome economic obstacles to higher-density redevelopment feasibility if they should be expected.

To address the question of economic viability of high-rise and mid-rise residential forms in the AmberGlen Community Plan, JOHNSON REID specifically provides analysis to answer four key questions:

1. How do the economics of mid-rise residential and high-rise residential generally compare?
2. How does the viability of mid-rise and high-rise residential compare in Hillsboro?
3. What difference does central park and commercial amenity make?
4. How does redevelopment of existing improvements differ from vacant parcel development?

HOW DO THE ECONOMICS OF MID-RISE RESIDENTIAL & HIGH-RISE RESIDENTIAL GENERALLY COMPARE?

To answer the key questions in this analysis, we model condominium units assuming two alternative development forms: mid-rise lightweight steel construction and high-rise concrete and steel construction. Cost estimates for mid-rise and high-rise construction are based on data from R.S. Means. Cost data for low-rise condominium construction have been included for comparison purposes, but are likely high as the construction type is concrete-based rather than wood-frame, the preferable construction type from a cost perspective. We would anticipate that wood-frame construction is achievable at \$80 per square foot, or roughly 33% below costs expressed in Figure 1.

FIGURE 1: LOW-, MID- AND HIGH-RISE CONDOMINIUM DEVELOPMENT CONSTRUCTION COSTS (2009 UNION WAGES)

Condominium	Units	Average		Total	Project Cost	Cost/Unit	Cost/Sq. Ft.
		Sq. Ft./Unit	Space	Space			
Low-Rise	100	1,000	100,000	100,000	\$11,987,000	\$119,870	\$120
Mid-Rise	100	935	110,000	110,000	\$18,355,000	\$183,550	\$167
High-Rise	250	850	250,000	250,000	\$53,111,000	\$212,444	\$212

SOURCE: R.S. Means and Johnson Reid, LLC



The following definitions are used to clearly delineate the three classes of residential construction:

- Low-Rise: Up to four stories of wood-frame, attached residential product overwhelmingly utilizing surface parking. Hillsboro code does allow four stories over concrete podium with tuck-under parking, however.
- Mid-Rise: 4 to 6 stories of concrete and steel construction, attached residential product usually depending upon structured parking.
- High-Rise: 7 or more stories of concrete and high-load steel construction overwhelmingly dependent upon structured parking, though usually occurring in highly dense areas where parking ratios are reduced.

While more than double the number of units is achieved (250 versus 100) in a high-rise development versus a mid-rise development, the cost of construction is substantially higher requiring a much higher level of pricing in order to be viable. Significant per-unit and per-square foot cost transition occurs between each general structure class as largely wood-frame in low-rise gives way to increasingly costly steel-based engineering. High-rise construction (seven or more stories) is seen primarily in the Pearl and South Waterfront Districts, which have the highest supportable price levels and land values.

As a means of comparison, it is helpful to consider how the cost for condominium development compares to pricing currently available in the market:

- Recent estimates of closed sales of new construction in Hillsboro since the beginning of the year indicate attached units sell on average at \$140 per square foot (higher than the cost of low-rise construction but lower than the cost of mid-rise construction).
- The average sale price for the same period in Washington County is approximately \$159 per square foot.
- Attached units in the Inner Westside (Central City Portland) have recently sold for \$335 per square foot during the same period.

It is important to note that mid-rise residential, much less high-rise residential, is significantly lacking in both the Hillsboro market as well as the greater Washington County/Westside area. The lack of mid- and high-rise developments complicates analysis of sales prices necessary for higher-density development because no true case study examples exist. Alternatively, lack of existence of such examples is also an indicator of the likely difficult economics of mid-rise and high-rise residential.

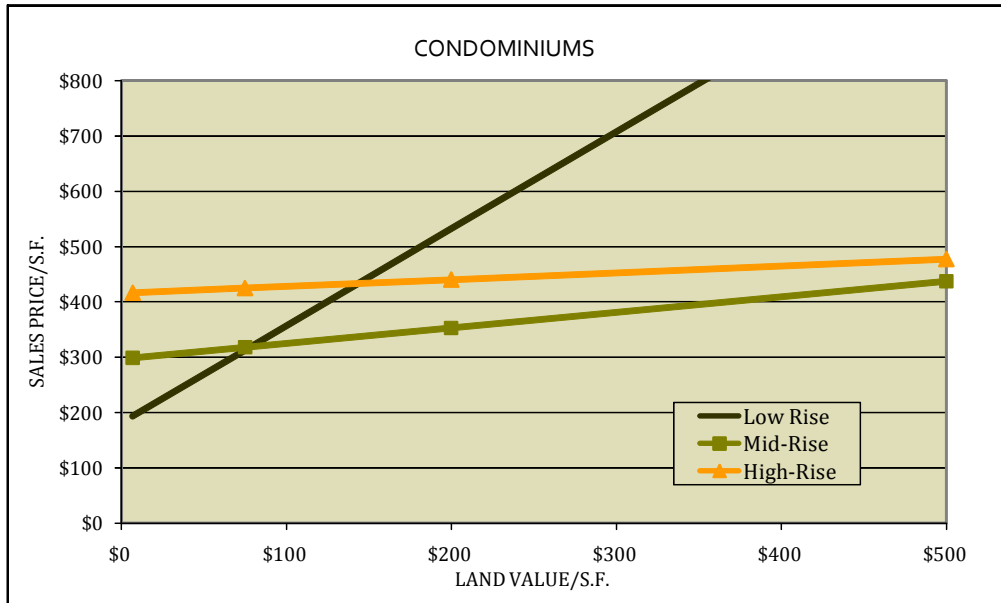
Figure 2 illustrates the relationship between condominium sale price (per square foot), land prices (per square foot), and highest and best use. As land value increases, moving right along the horizontal axis, highest and best use is denoted by the lowest line on the chart, which represents lowest price a home buyer would have to pay.

Currently, at an average sales price of \$140 per square foot, Hillsboro is well below the pricing necessary to motivate private development of mid-rise construction.

Under the assumptions used, wood-frame condominium units are able to pay the highest land values when the achievable sales prices are \$300 per square foot or below. When pricing rises above this level, mid-rise housing delivers the highest residual land values up to about \$400 per square foot, when high-rise development becomes the highest and best use assuming a developer would require no less than 15% return on cost for the risk of development.



FIGURE 2: PRICING MINIMUMS (\$/SQ. FT.) BY LAND VALUE AND BUILDING TYPE



Source: Johnson Reid, LLC

In Figure 2, as land values rise, the construction cost advantage of lower density construction is offset by the higher land costs associated with lower intensity of use. Construction costs per square foot tend to increase as densities increase, with higher costs associated with shifts to concrete and steel construction. In general, the increase in either sales price or achievable lease rates associated with alternative construction type is insufficient to offset the higher costs. The key benefit from a financial perspective of changing densities through construction type is a higher yield, in terms of leasable square footage or units, associated with a particular land parcel. As a result, higher underlying land values can change the financial equation to favor higher density development forms.

HOW DOES THE VIABILITY OF MID-RISE & HIGH-RISE COMPARE IN HILLSBORO?

The key challenge illustrated by previous analysis is that the development of mid-rise residential and even higher-density projects in most suburban areas usually requires pricing not currently attainable in those markets. While a regulatory action setting minimum densities that precluded low-rise condominiums would make mid-rise construction the highest and best use of the property, no development activity would be expected to occur without substantive subsidy. Rising achievable sales prices, or rents in the case of apartments, would cause mid-rise development to make financial sense. But precluding development until achievable rent levels rise would not support the development necessary to provide the amenity level required for higher rents.

To specifically illustrate financial viability regarding higher-density development slated for the AmberGlen Community Plan, a series of prototypical pro formas were generated to contrast the financial viability of mid-rise condominium development and high-rise condominium development. Figure 3 on the following page provide a summary of results. Before exploring results and their implications, the following assumptions must be understood:

- *Mid-Rise Condominiums Prototype:* 100 residential units on a one-half acre parcel.
- *High-Rise Condominiums Prototype:* 250 residential units on a one-half acre parcel.



- *Land and Price Characteristic:* In both cases, a one-half acre vacant parcel at a cost of \$10 per square foot consistent with vacant parcel market price in the AmberGlen Community study area according to the Washington County Assessor's Office.
- *Mid-Rise Development Cost:* \$167 per square foot consistent with Figure 1 and reflective of concrete and steel frame construction.
- *High-Rise Development Cost:* \$212 per square foot consistent with Figure 1 and reflective of higher-load concrete and steel frame construction.
- *Residential Price Assumption:* JOHNSON REID assumed all residential units achieve a base price of \$215 per square, which is rather optimistic for the Hillsboro and Washington County market currently demonstrating \$140 per sq. ft. to \$160 per sq. ft. We view it in the realm of possibility, however, or at least reflective of a potential unit sale price over a five-year time period.

To answer the viability comparison question, please refer to the "Baseline" scenario for mid-rise and high-rise development in Figure 3. The "Baseline" scenario analyzes project financials without consideration for either park space or commercial amenity premiums as previously discussed in JOHNSON REID analysis. Implications of park space and urban commercial amenity are explored in the next section.

Key figures for consideration in Figure 3 are numbered in the far left hand column and discussed below:

- ① The overall project cost, including land acquisition and construction costs, for a high-rise unit is approximately 26% higher than that for a mid-rise unit.
- ⑤ Net pre-tax profit for both mid-rise and high-rise construction under the "Baseline" scenario is negative, indicating optimistic sales prices and sales revenue (④) assumed in this analysis is not enough to justify development costs (①).
- ⑥ Return on cost, or net pre-tax profit (⑤) divided by overall project cost (①), is negative for both mid-rise (-17.5%) and high-rise (-40.7%), but certainly lower for the former. In other words, neither form is feasible all else equal.
- ⑦ Indicated Viability Gap indicates the extent to which pre-tax profit falls short in ensuring at least a 15% return for the developer's risk in the project. The viability gap for both mid-rise and high-rise is significant, all else equal, but mid-rise certainly comes closer than high-rise to meeting the 15% return on cost threshold.



FIGURE 3: STATIC PRO FORMA EVALUATION OF MID-RISE AND HIGH-RISE CONDOMINIUM DEVELOPMENT IN HILLSBORO

	Mid-Rise Condominium		High-Rise Condominium	
	Baseline	W/Premiums	Baseline	W/Premiums
PROJECT DETAILS				
Number of Units:	100	100	250	250
LAND ACQUISITION				
Assumed Density (Units/Acre):	200	200	500	500
Land Price/SF:	\$10	\$10	\$10	\$10
Land Acquisition:	\$217,800	\$217,800	\$217,800	\$217,800
Construction Cost/Unit:	\$229,438	\$229,438	\$292,111	\$292,111
Construction Cost/Total:	\$22,943,750	\$22,943,750	\$73,027,625	\$73,027,625
① Overall Project Cost:	\$23,161,550	\$23,161,550	\$73,245,425	\$73,245,425
Overall Cost Per Unit:	\$231,616	\$231,616	\$292,982	\$292,982
INCOME				
Number of Units:	100	100	250	250
Average Sales Price	\$201,025	\$266,358	\$182,750	\$242,144
Average Unit Size/S.F.:	935	935	850	850
Average Base Price/S.F.:	\$215	\$215	\$215	\$215
② Specialty Grocer Premium @ 17.5%	<i>\$0</i>	<i>\$38</i>	<i>\$0</i>	<i>\$38</i>
③ Adjacent Park @ 15.0%	<i>\$0</i>	<i>\$32</i>	<i>\$0</i>	<i>\$32</i>
Gross Sales Income:	\$20,102,500	\$26,635,813	\$45,687,500	\$60,535,938
④ Total Income	\$20,102,500	\$26,635,813	\$45,687,500	\$60,535,938
EXPENSES				
Sales Costs @ 5%	\$1,005,125	\$1,331,791	\$2,284,375	\$3,026,797
Total Expenses	\$1,005,125	\$1,331,791	\$2,284,375	\$3,026,797
⑤ NET PRE-TAX PROFIT	-\$4,064,175	\$2,142,472	-\$29,842,300	-\$15,736,284
VIABILITY GAP ANALYSIS				
⑥ Return on Cost	-17.5%	9.3%	-40.7%	-21.5%
Threshold Return	15.00%	15.00%	15.00%	15.00%
⑦ Indicated Gap	(\$7,538,408)	(\$1,331,761)	(\$40,829,114)	(\$26,723,098)

Source: Johnson Reid, LLC

Given these findings, it is worth noting that the urban renewal model in other jurisdictions has been to invest public resources to mitigate the indicated viability gap, in this case significant for both residential development forms. A second model is emerging, however, that targets public resources for successful recruitment of urban commercial amenities that not only enhance an individual project's feasibility, but also enhances the viability and desirability of an entire district or community. The implications of this approach are modeled in the following section.



WHAT DIFFERENCE DOES PARK & COMMERCIAL AMENITY MAKE?

In the 2007 report “Urban Living Infrastructure: Marginal Impact of Selected Urban Amenities on Residential Pricing” for the Metro Transit-Oriented Development Program, JOHNSON REID conducted a detailed, hedonic model analysis, case study and developer interview process to identify what commercial retail and service offerings actually affect buyer behavior to enhance higher-density residential viability. Specifically, a range of common urban commercial amenities were econometrically tested to measure actual impact to home sale price in a manner that would help overcome the condominium price problem identified in the previous section.

In reality, some commercial amenities are so valuable to households that having them within walking distance allows them to pay more for a condominium instead of spending the money on annual transportation expense getting to and from individual and groups of commercial needs. A detailed treatment of the commercial amenities and their measurement are beyond the scope of this analysis and the reader is invited to reference that document. However, to demonstrate how successful attraction of a “measurable” amenity can impact development viability, JOHNSON REID conducted a second set of prototypical pro formas assuming the AmberGlen Community featured the following key, marketable amenity examples:

- Specialty Grocer (17.5% Premium) – The combination of specialty foods, specialty deli, flowers, gifts and café under one roof and within two blocks has been measured to achieve a nearly 18% premium for a residence, all things equal.
- Centerpiece Park (15% Premium) – Based on previous analysis for the City of Hillsboro, a centerpiece park adjacent to a high-density residential project can achieve a measurable premium.

Results of the second financial analysis are expressed in Figure 3 on the previous page as the “W/Premiums” scenario for both mid-rise and high-rise condominiums. The second analysis differs from the first only due to the addition of both the specialty grocer and park amenity premium addition. Key figures for consideration in Figure 3 are numbered in the far left hand column and discussed below:

- ② The specialty grocer amenity is found to add a \$38 per square foot premium to the base condominium price.
- ③ The centerpiece park is found to add a \$32 per square foot premium to the base condominium price.
- ⑤ Adding the two amenities actually creates a positive, net pre-tax profit for mid-rise construction under the “W/Premiums” scenario due to the boost in achievable price. The amenities are, however, not enough to create a positive profit for the higher construction-cost high-rise orientation.
- ⑥ Return on cost, or net pre-tax profit (⑤) divided by overall project cost (①), is 9.3% for the mid-rise type but still negative for high-rise (-21.5%), though the amenities appear to have reduced the negative rate of return on high-rise by half.
- ⑦ Despite the boost in achievable price and resulting positive profit and return on investment, the Indicated Viability Gap for mid-rise is still negative. The 9.3% return on cost is still below the minimum threshold 15%, indicating that although the project is profitable, the amount of profit is not worth the considerable risk of development. To the developer, other projects with higher opportunity cost are worth exploring rather than this scenario. Indicated viability gap is negative for mid-rise and high-rise, though considerably lower than without the marketable premium examples.



HOW DOES REDEVELOPMENT OF EXISTING IMPROVEMENTS DIFFER FROM VACANT PARCEL DEVELOPMENT?

The economics of mid-rise and high-rise condominium development stand to differ significantly over time in the AmberGlen Community planning area given a mix of both vacant parcels and parcels with improvements frequently comprising business park space. To illustrate the implications of redevelopment of existing improvements in contrast to vacant land, the mid-rise and high-rise formats were modeled assuming a different land cost that reflects existing improvement value. Results are expressed in Figure 4.

FIGURE 4: STATIC PRO FORMA EVALUATION OF HILLSBORO MID-RISE AND HIGH-RISE CONDOMINIUM REDEVELOPMENT

	Mid-Rise Condominium		High-Rise Condominium	
	Baseline	W/Premiums	Baseline	W/Premiums
PROJECT DETAILS				
Number of Units:	100	100	250	250
LAND ACQUISITION				
Assumed Density (Units/Acre):	200	200	500	500
Land Price/SF:	\$32	\$32	\$32	\$32
Land Acquisition:	\$686,070	\$686,070	\$686,070	\$686,070
Construction Cost/Unit:	\$229,438	\$229,438	\$292,111	\$292,111
Construction Cost/Total:	\$22,943,750	\$22,943,750	\$73,027,625	\$73,027,625
① Overall Project Cost:	\$23,629,820	\$23,629,820	\$73,713,695	\$73,713,695
Overall Cost Per Unit:	\$236,298	\$236,298	\$294,855	\$294,855
INCOME				
Number of Units:	100	100	250	250
Average Sales Price	\$201,025	\$266,358	\$182,750	\$242,144
Average Unit Size/S.F.:	935	935	850	850
Average Base Price/S.F.:	\$215	\$215	\$215	\$215
② Specialty Grocer Premium @ 17.5%	\$0	\$38	\$0	\$38
③ Adjacent Park @ 15.0%	\$0	\$32	\$0	\$32
Gross Sales Income:	\$20,102,500	\$26,635,813	\$45,687,500	\$60,535,938
④ Total Income	\$20,102,500	\$26,635,813	\$45,687,500	\$60,535,938
EXPENSES				
Sales Costs @ 5%	\$1,005,125	\$1,331,791	\$2,284,375	\$3,026,797
Total Expenses	\$1,005,125	\$1,331,791	\$2,284,375	\$3,026,797
⑤ NET PRE-TAX PROFIT	-\$4,532,445	\$1,674,202	-\$30,310,570	-\$16,204,554
VIABILITY GAP ANALYSIS				
⑥ Return on Cost	-19.2%	7.1%	-41.1%	-22.0%
Threshold Return	15.00%	15.00%	15.00%	15.00%
⑦ Indicated Gap	(\$8,076,918)	(\$1,870,271)	(\$41,367,624)	(\$27,261,609)

Source: Johnson Reid, LLC

In Figure 4, mid-rise and high-rise developments assumed to be developed on redeveloped parcels are considered under the same two scenarios utilized in Figure 3. The only difference the analysis featured in Figure 3 and Figure 4 is the price of land. In Figure 3, the price of land is assumed to be \$10 per square foot while in Figure 4 it is assumed to be \$32 per square foot, capitalizing the cost of demolition into land acquisition. As is demonstrated, net pre-tax profit decreases across the board, while return on cost and



indicated viability gap increase due to the sizeable increase in effective land cost. Amenity premiums certainly continue to render mid-rise development closest to viability, but return still falls short of threshold rate of return for the risk involved.

The primary impact of a relatively high perceived level of risk is the resulting impact on acceptable rate of return. Increasing the return threshold can dramatically impact development activity. Risk is also a particular concern when dealing with redevelopment, where construction cost estimates and timing are less predictable. In addition, the scale of most infill and redevelopment opportunities is limited, while the complexity is substantially higher. This increases soft costs relative to the overall level of investment, decreasing yield.

IMPLICATIONS AND CAVEATS

As demonstrated in the pro formas, the highest and best use determination resembles a step function in terms of the development form that supports the highest underlying land values. If achievable sales prices are below \$200 per square foot, the development form capable of bidding the greatest value for the property is wood frame construction with surface parking. As pricing increases to \$300 per square foot, mid-rise construction over a concrete podium become the land use that supports the highest values. High-rise construction becomes the highest and best use only when pricing rises above \$450 per square foot under these assumptions.

It should be noted that these types of prototypical pro formas imply a level of precision that is not completely indicative of all developer behavior. Developers use a range of return parameters and yield requirements in making decisions, costs can vary substantively, and assumptions with respect to the market area can also vary. As a result, a series of developers looking at the same project may have sharply divergent views as to what development form represents the highest and best use for that site and the associated supportable land value.

Nonetheless, the general relationship between costs and achievable price remains a constant. The physical form of residential development is determined primarily by achievable pricing. It should also be noted that expectations of pricing and perceived market risk also have a significant impact on the determination of highest and best use. To the extent that a project can “prove” or demonstrate that a market exists for an untested product and that certain pricing levels are achievable, the project can increase expectations and/or reduce perceived risk. This shifts the market further along the path towards more intensive development forms.

CONCLUSIONS

JOHNSON REID was retained by the City of Hillsboro to provide financial analysis of mid-rise and high-rise residential development to help inform the AmberGlen Community planning process. In doing so, four key questions were addressed and answered as follows:

1. How do the economics of mid-rise residential and high-rise residential generally compare?

Mid-rise and high-rise residential development are frequently challenging in a suburban location because the significant increase in construction costs per unit with steel and concrete materials are rarely justified by attached residential price levels in the suburbs. Hillsboro/Washington County specifically is currently achieving roughly \$140 per square foot to \$160 per square foot in unit sales prices, while construction costs are easily \$167 per square foot for mid-rise and \$212 per square foot high-rise.



2. How does the viability of mid-rise and high-rise residential compare in Hillsboro?

A series of prototypical mid-rise and high-rise development financial pro formas were conducted to compare viability of both in Hillsboro, all else equal. On a vacant parcel, and assuming a somewhat optimistic sales price per square foot in Hillsboro, we found (Figure 3):

- Mid-rise residential construction fails the viability test in terms of negative pre-tax profit, negative return on cost and resulting significant viability gap given the failure to achieve an assumed minimum return on cost of 15% for risk of the venture to be worthwhile.
- High-rise residential construction also fails the viability on all counts, but significantly worse than mid-rise due to the significant cost-per-unit increase from a higher-load concrete and steel construction type necessary for 7 stories or more.

3. What difference does central park and commercial amenity make?

A second set of financial pro formas were conducted for both mid-rise and high-rise on a vacant parcel assuming two key urban living amenities were well-executed and highly proximate to the residential development. Again, assuming an optimistic sales price in Hillsboro, we found (Figure 3):

- Mid-rise residential construction posted positive pre-tax profit and a positive return on cost of over 9%, but barely failed the viability test because the project falls short of the minimum 15% return on cost threshold. In other words, although the project is profitable, to a developer it is not quite profitable *enough* to warrant the risk of the project.
- High-rise residential construction still fails the viability test on all counts, but the addition of the focused amenities significantly reduced the viability gap.

4. How does redevelopment of existing improvements differ from vacant parcel development?

A third set of financial pro formas were conducted for mid-rise and high-rise, with and without focused urban amenities, but this time assuming a \$32 per square foot land cost including existing business park improvements instead of a \$10 per square foot vacant parcel cost. Both figures are for actual parcels in the AmberGlen Community Plan study area nearby the existing, central landscaped space according to the Washington County Assessor's Office.

- Mid-rise residential construction still posted positive pre-tax profit and a positive return on cost of over 7%, but as a result failed the viability test by falling short of the 15% minimum return on cost threshold.
- High-rise residential construction still fails the viability test on all counts.

NEXT STEPS

Analysis in this memorandum has found that in Hillsboro's suburban location, residential pricing is not yet at a level that will enable the economics of mid-rise residential to "pencil out," much less high-rise residential development. However, we would conclude that the results are encouraging for planning greater emphasis on mid-rise residential development forms at least in earlier phases of the plan.

- Mid-rise barely failed the viability test when it was assumed specialty grocery centerpiece park amenities were well-executed and highly proximate to a project.
- Financial modeling utilized near-term, though optimistic, sales price assumptions for AmberGlen, though the plan is longer-term and will likely materialize over several real estate cycles with increasing prices relative to cost and land value over time.



- Financial assumptions were very specific, particularly the minimum return on cost threshold of 15%. Some developers may perceive the AmberGlen Community concept as lower-risk and develop with different acceptable return expectations and higher viability probability.

Accordingly, we would encourage the City of Hillsboro to do the following based upon findings:

- Pursue mid-rise residential forms as an earlier and more prevalent component of the AmberGlen Community Plan.
- Delay or rethink placement of high-rise residential forms in the plan, potentially to sites with existing improvements that in time will depreciate in economic value relative to land price escalation.
- Pursue public resources paired with economic development strategy that encourages and rewards specific types of commercial and services development in the AmberGlen Community that will have measurable impact upon the economics of mid-rise and high-rise development. This may be via urban renewal, targeted SDC credits, or some other incentive(s). Unlike a subsidy to a specific condominium project, a successful urban amenity will increase the viability in more than one project via a “halo effect.”



MEMORANDUM

DATE: April 7, 2009

TO: Colin Cooper, Hillsboro Current Planning Supervisor

FROM: Bill Reid, Principal
JOHNSON REID, LLC

SUBJECT: Urban Amenity Values Associated with Public Park Space

As part of the AmberGlen Community Plan urban center planning process, the City of Hillsboro seeks to understand the value of improved City park space as an urban amenity and development catalyst for planned high-density mixed-use development. This memorandum presents objective findings related to the issue at hand for utilization by the City and the AmberGlen Community Plan Steering Committee to refine conceptual planning completed to date.

The scale and intensity of the planned AmberGlen Community Plan center has no precedent in the Portland metro area suburbs. Portland's South Waterfront is perhaps the most comparable effort in the metro area to date. Accordingly, a two-step approach to identify the market value of improved park space as an amenity and catalyst to high-intensity redevelopment in Hillsboro was undertaken:

1. *Overview of Park Space Value as an Urban Amenity:* A review of real estate and land use studies that have credibly documented the value of park space on urban residential development, largely reflecting precedent in other markets nationwide.
2. *Portland Metro Market Findings:* Analysis of various urban residential sales data in the Portland metro area to identify the value of proximate park space on home prices by the unique population demographics of the Portland metro area and, therefore, financial viability on planned residential development within the AmberGlen Community Plan concept.

URBAN AMENITY VALUE & HIGH-DENSITY RESIDENTIAL DEVELOPMENT FEASIBILITY

The primary question for the City of Hillsboro in planning unprecedented residential products in the AmberGlen Community is the following: What amenities including park space help to "catalyze" increased-density residential development nearby. From an economic perspective, success of the AmberGlen Community Plan will greatly depend upon the package of nearby amenities that potential community residents find not only desirable, but *desirable enough* for households to pay market prices and/or rents that will justify higher-density residential development. It is generally true that as building heights increase, particularly above three stories, construction expenses increase not only due to scale of building size, but also fundamental change in materials to higher-cost steel-based engineering and materials.

Industry experience indicates that urban-oriented, high-intensity districts depend upon the amenity trade-off for reduced dependence upon automobile transportation for three key areas of daily activity:

1. *Employment – Proximate or connected employment centers;*
2. *Recreation – Parks, trails and other opportunities for outdoor recreational activities; and*
3. *Entertainment – Shopping, services and entertainment offerings in a 16-hour+ district.*

In other words, households can be willing to divert their automobile-related transportation expenses associated with traditional, suburban residential form into attached urban residential forms *provided the convenience and connection to daily activities is highly proximate to the high-density residential choice.* To the



extent that a menu of urban amenities and services is maximized and associated with the residential opportunity, or capitalized into the value of the home purchase, the higher market price of the home can help to economically justify the higher costs of mid-rise and high-rise construction that to date has only occasionally been justified within or proximate to the Portland CBD.

Park space, therefore, is but one ingredient in a complicated recipe for high-density residential development.

OVERVIEW OF PARK SPACE VALUE AS AN URBAN AMENITY

The value of park space as an amenity generally to communities and specifically residential development is one of the oldest issues of study in both planning and real estate economics, extending to 1926 analysis of the financial return of New York's Central Park.¹ Open space, and specifically urban park space, are long established as important public investments for maintaining robust, healthy communities – assuming they are well-maintained and safely managed. Traditionally, real estate economic analysis has focused on the question:

- *Does enhanced property tax revenue generated by new real estate development justify the expense of creating new park space?*

The goal of the community planning effort, therefore, has traditionally been the achievable end benefit of creating new park space with fiscal interest in recovering public investment via enhanced property values.

With greater emphasis on higher-density real estate uses in support of land use efficiency benchmarks nationwide – in many ways led by the Portland metro area – the means and end have reversed. Of more recent interest has been the marginal economic value of open space in facilitating specific residential investment forms, specifically in public redevelopment initiatives. In other words, economic analysis has focused on the cost of public park/open space as an urban community amenity with capitalized value in higher-density residential uses which face riskier financial feasibility, particularly in a suburban environment where high density residential product is usually far less market-tested and competitive with a much greater stock of traditional, detached single-family residences.

Whatever the geographic setting, and the topic has been thoroughly documented in most major metro areas of the country over the last 80 years, JOHNSON REID would anticipate the following real estate economic characteristics of park amenity to generally hold true for the AmberGlen Community Plan project:

- Capitalization of the benefits of public park space into residential development is typically concentrated between 500 and 3,000 feet from park space, with declining benefit as distance increases.²
- Park space design maximizes value capitalization with the “Edge Principal,” i.e. longer narrow parks with greater edge are of higher value than parks with wider or round parks.³
- Parks with emphasis on natural areas (woods, ponds, etc.) exhibit higher value capitalization than improved, flat open spaces for social or athletic functions.⁴
- Although numerous empirical studies have been conducted nationwide with a diverse array of results, in general larger, passive-use and well-maintained parks add anywhere from 10% to 20% additional value to residential development within 3-4 blocks, all else equal.⁵

¹ Metropolitan Conference of City and State Park Authorities (1926). Parks as investments. New York City. Cited in L.H. Weir (1928), Parks, *A Manual of municipal and county parks*. New York: A.S. Barnes.

² Crompton, J.L. (2001). The Impact of Parks on Property Values: A Review of the Empirical Evidence. *Journal of Leisure Research*, Vol. 33, No. 1, pp. 1-31.

³ Little, C. E. (1990). *Greenways for America*. Baltimore: John Hopkins University Press.

⁴ Kaplan, R. & Kaplan, S. (1990). *The experience of nature*. New York: Cambridge University Press.



Nearly all of the above studies focused on a diversity of urban residential form, i.e. attached residential development as well as detached, and capitalized property values associated with parks. A study of parks and capitalized values within the City of Portland in 2000,⁶ which largely focuses on detached, single-family housing actually found less marginal impact of parks on prices and, therefore, premiums paid by households to live near parks. Findings of the study indicated:

- Overall, park space proximity displayed a 1.43% price premium to nearby, largely single-family homes;
- Golf course open space by far exhibited the greatest price premium estimated at 5.97%;
- General public park space benefited proximate homes by 1.28% on average.

PORTLAND METRO MARKET FINDINGS

Although evidence from other metropolitan areas and one study of the Portland area focusing on single-family development are useful, examination of recent market behavior for comparable urban residential initiatives is useful. The Portland metro area has three primary neighborhoods of residential towers analogous to the vision for the AmberGlen Community Plan: the Pearl District, Downtown, and the South Waterfront. Somewhat unfortunately for the sake of this analysis, all three neighborhoods have multiple parks and all of the condominium towers are within close walking distance of a park thus the value of parks *in isolation* cannot be determined.

However, with respect to parks, contrasts can be drawn:

- While the neighborhoods all have their condominium developments near parks, the South Waterfront is superior in terms of parks and natural amenities. Every condominium either borders the under-construction Neighborhood Park or has frontage on the Willamette River.
- Downtown does not fare quite as well for parks or natural amenities as the South Waterfront, though most of the condominium towers either have Willamette River frontage or are near the South Park Blocks.
- While there are two new small parks, a larger park under construction, and the North Park Blocks, parks and natural amenities play the smallest role in the Pearl District.

Pearl District

The North Park Blocks line the eastern portion of the Pearl District between NW Park Avenue and NW 8th Avenue, Jamison Square consists of a city block at the intersection of NW 11th Avenue and NW Johnson Street, and Tanner Springs consists of a city block at the intersection of NW 11th Avenue and NW Marshall Street. Plans for The Fields, in the northern portion of the Pearl, call for three acres of greenspace with trails, playing fields, and a children's play area. There are four recently constructed condominium towers in the Pearl, The Casey, The Metropolitan, the 937 Condominiums, and The Encore.

- The Casey had four closed sales over the past six months, averaging \$1.7 million, or \$591 per square foot. The Casey, on average, is the most expensive major condominium development on an absolute basis in the history of Portland, despite being four blocks from the North Park Blocks and six blocks from Jamison Square.
- The Metropolitan had nine closed sales over the past six months, averaging \$1.1 million, or \$652 per square foot. The Metropolitan, had the highest per-foot pricing in the past six months of the observed

⁵ Crompton, J.L. (2001). The Impact of Parks on Property Values: A Review of the Empirical Evidence. *Journal of Leisure Research*, Vol. 33, No. 1, pp. 1-31.

⁶ Bolitzer, B. & Netusil, N.R. (2000). The impact of open spaces on property values in Portland, Oregon. *Journal of Environmental Management*, Vol. 59, pp. 185-193.



Pearl developments, in part due to the sale of a penthouse for \$2.5 million, or \$743 per square foot. The Metropolitan is situated roughly a block south of Tanner Springs Park and a block north of Jamison Square.

- The 937 Condominiums had five closed sales over the past six months, averaging \$371,500, or \$384 per square foot. Pricing at the 937 Condominiums was brought down by a couple lower-level units that did not include parking. The 937 Condominiums are located a block east of the North Park Blocks.
- The Encore had one closed sale over the past six months, a 725 square-foot unit located on the sixth floor. The unit sold for \$259,000, or \$357 per square foot. While The Encore is located next to The Fields and is close to Tanner Springs, its relative isolation from retail amenities and employment, as well as its proximity to the rail yards, has hurt its achievable pricing and absorption.

Downtown

The residential towers in Downtown are located either in the West End, between SW 11th Avenue and Portland State University, or in RiverPlace, at the south end of Downtown's waterfront. The primary condominium towers in the West End, the Eliot Tower and the Benson Condominiums, are two blocks west of the South Park Blocks. The major RiverPlace development, The Strand, is located at the south end of Tom McCall Waterfront Park.

- The Eliot Tower had four closed sales over the past six months, averaging \$480,700, or \$413 per square foot. The Eliot Tower has the best finishes of any condominium development in the West End and benefits from its location near cultural amenities, Downtown employment, and the South Park Blocks.
- The Benson Tower had one closed sale over the past six months, a 557 square-foot unit located on the fourteenth floor. The unit sold for \$245,000, or \$440 per square foot. The Benson Tower is located two blocks south of the Eliot Tower.
- The Strand had ten closed sales over the past six months, averaging \$737,800, or \$425 per square foot. The Strand benefits primarily from its views up the Willamette River and proximity to Downtown employment.

South Waterfront

The South Waterfront has two primary park spaces, the Neighborhood Park and the River Greenway. The Meriwether and Atwater Place are located along the River Greenway and east-facing units offer unobstructed views of the Willamette River and Mount Hood. The John Ross is located a block inland and borders the Neighborhood Park. The only condominium tower in the South Waterfront, constructed to date, without frontage along either greenspace was the 3720 Condominiums. During construction, the 3720 Condominiums were converted to rentals and the project was renamed The Ardea.

- The Meriwether had six closed sales over the past six months, averaging \$695,200, or \$388 per square foot. The Meriwether, the first of the condominium towers in the South Waterfront, fronts the Willamette River and was successful in rapidly selling the majority of its units when sales began in 2005.
- Atwater Place had four closed sales over the past six months, averaging \$845,300, or \$447 per square foot. Like The Meriwether, Atwater Place fronts the Willamette River, but its later release has slowed its sales significantly.
- The John Ross had five closed sales over the past six months, averaging \$327,600, or \$309 per square foot. The John Ross, the tallest of the condominium towers in the South Waterfront at 325 feet, has frontage along the Neighborhood Park. After a strong opening month, sales activity has been very slow the past two years and resales are typically priced well below their original purchase price.



PORTLAND URBAN, HIGH-DENSITY RESIDENTIAL SALES IN THE PAST SIX MONTHS

	Units Sold	Unit Size			Unit Price			Price/SF		
		Min	Max	Ave	Min	Max	Ave	Min	Max	Ave
<u>All Sales</u>										
Pearl District	44	662	3,366	1,327	\$240,000	\$2,500,000	\$673,443	\$279	\$765	\$508
Downtown	15	557	2,039	1,504	\$245,000	\$1,050,000	\$636,393	\$293	\$576	\$423
South Waterfront	15	638	3,646	1,575	\$200,000	\$1,895,000	\$612,687	\$217	\$520	\$389

Neighborhood Comparison

Despite offering the least, in the way of parks and natural amenities, the Pearl District achieved the highest pricing over the past six months, both absolute and per square foot as verified by comprehensive sales statistics in the figure above. While the Pearl ranks third in parks of the three neighborhoods, it has the second best location in terms of employment and the best location in terms of commercial amenities. As the most established high-density-residential neighborhood in Portland, the Pearl has a critical mass of retail, restaurants, and entertainment options for urban condominium dwellers. Downtown is the best location from an employment standpoint but is not suited as well for residential living as the Pearl. The South Waterfront achieves the lowest pricing of the observed neighborhoods, largely because of its separation from both Downtown employment and Pearl amenities. While there are a couple restaurants and OHSU employment, there is not the critical mass required to make the neighborhood self sufficient.

CONCLUSIONS & NEXT STEPS

JOHNSON REID was retained by the City of Hillsboro to begin a market-based assessment of feasibility issues for the evolving AmberGlen Community Plan process. The first area of focus for the City is regarding the value of a central, urban park as a catalyst for higher-density residential development. In other words, of interest are the following:

1. *What type of parks facilitates higher density urban redevelopment? and*
2. *How much economic value is created by open space that is capitalized into the value of proximate residences, thus assisting the economics of redevelopment?*

After review of a robust body of real estate economic studies conducted nationwide, as well as a remarkable laboratory for case study within the City of Portland CBD, we conclude the following:

- A sizeable central park maximizing proximity to urban residential forms will economically benefit the feasibility of redevelopment.
- The creation of a distinct park amenity will likely provide proximate residential development with a 10% to 15% price premium compared to comparable redevelopment not located proximate to such a park.
- Design of the park should have the following in mind: maximum edge for greater proximity to a greater number of residential projects, passive use, concentration on unimproved/natural features rather than community/event space, and within 1,500 feet of all planned high-density urban form.
- In the context of much comparable redevelopment in the City of Portland, park space is a common denominator among new urban form comparable to that envisioned for the AmberGlen Community Plan.
- Well-planned park space should be thought of as one leg on a three-legged stool as well as proximate commercial/entertainment amenity and key employment amenity.
- As evidenced by the pricing leadership of the Pearl District, a strong assortment of commercial amenities, such as shops, restaurants, grocery stores, bars, and galleries, are necessary for most high-density



residential to be successful. Proximity to primary employment concentrations and natural amenities are secondary.

- The Pearl is the only neighborhood in the State of Oregon to have large scale success with high-density residential development and most of that success was during the housing boom between 2003 and 2007. Downtown has had some moderate success with a couple projects during the same boom period. The South Waterfront, despite its ample greenspace and Willamette River frontage far superior to other districts of Portland seeing redevelopment comparable to that envisioned for the AmberGlen Community, sold well initially to speculators but has struggled since the housing market cooled.
- The City of Hillsboro should continue to pursue park/open space as a distinct amenity for the AmberGlen Community Plan, however greater emphasis and planning should be put on increasing the strength of the planning area as a commercial/retail and employment center given the failure of far superior park/open space alone to achieve the best redevelopment economics in comparable Portland districts. This may include discussed transportation enhancements that include strengthening of Stucki and the Streets of Tanasbourne as a commercial center for the Hillsboro area.
- Given the estimated 10% to 15% price premium alone from open space, the suggestion that more mid-rise construction be placed closer to the planned central park concept warrants further consideration in our view. Mid-rise would likely benefit more from the park concept as catalyst as it faces lower economic risk than high-rise.