

Developing and Financing Affordable For-Sale Housing



2017 Housing Colorado NOW

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Home Ownership Finance

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LECTURE NOTES

**Developing and Financing
Affordable For-Sale Housing**



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What Is the Housing Problem?

- Depends on who you are
 - Inner-city home owner
 - First-time home buyer
 - Homeless family/person
 - Historic preservationist
 - Persons with disabilities
 - Families with children receiving public assistance

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**Why the Public Sector Is Involved³
in Developing For Sale Housing?**

- Investment in housing in certain areas fulfills a public purpose
 - Provide home ownership opportunities
 - Improve the housing stock
 - Stabilize a neighborhood
 - Economic integration
 - Establish a market
 - Historic district



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But . . .

**Most Housing Problems
Are Economic in Nature**



**Two Basic Types of Housing
Problems**

- Lack of Investment
 - Costs exceed what people are willing/able to pay
- Affordability
 - A household cannot pay the cost of housing



**Two Distinct Financing Issues in
Development for Home Owners**

- Financing the Development
- Financing the Purchase



Must Know

Cost

Financing the Development

What will it cost to produce the product?

Value

Financing the Purchase

What is the market value, who wants it, and how deep is the market?

Affordability

Can the target market afford the product? If not, what financing must exist to make the units affordable?



Requirements For Successful For Sale Housing Development

- Accurate estimate of costs
- Effective management to control production and financing cost
- Reliance on market value for sales price
- Accurate understanding of demand for houses to be produced, including absorption and affordability



The Development Process

- Major Actors
 - The developer
 - Takes risks
 - Finds use for real estate
 - Secures financing
 - Oversees construction
 - Finds buyers

Desired Benefit:
Market ROI or Better



The Development Process (cont.)

- The appraiser
 - Establishes value which lenders lend against
 - Part scientist / part artist
 - An observer
 - An estimator
- The contractor
 - Hires subcontractors
 - Oversees construction
 - Controls costs
 - Financial strength



Two Kinds of Lenders and Two Kinds of Loans

- Construction lender
 - Finances development cost
 - The “construction loan”
- Permanent lender
 - Provides financing for buyers
 - The “mortgage loan”

Both Are Risk Averse



Construction Loan

- Loan to developer/builder for specific term and interest rate
 - Repaid when project completed
 - Interest accrues during loan period
 - Principal repaid when revenue available from the sale of units



Calculation of Debt

$$\begin{aligned}
 & \text{Amount Drawn} \\
 + & \text{Interest Owed} \\
 = & \text{Current Debt}
 \end{aligned}$$



Example (cont.)

- Loan: \$1.0 Million
- Term: 24 Months
- Interest: Prime + 2
- Prime: 4.0 Percent

- Draw \$200,000 per month for two months
- How much is owed to the bank at the beginning of the third month?



Example (cont.)

- **Step 1**
 - Determine monthly interest rate
 - Annual interest rate / 12

- **Step 2**
 - Multiply monthly interest rate times previous month's debt to bank to calculate interest owed



Example (cont.)

- **Step 3**
 - Add interest owed to bank debt
- **Step 4**
 - Repeat Steps 2 and 3 up to current month



Example (cont.)

Monthly interest = 6% ÷ 12 mos. = .5% per mo. (0.005)

Months	1	2	3
Beginning Balance	\$ 0.00	\$200,000	\$ 401,000
Previous Month's Interest	\$ 0.00	\$ 1,000	
Draw	\$200,000	\$200,000	
Ending Balance	\$200,000	\$ 401,000	



Mortgage Loan

- Permanent financing
- Loans to buyers
- Provide cash to pay off development (construction) loan



Amortized Loans

- Loan Payment or Debt service (D/S) pays interest due plus portion of principal (p+i)
- At the end of the term the loan principal and all interest is paid off



Mortgage Payments Are Made Monthly

- Constant Chart
 - Loan Amount X "c" = Annual Debt Service
 - Divide annual debt service by 12 for monthly debt service
 - Same formula can be used to figure out how much a buyer can borrow if you know how much their maximum payment can be
 - Loan Amount = Annual Debt Service ÷ "c"
 - Multiply monthly debt service by 12 for annual debt service



Debt Capacity

- The maximum loan amount a person can afford to borrow is known as their Debt Capacity
 - Debt Capacity (Ln Amt) = (Monthly D/S x 12) ÷ "c"
 - Example
 - If Max Monthly D/S = \$450
 - 5% interest, 30 year term ("c" = .0645)
- \$450/mo X 12 mos = \$5,400 annual D/S
 \$5,400 annual D/S ÷ .0645 = \$83,721 max mortgage



Steps in the Single Family Housing Development Process

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- Site identification
- Market analysis
- Design/budgeting
- Financing
 - Construction
 - Permanent
- Land development
- Unit construction
- Sales

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Site Identification

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- Residential environment
 - Absence of negatives – crime, noise, pollution
 - Access to employment
 - Schools
 - Amenities – parks, trees, water
 - Properly zoned

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Site Identification (cont.)

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- Easily serviced
 - Roads
 - Water
 - Power
 - Sewer
- Available at reasonable price/terms
 - The fewer the negatives and the greater the positives of the site, the higher the price
 - May need to pay more for a better site to make sure you have a market for the homes you build

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Market Analysis

- Basic questions
 - Who wants to live there?
 - What type of home are they looking for?
 - How much can they (will they) pay?
 - How deep is the market?



Market Analysis (cont.)

- Market analysis is more critical in housing for sale versus rental because buying is a longer-term commitment
- Generally, it costs more to own than to rent



Appraisal

- Key part of appraisal
 - Provides estimate of sales price for the homes you plan to build
 - Determines availability of private financing
 - Lenders will lend only a portion of the value of the home (collateral)
- Appraisal provides opinion of fair market value (FMV)



Factors Affecting Value

- Neighborhood
- Schools
- Size
- Condition
- Construction quality
- Appearance
- Heating/cooling
- Energy efficiency
- Layout
- Amenities
- Financing concessions



Design/Budgeting

- Land
 - Acquisition
 - Site improvements
 - Off-sites
 - Impact fees
- Fees
 - Architectural and engineering
 - Legal and accounting
 - Construction management
 - Permits
- Financing
 - Construction interest
 - Loan fees
 - Appraisal



Design/Budgeting (cont.)

- Construction Costs
 - New construction
 - Rehab
- Sales costs
- Profit and overhead



Key Cost Issues

- Density/cost of finished lots
- Holding costs
 - Investment in non-revenue producing assets – models, common amenities
 - Insurance
 - Taxes
 - Security
 - Grounds maintenance (snow removal, grass cutting)
 - Utilities
- Rate of sales – the slower your sales the more in holding costs and construction interest you accrue



Financing

- Construction
 - Pre-development – most risky. Typically can't borrow
 - Land development – slightly less risky. May be able to borrow 50% of cost to develop lots
 - Unit construction – still risky. May be able to borrow 80% of costs
- Concerns
 - Market absorption
 - Contractor
 - Permanent financing standards
 - Overruns



Financing (cont.)

- Sources Needed to Cover Costs that cannot be borrowed
 - **Developer Equity**
 - Subordinated seller financing of land
 - Staged land purchase
 - Public Subsidies if project is aligned with local community development goals



Financing (cont.)

- Permanent Lender
 - Construction standards
 - Buyer qualifications
- Public Agency
 - “Soft” second mortgage



Land Development

- Land value depends on use
- Cannot use without improvements
- What is cost of finished lot?
 - Land
 - Subdivision
 - Planning and zoning
 - Grading
 - Drainage
 - Gas, electricity, roads
 - Impact fees
 - Sub-surface conditions



Unit Construction

- Construction manager
- General contractor
- Performance bonds



Profit and Overhead

- Profit only if: Total Revenue > Total Expenses
- Generally, all debt gets paid before return of equity and profit



Financing the Development

- Developer's goal: maximum use of debt (less of their own equity)
- Lender's goal: ensure sufficient collateral to repay debt



Risks

- Pre-development risk
 - Lack of financing
 - Political opposition
 - Environmental problems
- Construction risk
 - Cost overruns
 - Changes in labor/materials costs
 - Contractor does not finish job
 - Developer goes bankrupt



Risks (cont.)

- Market risk
 - Changes in perception of the area
 - Rise in interest rates
 - Local economic problems
 - Buyers cannot sell existing houses
 - Long sell-out period



Risks (cont.)

- Lender – closer the product is to completion, more willing lenders are to lend
- Lender evaluates Developer's
 - Use of funds
 - Track record
 - Financial
 - Marketability of design
 - Contractor strength



Risks (cont.)

- Financing is structured to reflect progress in development
- As noted earlier:
 - Predevelopment – typically may not be able to borrow any money
 - Lot Development – typically may be able to borrow 50% of costs
 - Construction – typically may be able to borrow 80% of costs



Risks (cont.)

- Developer goal
 - Complete development successfully
 - Minimize time
 - Minimize equity invested



Risks (cont.)

- Key question: Does project have basic viability?
 - Will revenue exceed debt and equity invested?
- Developer wants a profit of at least 10-15 percent of gross sales or development cost (whichever is higher)
- Pro forma (profit and loss statement) gives rough estimate of viability



Two Key Financial Questions

- Is it profitable?
 - Revenues > expenses
 - Profit and Loss Statement
- Will there be sufficient cash to meet expenses?
 - Profitability and solvency are not the same
 - Front end costs difficult to finance
 - Timing
 - Cash Flow Statement (will not be covering today)



Profit and Loss Statement

REVENUE	
Sale of Housing Units	+
(Less) Selling Costs (Percent)	-
Total Revenue	=
COSTS	
Land Acquisition	
Planning/Engineering	+
Site Improvements	+
House Construction	+
Fees and Other Soft Costs	+
Costs Sub-Total	=
Estimated Financing Costs	+
Total Costs	+
TOTAL REVENUE	
(Less) TOTAL COSTS	-
DEVELOPER RETURN (Subsidy Required)	=



Qualifying Buyers

- Review the target market
- How much can the buyer pay for the house?
 - Lender ratios
 - Loan-to-Value (LTV)
 - Housing expense to income – 1st ratio
 - Recurring debt to income – 2nd ratio (total debt/income)
- Credit worthiness of buyer



Loan-to-Value Ratio

- Percent of “purchase price” or appraised value that lender will finance
- In addition, buyers need funds for
 - Points/Origination
 - Closing costs
 - Prepaid expenses
 - Escrowed taxes, insurance and others
- Depending on lender, may be able to finance some of these costs



Housing Cost to Income – First Ratio 49

- Typical: 28 to 29 Percent
- Income Includes: Full-time Salary and Wages
- Part-time/Overtime Pay Consistent over 18 to 24 Months
- Can Be Exceeded with Compensating Factors



Housing Cost to Income – First Ratio (cont.)

- Self-employed: income minus business expenses (include signed tax return for last two years)
- Other income
 - Retirement
 - Social security
 - Disability
 - Trust
 - Child support
 - Alimony
 - Interest from savings



Housing Cost to Income – First Ratio (cont.)

- **NOT** counted
 - Educational benefits
 - Other temporary income



Total Recurring Monthly Obligations to Income – Second Ratio 52

- Maximum: 33 to 41 Percent
- Sum of Housing Expenses Plus
 - Loan payments
 - Credit card payments
 - Alimony
 - Child support
 - Day care
 - Job-related expenses
 - Others



Reducing Cash Demands on Buyer 53

- Increasing Loan-to-Value ratio (LVR)
- Financing down payment
- Including closing costs in mortgage calculation
- Soft second mortgages
- Lease/purchase



Case Studies 54

- COOL
- Buyers



CASE STUDIES

Case Study

COOL

Colorado Ownership Opportunities for Life (COOL), a not-for-profit housing development corporation in Somwarin, CO has identified four adjacent lots on which to build houses for first-time home buyers. COOL feels that it can get a sales contract on one house a month. It has scheduled to begin construction as soon as it has a sales contract. All four lots will be acquired at the same time, and construction can begin immediately after the lots are acquired.

Martha Nailor, the contractor COOL has been working with, has given a firm construction price of \$110 per square foot for the 1,250 square foot house that COOL wants to build. In addition, the lots will cost an average of \$10,000 each, and site improvements to remove old foundations, clay and other non-compactable material will total \$15,000 for the four lots. Fees, permits and other expenses will be \$5000 per home.

With the help of two appraisals, COOL has carefully analyzed the market and determined that the houses will sell at a fair market value of \$165,000. COOL expects selling costs to total 5%, which includes a selling commission to insure the interest of the local real estate agents. The not-for-profit expects home sales to close 30 days after completion of construction.

Worker Housing Alliance and Mortgage Company (WHAM) is offering construction financing for the project. WHAM will finance 50 percent of the acquisition and site improvements, and 80 percent of all other costs at prime plus 2.5 (prime is 3.0 percent). WHAM will require a commitment and other fees of \$5,000.

Based upon a number of conversations COOL, Martha and WHAM have agreed on the following development schedule:

- Acquire the property and complete site improvements in month one.
- Construction of the first house will start in month one and one house per month will be started in subsequent months, a schedule consistent with expected sales contracts. Each house will take three months to complete with the cost of each house evenly spread over this time period.
- Fees, permits and other expenses will be paid as each house is started.

Based on the above development and sales schedule, construction interest is projected to be \$10,000.

ASSIGNMENT #1

1. Complete a profit and loss analysis of the project to determine whether the development must be subsidized (is cost greater than value). If so, how much is the difference?
2. Determine the amount of debt COOL can get from WHAM and the amount of equity it needs to complete the project.

ASSIGNMENT #2

The typical buyer has an annual family income of \$49,000, and enough cash for down payment and closing costs. Recurring obligations are \$425 per month (personal loans, credit card payments, etc.). Property taxes and insurance together are expected to total \$200 per month.

WHAM is offering 30-year permanent mortgage financing for 95 percent of value at 6.25 APR. WHAM will underwrite the loan using a first ratio of 28 percent and a second ratio of 38 percent.

Determine:

1. The amount of financing the buyer must have in order to purchase the house.
2. The maximum mortgage WHAM feels the typical buyer can afford.
3. Is a deferred second mortgage necessary? If so, for how much?

ASSIGNMENT #3

1. How much in total subsidy is required to complete the project, have COOL make a 10% profit and help the intended buyers to purchase the homes, once complete?

Case Study

BUYERS

Assume each of the following households wants to purchase a home from COOL. How much in homebuyer assistance will each need?

1. Cynthia Dubas — Ms. Dubas, 39 years old, has held a succession of retail sales jobs over the last 10 years. She is known as a hard worker, has never been fired, and has always been able to find a new job when she wanted one. She is currently working at K-Mart, earning \$10.65 an hour for 37.5 hours per week. Cynthia was divorced two years ago and has not remarried. She has full custody of her two children, ages 12 and nine, and receives \$380 per month in child support. Cynthia has two payments (\$220 per month) left on the used car she bought almost three years ago. She has set aside a little over \$650 in case of an emergency. Cynthia has dreamed of owning her own home for several years, but does not see how it will ever be possible.
2. Reginald Riley — Mr. Riley, 24 years old, graduated from college last year and has taken a job as a management trainee with Barrier Bank, earning \$48,000. Mr. Riley is single and has no dependents except for the new car he bought to celebrate landing a job, and the \$375 per month payment that comes with it. Reginald also has a school loan payment of \$250 per month, and an outstanding credit card balance of \$3,525. Reginald has lived at his current address for four months, but would like to buy a house as soon as possible. Reginald's father has promised \$4,000 to help Reginald buy his first house.
3. Charles Naught — Professor Naught, 37 years old, teaches applied mathematics at River University and earns \$71,000 per year. Professor Naught was divorced four years ago and provides \$450 per month in child support for the support of his four children. The divorce was expensive for Professor Naught, and cleaned out his savings, which he has been unable to rebuild. Professor Naught has an outstanding credit card balance of \$1,200, and 20 months of car payments left at \$288 per month. Professor Naught has prided himself on always paying his obligations on time.
4. Gene Carter — Ex-Sergeant Carter, 42 years old and retired from the U.S. Army after 20 years of service, is currently working for the Smart Time Building Company. Mr. Carter earns \$22,000 annually from Smart Time, and also receives \$2,082 per month in military retirement pay. Mr. Carter is married and has two teenage children still living at home. Mrs. Carter works as a teacher at

'Wonderful World Day Care' and made \$17,250 last year. The Carter's bought a new car when he retired from the Army, and with payments of \$312 per month for 38 more months. The Carters also have a credit card balance of \$4,500, and have a personal loan from the U.S. Military Federal Credit Union for \$4,500 with payments of \$220 per month. The Carters have one year of rent history, and have only been delinquent one time during that period.

5. Susan and Jim Turner — The Turners, 36 and 38 years old respectively, have two children. Susan earns \$9.25 an hour for 37.5 hours per week as a checkout clerk at the Friendly Grocery Store. Jim works as a loadman for Heavy Deliveries, earning \$19.30 an hour for 40 hours per week. The Turners have two children in early adolescence. The Turners have been saving hard to get the money to buy a house, and have put aside almost \$3,100. Jim and Susan each have a car, though there are only three months left on Jim's car with payments of \$225 per month, while there are 27 months left on Susan's car with payments of \$343 per month.
6. Pamela and Peter Pan are young and eager to engage the world. Pamela is an accountant with a small local accounting firm earning \$41,000 a year. Peter works for the SIDEX Co. as a manufacturing engineer and made \$39,500 last year. The Masons, who have no kids and are not eager to start a family, bought (or leased) two cars in the last year; and have payments of \$320 per month with 30 months remaining on one, and a lease payment of \$273 per month with 24 months remaining and a payoff of \$5,500 on the other. The Pans also have a credit card balance of \$6,250, \$180 monthly furniture payments for the next two years and school loan payments of \$250. Pamela's father has provided a gift of up to \$5,000 to Pamela and Peter toward their first house.

SUPPLEMENTAL INFORMATION AND FORMS

CONSTANT CHART

<i>Interest Rate</i>	<i>5 yrs</i>	<i>6 yrs</i>	<i>7 yrs</i>	<i>8 yrs</i>	<i>9 yrs</i>	<i>10 yrs</i>	<i>11 yrs</i>	<i>12 yrs</i>	<i>13 yrs</i>	<i>14 yrs</i>	<i>15 yrs</i>
4.00	.2210	.1878	.1641	.1463	.1325	.1215	.1126	.1051	.0988	.0935	.0888
4.25	.2224	.1892	.1655	.1477	.1340	.1230	.1140	.1066	.1003	.0949	.0903
4.50	.2238	.1905	.1669	.1491	.1354	.1244	.1155	.1081	.1018	.0965	.0918
4.75	.2251	.1919	.1683	.1505	.1368	.1259	.1169	.1095	.1033	.0980	.0934
5.00	.2265	.1933	.1697	.1520	.1383	.1273	.1184	.1110	.1048	.0995	.0949
5.25	.2279	.1947	.1711	.1534	.1397	.1288	.1199	.1125	.1063	.1011	.0965
5.50	.2293	.1961	.1725	.1548	.1412	.1303	.1214	.1141	.1079	.1026	.0981
5.75	.2307	.1975	.1739	.1563	.1426	.1318	.1229	.1156	.1094	.1042	.0997
6.00	.2320	.1989	.1754	.1577	.1441	.1333	.1245	.1172	.1110	.1058	.1013
6.25	.2334	.2003	.1768	.1592	.1456	.1348	.1260	.1187	.1126	.1074	.1029
6.50	.2348	.2018	.1782	.1607	.1471	.1363	.1275	.1203	.1142	.1090	.1046
6.75	.2363	.2032	.1797	.1622	.1486	.1378	.1291	.1219	.1158	.1107	.1062
7.00	.2377	.2046	.1812	.1637	.1501	.1394	.1307	.1235	.1174	.1123	.1079
7.25	.2391	.2061	.1826	.1652	.1516	.1409	.1322	.1251	.1191	.1140	.1096
7.50	.2405	.2075	.1841	.1667	.1532	.1425	.1338	.1267	.1207	.1156	.1113
7.75	.2419	.2090	.1856	.1682	.1547	.1441	.1354	.1283	.1224	.1173	.1130
8.00	.2434	.2104	.1871	.1697	.1563	.1456	.1370	.1299	.1240	.1190	.1147
8.25	.2448	.2119	.1886	.1712	.1578	.1472	.1387	.1316	.1257	.1207	.1165
8.50	.2462	.2134	.1901	.1728	.1594	.1488	.1403	.1333	.1274	.1224	.1182
8.75	.2477	.2149	.1916	.1743	.1610	.1504	.1419	.1349	.1291	.1242	.1200
9.00	.2492	.2164	.1931	.1759	.1626	.1521	.1436	.1366	.1308	.1259	.1218
9.25	.2506	.2178	.1946	.1774	.1642	.1537	.1452	.1383	.1325	.1277	.1236
9.50	.2521	.2193	.1962	.1790	.1658	.1553	.1469	.1400	.1343	.1295	.1254
9.75	.2535	.2209	.1977	.1806	.1674	.1570	.1486	.1417	.1360	.1312	.1272
10.00	.2550	.2224	.1993	.1821	.1690	.1586	.1503	.1435	.1378	.1330	.1290
10.25	.2565	.2239	.2008	.1837	.1706	.1603	.1520	.1452	.1396	.1348	.1308
10.50	.2580	.2254	.2024	.1853	.1723	.1620	.1537	.1469	.1414	.1367	.1327
10.75	.2595	.2269	.2039	.1869	.1739	.1637	.1554	.1487	.1431	.1385	.1346
11.00	.2610	.2285	.2055	.1886	.1756	.1654	.1572	.1505	.1450	.1403	.1364
11.25	.2625	.2300	.2071	.1902	.1772	.1671	.1589	.1523	.1468	.1422	.1383
11.50	.2640	.2315	.2087	.1918	.1789	.1688	.1607	.1540	.1486	.1441	.1402
11.75	.2655	.2331	.2103	.1934	.1806	.1705	.1624	.1558	.1504	.1459	.1421
12.00	.2670	.2347	.2119	.1951	.1823	.1722	.1642	.1577	.1523	.1478	.1441
12.25	.2685	.2362	.2135	.1967	.1840	.1740	.1660	.1595	.1542	.1497	.1460
12.50	.2700	.2378	.2151	.1984	.1857	.1757	.1678	.1613	.1560	.1516	.1480
12.75	.2716	.2394	.2167	.2001	.1874	.1775	.1696	.1632	.1579	.1536	.1499
13.00	.2731	.2409	.2184	.2017	.1891	.1792	.1714	.1650	.1598	.1555	.1519
13.25	.2746	.2425	.2200	.2034	.1908	.1810	.1732	.1669	.1617	.1574	.1539
13.50	.2762	.2441	.2216	.2051	.1926	.1828	.1750	.1687	.1636	.1594	.1558
13.75	.2777	.2457	.2233	.2068	.1943	.1846	.1768	.1706	.1655	.1613	.1578
14.00	.2793	.2473	.2249	.2085	.1961	.1864	.1787	.1725	.1675	.1633	.1599
14.25	.2808	.2489	.2266	.2102	.1978	.1882	.1805	.1744	.1694	.1653	.1619
14.50	.2824	.2505	.2283	.2119	.1996	.1900	.1824	.1763	.1714	.1673	.1639
14.75	.2840	.2522	.2299	.2137	.2014	.1918	.1843	.1782	.1733	.1693	.1660
15.00	.2855	.2538	.2316	.2154	.2031	.1937	.1862	.1802	.1753	.1713	.1680
15.25	.2871	.2554	.2333	.2171	.2049	.1955	.1880	.1821	.1773	.1733	.1701
15.50	.2887	.2571	.2350	.2189	.2067	.1973	.1899	.1840	.1793	.1753	.1721
15.75	.2903	.2587	.2367	.2206	.2085	.1992	.1919	.1860	.1812	.1774	.1742
16.00	.2919	.2604	.2384	.2224	.2104	.2011	.1938	.1879	.1833	.1794	.1763
16.25	.2935	.2620	.2401	.2242	.2122	.2029	.1957	.1899	.1853	.1815	.1784
16.50	.2951	.2637	.2418	.2259	.2140	.2048	.1976	.1919	.1873	.1836	.1805
16.75	.2967	.2653	.2435	.2277	.2158	.2067	.1996	.1939	.1893	.1856	.1826
17.00	.2983	.2670	.2453	.2295	.2177	.2086	.2015	.1959	.1914	.1877	.1847
17.25	.2999	.2687	.2470	.2313	.2195	.2105	.2035	.1979	.1934	.1898	.1869
17.50	.3015	.2704	.2488	.2331	.2214	.2124	.2054	.1999	.1955	.1919	.1890
17.75	.3031	.2721	.2505	.2349	.2233	.2143	.2074	.2019	.1975	.1940	.1911
18.00	.3048	.2737	.2523	.2367	.2251	.2163	.2094	.2039	.1996	.1961	.1933
18.25	.3064	.2754	.2540	.2386	.2270	.2182	.2114	.2060	.2017	.1982	.1955
18.50	.3080	.2771	.2558	.2404	.2289	.2201	.2134	.2080	.2038	.2004	.1976
18.75	.3097	.2789	.2576	.2422	.2308	.2221	.2154	.2101	.2059	.2025	.1998

CONSTANT CHART (continued)

<i>Interest Rate</i>	<i>16 yrs</i>	<i>17 yrs</i>	<i>18 yrs</i>	<i>19 yrs</i>	<i>20 yrs</i>	<i>21 yrs</i>	<i>22 yrs</i>	<i>23 yrs</i>	<i>24 yrs</i>	<i>25 yrs</i>	<i>26 yrs</i>
4.00	.0848	.0812	.0781	.0753	.0728	.0705	.0685	.0666	.0649	.0634	.0620
4.25	.0863	.0828	.0796	.0768	.0744	.0721	.0701	.0683	.0666	.0651	.0637
4.50	.0878	.0843	.0812	.0784	.0760	.0737	.0717	.0699	.0683	.0667	.0654
4.75	.0894	.0859	.0828	.0801	.0776	.0754	.0734	.0716	.0700	.0685	.0671
5.00	.0910	.0875	.0844	.0817	.0792	.0771	.0751	.0733	.0717	.0702	.0689
5.25	.0926	.0891	.0860	.0833	.0809	.0787	.0768	.0750	.0734	.0720	.0706
5.50	.0942	.0907	.0877	.0850	.0826	.0804	.0785	.0768	.0752	.0737	.0724
5.75	.0958	.0924	.0894	.0867	.0843	.0822	.0803	.0785	.0770	.0755	.0742
6.00	.0974	.0940	.0910	.0884	.0860	.0839	.0820	.0803	.0788	.0774	.0761
6.25	.0991	.0957	.0927	.0901	.0878	.0857	.0838	.0821	.0806	.0792	.0780
6.50	.1007	.0974	.0944	.0918	.0895	.0875	.0856	.0839	.0824	.0811	.0798
6.75	.1024	.0991	.0962	.0936	.0913	.0893	.0874	.0858	.0843	.0830	.0817
7.00	.1041	.1008	.0979	.0954	.0931	.0911	.0893	.0876	.0862	.0849	.0837
7.25	.1058	.1025	.0997	.0971	.0949	.0929	.0911	.0895	.0881	.0868	.0856
7.50	.1075	.1043	.1014	.0989	.0967	.0947	.0930	.0914	.0900	.0887	.0876
7.75	.1093	.1061	.1032	.1008	.0986	.0966	.0949	.0933	.0919	.0907	.0896
8.00	.1110	.1078	.1050	.1026	.1004	.0985	.0968	.0953	.0939	.0927	.0916
8.25	.1128	.1096	.1069	.1044	.1023	.1004	.0987	.0972	.0959	.0947	.0936
8.50	.1146	.1114	.1087	.1063	.1042	.1023	.1007	.0992	.0979	.0967	.0956
8.75	.1164	.1133	.1106	.1082	.1061	.1043	.1026	.1012	.0999	.0987	.0977
9.00	.1182	.1151	.1124	.1101	.1080	.1062	.1046	.1032	.1019	.1008	.0997
9.25	.1200	.1170	.1143	.1120	.1100	.1082	.1066	.1052	.1039	.1028	.1018
9.50	.1218	.1188	.1162	.1139	.1119	.1101	.1086	.1072	.1060	.1049	.1039
9.75	.1237	.1207	.1181	.1158	.1139	.1121	.1106	.1093	.1081	.1070	.1060
10.00	.1256	.1226	.1200	.1178	.1159	.1141	.1126	.1113	.1101	.1091	.1082
10.25	.1274	.1245	.1220	.1198	.1178	.1162	.1147	.1134	.1122	.1112	.1103
10.50	.1293	.1264	.1239	.1217	.1199	.1182	.1168	.1155	.1143	.1134	.1125
10.75	.1312	.1284	.1259	.1237	.1219	.1203	.1188	.1176	.1165	.1155	.1146
11.00	.1331	.1303	.1279	.1257	.1239	.1223	.1209	.1197	.1186	.1177	.1168
11.25	.1351	.1323	.1298	.1278	.1260	.1244	.1230	.1218	.1208	.1198	.1190
11.50	.1370	.1342	.1318	.1298	.1280	.1265	.1251	.1240	.1229	.1220	.1212
11.75	.1389	.1362	.1339	.1318	.1301	.1286	.1273	.1261	.1251	.1242	.1235
12.00	.1409	.1382	.1359	.1339	.1322	.1307	.1294	.1283	.1273	.1264	.1257
12.25	.1429	.1402	.1379	.1360	.1343	.1328	.1316	.1305	.1295	.1287	.1279
12.50	.1449	.1422	.1400	.1380	.1364	.1350	.1337	.1326	.1317	.1309	.1302
12.75	.1468	.1442	.1420	.1401	.1385	.1371	.1359	.1348	.1339	.1331	.1324
13.00	.1488	.1463	.1441	.1422	.1406	.1393	.1381	.1371	.1362	.1354	.1347
13.25	.1509	.1483	.1462	.1444	.1428	.1414	.1403	.1393	.1384	.1377	.1370
13.50	.1529	.1504	.1483	.1465	.1449	.1436	.1425	.1415	.1407	.1399	.1393
13.75	.1549	.1525	.1504	.1486	.1471	.1458	.1447	.1437	.1429	.1422	.1416
14.00	.1570	.1545	.1525	.1508	.1493	.1480	.1469	.1460	.1452	.1445	.1439
14.25	.1590	.1566	.1546	.1529	.1515	.1502	.1492	.1482	.1475	.1468	.1462
14.50	.1611	.1587	.1568	.1551	.1536	.1524	.1514	.1505	.1498	.1491	.1486
14.75	.1632	.1609	.1589	.1572	.1559	.1547	.1537	.1528	.1521	.1514	.1509
15.00	.1653	.1630	.1611	.1594	.1581	.1569	.1559	.1551	.1544	.1537	.1532
15.25	.1674	.1651	.1632	.1616	.1603	.1592	.1582	.1574	.1567	.1561	.1556
15.50	.1695	.1672	.1654	.1638	.1625	.1614	.1605	.1597	.1590	.1584	.1579
15.75	.1716	.1694	.1676	.1660	.1648	.1637	.1628	.1620	.1613	.1608	.1603
16.00	.1737	.1716	.1698	.1683	.1670	.1659	.1650	.1643	.1637	.1631	.1627
16.25	.1758	.1737	.1720	.1705	.1693	.1682	.1674	.1666	.1660	.1655	.1650
16.50	.1780	.1759	.1742	.1727	.1715	.1705	.1697	.1689	.1683	.1678	.1674
16.75	.1801	.1781	.1764	.1750	.1738	.1728	.1720	.1713	.1707	.1702	.1698
17.00	.1823	.1803	.1786	.1772	.1761	.1751	.1743	.1736	.1731	.1726	.1722
17.25	.1845	.1825	.1808	.1795	.1784	.1774	.1766	.1760	.1754	.1750	.1746
17.50	.1866	.1847	.1831	.1817	.1806	.1797	.1790	.1783	.1778	.1774	.1770
17.75	.1888	.1869	.1853	.1840	.1829	.1820	.1813	.1807	.1802	.1797	.1794
18.00	.1910	.1891	.1876	.1863	.1852	.1844	.1837	.1831	.1826	.1821	.1818
18.25	.1932	.1913	.1898	.1886	.1876	.1867	.1860	.1854	.1849	.1845	.1842
18.50	.1954	.1936	.1921	.1909	.1899	.1891	.1884	.1878	.1873	.1869	.1866
18.75	.1976	.1958	.1944	.1932	.1922	.1914	.1907	.1902	.1897	.1894	.1890

CONSTANT CHART (continued)

<i>Interest Rate</i>	<i>27 yrs</i>	<i>28 yrs</i>	<i>29 yrs</i>	<i>30 yrs</i>	<i>31 yrs</i>	<i>32 yrs</i>	<i>33 yrs</i>	<i>34 yrs</i>	<i>35 yrs</i>	<i>40 yrs</i>
4.00	.0607	.0595	.0584	.0573	.0564	.0555	.0547	.0539	.0532	.0502
4.25	.0624	.0612	.0601	.0591	.0581	.0573	.0565	.0557	.0550	.0521
4.50	.0641	.0629	.0618	.0609	.0599	.0591	.0583	.0575	.0568	.0540
4.75	.0658	.0647	.0636	.0626	.0617	.0609	.0601	.0594	.0587	.0559
5.00	.0676	.0665	.0654	.0645	.0636	.0628	.0620	.0613	.0606	.0579
5.25	.0694	.0683	.0673	.0663	.0654	.0646	.0639	.0632	.0625	.0599
5.50	.0712	.0701	.0691	.0682	.0673	.0665	.0658	.0651	.0645	.0619
5.75	.0731	.0720	.0710	.0701	.0692	.0685	.0677	.0671	.0665	.0640
6.00	.0749	.0739	.0729	.0720	.0712	.0704	.0697	.0691	.0685	.0661
6.25	.0768	.0758	.0748	.0739	.0731	.0724	.0717	.0711	.0705	.0682
6.50	.0787	.0777	.0768	.0759	.0751	.0744	.0737	.0731	.0725	.0703
6.75	.0806	.0796	.0787	.0779	.0771	.0764	.0758	.0752	.0746	.0725
7.00	.0826	.0816	.0807	.0799	.0791	.0785	.0778	.0772	.0767	.0746
7.25	.0846	.0836	.0827	.0819	.0812	.0805	.0799	.0793	.0788	.0768
7.50	.0865	.0856	.0847	.0840	.0832	.0826	.0820	.0815	.0810	.0790
7.75	.0885	.0876	.0868	.0860	.0853	.0847	.0841	.0836	.0831	.0812
8.00	.0906	.0897	.0888	.0881	.0874	.0868	.0863	.0857	.0853	.0835
8.25	.0926	.0917	.0909	.0902	.0895	.0890	.0884	.0879	.0875	.0857
8.50	.0947	.0938	.0930	.0923	.0917	.0911	.0906	.0901	.0897	.0880
8.75	.0967	.0959	.0951	.0945	.0938	.0933	.0928	.0923	.0919	.0903
9.00	.0988	.0980	.0973	.0966	.0960	.0955	.0950	.0945	.0941	.0926
9.25	.1009	.1001	.0994	.0988	.0982	.0977	.0972	.0968	.0964	.0949
9.50	.1031	.1023	.1016	.1010	.1004	.0999	.0994	.0990	.0986	.0973
9.75	.1052	.1044	.1038	.1031	.1026	.1021	.1017	.1013	.1009	.0996
10.00	.1073	.1066	.1059	.1054	.1048	.1044	.1039	.1036	.1032	.1019
10.25	.1095	.1088	.1082	.1076	.1071	.1066	.1062	.1058	.1055	.1043
10.50	.1117	.1110	.1104	.1098	.1093	.1089	.1085	.1081	.1078	.1067
10.75	.1139	.1132	.1126	.1121	.1116	.1112	.1108	.1105	.1102	.1091
11.00	.1161	.1154	.1148	.1143	.1139	.1135	.1131	.1128	.1125	.1114
11.25	.1183	.1177	.1171	.1166	.1162	.1158	.1154	.1151	.1148	.1138
11.50	.1205	.1199	.1194	.1189	.1185	.1181	.1177	.1174	.1172	.1162
11.75	.1228	.1222	.1216	.1212	.1208	.1204	.1201	.1198	.1195	.1187
12.00	.1250	.1244	.1239	.1235	.1231	.1227	.1224	.1222	.1219	.1211
12.25	.1273	.1267	.1262	.1258	.1254	.1251	.1248	.1245	.1243	.1235
12.50	.1296	.1290	.1285	.1281	.1278	.1274	.1271	.1269	.1267	.1259
12.75	.1318	.1313	.1309	.1305	.1301	.1298	.1295	.1293	.1291	.1284
13.00	.1341	.1336	.1332	.1328	.1325	.1322	.1319	.1317	.1315	.1308
13.25	.1364	.1359	.1355	.1351	.1348	.1345	.1343	.1341	.1339	.1332
13.50	.1387	.1383	.1379	.1375	.1372	.1369	.1367	.1365	.1363	.1357
13.75	.1411	.1406	.1402	.1399	.1396	.1393	.1391	.1389	.1387	.1381
14.00	.1434	.1430	.1426	.1422	.1419	.1417	.1415	.1413	.1411	.1406
14.25	.1457	.1453	.1449	.1446	.1443	.1441	.1439	.1437	.1436	.1430
14.50	.1481	.1477	.1473	.1470	.1467	.1465	.1463	.1461	.1460	.1455
14.75	.1504	.1500	.1497	.1494	.1491	.1489	.1487	.1486	.1484	.1480
15.00	.1528	.1524	.1521	.1518	.1515	.1513	.1512	.1510	.1509	.1504
15.25	.1551	.1548	.1545	.1542	.1540	.1538	.1536	.1534	.1533	.1529
15.50	.1575	.1572	.1569	.1566	.1564	.1562	.1560	.1559	.1558	.1554
15.75	.1599	.1595	.1593	.1590	.1588	.1586	.1585	.1583	.1582	.1579
16.00	.1623	.1619	.1617	.1614	.1612	.1610	.1609	.1608	.1607	.1603
16.25	.1647	.1643	.1641	.1638	.1636	.1635	.1633	.1632	.1631	.1628
16.50	.1671	.1667	.1665	.1663	.1661	.1659	.1658	.1657	.1656	.1653
16.75	.1694	.1692	.1689	.1687	.1685	.1684	.1682	.1681	.1680	.1678
17.00	.1719	.1716	.1713	.1711	.1710	.1708	.1707	.1706	.1705	.1702
17.25	.1743	.1740	.1738	.1736	.1734	.1733	.1732	.1731	.1730	.1727
17.50	.1767	.1764	.1762	.1760	.1759	.1757	.1756	.1755	.1755	.1752
17.75	.1791	.1788	.1786	.1785	.1783	.1782	.1781	.1780	.1779	.1777
18.00	.1815	.1813	.1811	.1809	.1808	.1806	.1805	.1805	.1804	.1802
18.25	.1839	.1837	.1835	.1834	.1832	.1831	.1830	.1829	.1829	.1827
18.50	.1864	.1861	.1860	.1858	.1857	.1856	.1855	.1854	.1854	.1852
18.75	.1888	.1886	.1884	.1883	.1881	.1880	.1880	.1879	.1878	.1877

Single Family Housing Profit & Loss Statement	
REVENUE	
Sale of Housing Units	+
(Less) Selling Costs (percent)	-
Total Revenue	=
COSTS	
Land Acquisition	
Planning/Engineering	+
Site Improvements	+
House Construction	+
Fees and Other Soft Costs	+
Costs Sub-Total	=
Estimated Financing Costs	+
Total Costs	=
TOTAL REVENUE	
(Less) TOTAL COSTS	-
<i>DEVELOPER RETURN (Subsidy Required)</i>	=

Single Family Housing Profit & Loss Statement	
REVENUE	
Sale of Housing Units	+
(Less) Selling Costs (percent)	-
Total Revenue	=
COSTS	
Land Acquisition	
Planning/Engineering	+
Site Improvements	+
House Construction	+
Fees and Other Soft Costs	+
Costs Sub-Total	=
Estimated Financing Costs	+
Total Costs	=
TOTAL REVENUE	
(Less) TOTAL COSTS	-
<i>DEVELOPER RETURN (Subsidy Required)</i>	=

Single Family Housing Profit & Loss Statement	
REVENUE	
Sale of Housing Units	+
(Less) Selling Costs (percent)	-
Total Revenue	=
COSTS	
Land Acquisition	
Planning/Engineering	+
Site Improvements	+
House Construction	+
Fees and Other Soft Costs	+
Costs Sub-Total	=
Estimated Financing Costs	+
Total Costs	=
TOTAL REVENUE	
(Less) TOTAL COSTS	-
<i>DEVELOPER RETURN (Subsidy Required)</i>	=

Lender Income Analysis	
Annual Income	Monthly Income
Bank Ratio	1 st :
	2 nd :
Monthly Income x 1st Ratio	
- tax	-
- insurance	-
- other	-
	= Maximum DS (p+i) 1
Monthly Income x 2nd Ratio	
- tax	-
- insurance	-
- other	-
Other Debts	
- loan payments	-
- credit card payments	- 1/20 of balance
- other	-
	= Maximum DS (p+i) 2
Choose lower DS	
Debt Capacity = (monthly DS x 12)/c	_____ x 12/ _____
DC (total)	=

Lender Income Analysis	
Annual Income	Monthly Income
Bank Ratio	1 st :
	2 nd :
Monthly Income x 1st Ratio	
- tax	-
- insurance	-
- other	-
	= Maximum DS (p+i) 1
Monthly Income x 2nd Ratio	
- tax	-
- insurance	-
- other	-
Other Debts	
- loan payments	-
- credit card payments	- 1/20 of balance
- other	-
	= Maximum DS (p+i) 2
Choose lower DS	
Debt Capacity = (monthly DS x 12)/c	_____ x 12/ _____
DC (total)	=

Lender Income Analysis	
Annual Income	Monthly Income
Bank Ratio	1 st :
	2 nd :
Monthly Income x 1st Ratio	
- tax	-
- insurance	-
- other	-
	= Maximum DS (p+i) 1
Monthly Income x 2nd Ratio	
- tax	-
- insurance	-
- other	-
Other Debts	
- loan payments	-
- credit card payments	- 1/20 of balance
- other	-
	= Maximum DS (p+i) 2
Choose lower DS	
Debt Capacity = (monthly DS x 12)/c	_____ x 12/ _____
DC (total)	=