

# Denver Affordable Housing Nexus Study



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**SUBMITTED TO:**

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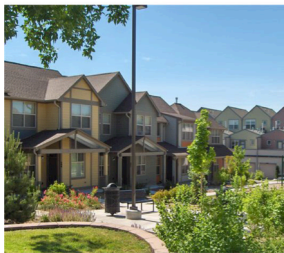


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## Executive Summary

The City of Denver (City) retained David Paul Rosen & Associates (DRA) to prepare a nexus study addressing the relationship between market-rate residential and non-residential development and the need for affordable housing in the City. The nexus analysis estimates the number of low and moderate income households associated with development of new market-rate housing and non-residential development in the City, and calculates the maximum legally justifiable nexus fee by land use, based on the cost to produce housing affordable to these households. The study also examines the potential effect of alternative levels of a nexus fee on the economic feasibility of new residential and non-residential development using a series of residential and non-residential development prototypes.

DRA worked with Residential and Commercial Technical Advisory Groups (TAGs) composed of local Denver area developers and real estate professionals to review and provide input on the development prototypes and economic assumptions used in the analysis.

## Development Prototypes

DRA conducted the nexus fee and economic feasibility analyses using ten residential and non-residential development prototypes<sup>1</sup> developed in conjunction with City staff and the Residential and Commercial Technical Advisory Groups. These prototypes represent the type of projects that have been recently developed and are in the development pipeline in the City.

The prototypes analyzed include high-rise residential and office prototypes limited to the greater Downtown area and low- and mid-rise development prototypes that could be built under current zoning in different market areas across the City. The

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<sup>1</sup> DRA evaluated an eleventh prototype (manufacturing) for the nexus analysis only.

tenure, number of units and building heights of the prototypes are summarized in **Table 1**.

| <b>Table 1<br/>Summary of Development Prototypes<br/>Denver Nexus Housing Study</b> |                         |                           |                            |                           |
|-------------------------------------------------------------------------------------|-------------------------|---------------------------|----------------------------|---------------------------|
| <b>Residential Prototypes</b>                                                       | <b>Total Hsg. Units</b> | <b>Residential Tenure</b> | <b>Appx. Bldg. Stories</b> | <b>Density (DUs/Acre)</b> |
| SFD Infill                                                                          | 1                       | Owner                     | 2 Stories                  | 7                         |
| Townhomes                                                                           | 10                      | Owner                     | 3 Stories                  | 44                        |
| 12-Story Condominium                                                                | 232                     | Owner                     | 12 Stories                 | 233                       |
| 5-Story Apartment                                                                   | 300                     | Rental                    | 5 Stories                  | 100                       |
| 20-Story Apartment                                                                  | 285                     | Rental                    | 20 Stories                 | 475                       |
| <b>Non-Residential Prototypes</b>                                                   | <b>Net Bldg. SF</b>     |                           | <b>Appx. Bldg. Stories</b> | <b>Density (FAR)</b>      |
| Mid-Rise Office                                                                     | 64,000                  |                           | 5 Stories                  | 2.5                       |
| High-Rise Office                                                                    | 128,000                 |                           | 12 Stories                 | 5.0                       |
| Hotel                                                                               | 50,000                  |                           | 4 Stories                  | 0.7                       |
| Stand-Alone Retail                                                                  | 25,000                  |                           | 1 Story                    | 0.2                       |
| Warehouse                                                                           | 250,000                 |                           | 1 Story                    | 0.4                       |
| Manufacturing*                                                                      | 100,000                 |                           | 1 Story                    | 0.4                       |

\*Used in nexus analysis only; not analyzed in the economic feasibility analysis.

Source: City of Denver; DRA.

## Findings of the Nexus Fee Analysis

The nexus fee analysis estimates the number of low and moderate income households associated with development of new market-rate housing and non-residential development in the City, and calculates the maximum legally justifiable nexus fee based on the cost to produce housing affordable to these households. **Table 2** summarizes the estimated maximum legally justifiable nexus fees for the residential prototypes and non-residential land uses.

Residential nexus fees were estimated under low-, middle- and high-cost scenarios reflecting the range of estimated home prices and rents for the prototypes. For the

low- and mid-rise prototypes, these scenarios represent the range of market conditions found in different areas of the City. For the high-rise prototypes, these scenarios represent an estimated range of assumptions for the Downtown area. The nexus fees in Table 2 reflect the middle-cost scenario.

| <b>Table 2</b><br><b>Estimated Maximum Legally Justifiable Nexus Fees<sup>1</sup></b><br><b>Residential and Non-Residential Development Prototypes<sup>2</sup></b><br><b>Denver Affordable Housing Nexus Fee and Economic Impact Analysis</b> |                                        |                       |                       |                        |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------|-----------------------|------------------------|--------------|
| <b>Prototype</b>                                                                                                                                                                                                                              | <b>Nexus Fee per Gross Square Foot</b> |                       |                       |                        |              |
|                                                                                                                                                                                                                                               | <b>Under 30% AMI</b>                   | <b>30% to 60% AMI</b> | <b>60% to 80% AMI</b> | <b>80% to 120% AMI</b> | <b>Total</b> |
| SFD Infill                                                                                                                                                                                                                                    | \$3.17                                 | \$5.31                | \$1.12                | \$0.00                 | \$9.60       |
| Townhomes                                                                                                                                                                                                                                     | \$5.09                                 | \$8.61                | \$1.75                | \$0.00                 | \$15.45      |
| 12-Story Condominium                                                                                                                                                                                                                          | \$6.10                                 | \$10.32               | \$2.10                | \$0.00                 | \$18.52      |
| 5-Story Apartment                                                                                                                                                                                                                             | \$5.19                                 | \$9.01                | \$1.82                | \$0.00                 | \$16.02      |
| 20-Story Apartment                                                                                                                                                                                                                            | \$6.36                                 | \$10.90               | \$2.19                | \$0.00                 | \$19.44      |
| Office                                                                                                                                                                                                                                        | \$11.17                                | \$32.72               | \$12.86               | \$0.00                 | \$56.74      |
| Hotel                                                                                                                                                                                                                                         | \$40.85                                | \$37.20               | \$4.97                | \$0.00                 | \$83.02      |
| Stand-Alone Retail                                                                                                                                                                                                                            | \$63.40                                | \$46.09               | \$9.81                | \$0.00                 | \$119.29     |
| Warehouse                                                                                                                                                                                                                                     | \$6.59                                 | \$17.47               | \$4.45                | \$0.00                 | \$28.51      |
| Manufacturing*                                                                                                                                                                                                                                | \$6.17                                 | \$17.00               | \$6.39                | \$0.00                 | \$29.57      |

<sup>1</sup>For residential prototypes, nexus fees represent the middle-cost scenario.

<sup>2</sup>For primary use listed; some prototypes include ground floor retail.

\*Used in nexus analysis only; not analyzed in economic feasibility analysis.

Source: DRA

## Findings of the Economic Feasibility Analysis

DRA prepared an economic feasibility analysis to assist the City in evaluating the potential impact of a nexus fee on new residential and non-residential development in Denver. DRA conducted the economic analysis using the residential and non-residential development prototypes described above. <sup>1</sup>

As noted above, DRA interviewed a number of residential and mixed-use developers active in Denver and participating in the Residential and Commercial

<sup>1</sup> No economic feasibility analysis was conducted for manufacturing uses.

Technical Advisory Groups to review the prototypes, revenue, operating cost and development cost assumptions used in the analysis, as well as target rates of return. DRA incorporated comments received from these developers into the analysis.

DRA evaluated the economic feasibility of the prototype developments using Return on Equity (ROE), Residual Land Value (RLV) and Return on Cost (ROC) approaches. The ROE approach calculates the value of a development based on its stabilized income potential and subtracts the costs of development (including land) to determine the net value of the investment, or developer/investor profit. Under the ROE approach, the financial feasibility of the prototypes is measured by the rate of the ROE that the resulting net investment value (or profit) represents. Land costs are held fixed at an estimated market land price and the economic impact of the program is shown as a change in the dollar amount of the net value of investment in the prototype and as a change in the ROE.

Residual Land Value analysis methodology calculates the value of a development based on its income potential and subtracts the costs of development (excluding land but including an assumed ROE), to yield the underlying value of the land. An alternative that generates a value to the land that is negative, or well below market land sales prices, is financially problematic.

Return on Cost is calculated by dividing net operating income by total development costs. It does not consider the benefits or risks of financial leverage and does not involve the use of cap rates.

All three approaches calculate the value of rental prototypes (residential and non-residential) at a point in time based on the estimated stabilized net operating income of the prototype.

The analysis was conducted under two alternative capitalization (“cap”) rate assumptions. The lower cap rate alternative is based on the low end of estimated current cap rates in Denver based on input from the TAGs, as well as a review of published cap rate data by land use for Denver. These current cap rates are close to the historically low levels seen in the development boom that has occurred in Denver and many metro areas across the country since the Great Recession. The high cap rate alternative is 50 basis points higher than the low cap rate assumed for each prototype.

The analysis examines the effect of nexus fees ranging from \$1.00 per gross building square foot to \$7.00 per gross square foot. The results of the analysis are



designed to inform the city as it evaluates a potential nexus fee and is one among other factors to consider in the public policy decision.

The results of the ROE and RLV analyses are summarized in **Table 3** under the low cap rate assumption and **Table 4** under the higher cap rate assumption. The findings are discussed below. Results are shown for all three scenarios (low-, middle- and high-cost), although it is expected that most development in Denver will occur in high-cost areas. Therefore, the discussion below focuses primarily on the high-cost scenario. All references to the ROE and the RLV are based on the results for the high cap rate assumption in Table 4. Given the relationship between the ROE and RLV calculations, the RLV exceeds the estimated land acquisition cost if the ROE is above the threshold rate of return. Therefore, the discussion focuses on the ROC and ROE measures.

The findings of the economic feasibility analysis are summarized as follows:

1. Returns for all three owner housing prototypes (single-family infill, townhomes and 12-story condos) exceed threshold returns for the ROC and ROE measures (15% and 10%, respectively) and the RLV exceeds estimated current land costs with no nexus fee. The ROC begins to fall below the threshold with a \$5.00 per square foot nexus fee under the low- and middle-cost scenarios and with a \$7.00 per square foot nexus fee under the high-cost scenario. The ROE measure exceeds the threshold and the RLV exceeds estimated land acquisition costs with fee levels up to \$7.00 per square foot at low-, middle- and high-cost scenarios.
2. For the 5-story rental prototype, the ROC measure is below the threshold of 6.5% with no fee and with all levels of the nexus fee tested. Under the high-cost scenario, the ROC declines from 5.79% with no fee to 5.65% with a \$7.00 per square foot nexus fee, a reduction of 2% from the no fee alternative. With a \$2.00 per square foot nexus fee, the ROC is 5.75%, a decline of 0.3% from the no fee baseline. However, the ROE measure exceeds the threshold of 8% and the RLV exceeds estimated land acquisition costs at all fee levels up to \$7.00 under the low-, middle- and high-cost scenarios.
3. For the 20-story rental prototype, the ROC is below the threshold of 6.5% with no fee. Under the high-cost scenario, the ROC declines from 6.24% with no fee to 6.20% with a nexus fee of \$2.00 per square foot and to 6.10% with a nexus fee of \$7.00 per square foot, reductions of 0.6% and 2%, respectively. The ROE measure exceeds the threshold of 8% and the RLV exceeds estimated land costs at all fee levels under low-, middle-, and high-cost scenarios.

4. The 5-story office prototype also does not meet the ROC threshold of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 5.95% with no fee to 5.91% with a \$2.00 nexus fee and to 5.82% with a fee of \$7.00 per square foot, reductions of 0.7% and 2%, respectively. The ROE is also below the threshold of 8% for the low- and middle-cost scenarios. However, under the high-cost scenario, the ROE exceeds the threshold of 8% and the RLV exceeds estimated land acquisition costs at fee levels up to \$7.00 per square foot.
5. Similarly, the 12-story office prototype does not meet the ROC threshold of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 5.93% with no fee to 5.90% with a fee of \$2.00 per square foot and to 5.80% with a fee of \$7.00 per square foot, reductions of 0.5% and 2%, respectively. This prototype performs best under the low-cost and middle-cost scenarios. For the high-rise office prototype, which is expected to be built only in high-cost areas such as the Downtown or Cherry Creek where rents are highest and higher density is allowed, the difference in these scenarios represents a sensitivity analysis of alternative cost and revenue assumptions that reflect specific site locational factors rather than larger geographic market variations. Under the low- and middle-cost scenarios, the ROE exceeds the threshold of 8% at all levels of a nexus fee up to \$7.00 per square foot. Under the high-cost scenario, the ROE falls below the threshold only with the \$7.00 fee.
6. For the 4-story hotel, the ROC exceeds the threshold of 9% only under the high-cost scenario. For this scenario, the ROC stays above the threshold at all fee levels up to \$7.00 per square foot, declining from 9.38% with no fee to 9.33% with a \$2.00 fee and to 9.21% with a \$7.00 fee, reductions of 0.5% and 2%, respectively.
7. The retail prototype does not meet the threshold ROC of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 6.19% with no fee to 6.17% with a \$2.00 per square foot fee and to 6.05% with a \$7.00 per square foot fee, reductions of 0.3% and 2%, respectively. The ROE exceeds the threshold of 8.0% for all fee levels under low-, middle- and high-cost scenarios.
8. The warehouse prototype also does not meet the threshold ROC of 7.5% even without a nexus fee. Under the high-cost scenario, the ROC declines from 6.68% with no fee to 6.58% with a \$2.00 per square foot fee and to 6.37% with a \$7.00 per square foot fee, reductions of 1% and 5%, respectively.

In summary, the analysis indicates that nexus fees up to \$7.00 per square foot have a relatively small effect on returns, with reductions in the ROC generally under 2%, based on the ROC, ROE and RLV measures for the prototypes analyzed. To the extent that fees at the levels analyzed do affect project feasibility, DRA expects that the market will adjust to fees at the moderate levels proposed over time. Regulation and development impact fees on residential development that increase the costs of development, including nexus fees, will ultimately be passed through to the landowner in the form of reduced land prices. In order for developers to profitably develop new projects, they will bid down land prices to the level that makes development feasible, given market economics and zoning regulations affecting the amount of development that can be built on a particular site. Land prices typically react quickly to factors that increase land prices, such as increases in rents and sales prices. Land prices tend to be slower to respond to factors that depress land prices, such as changing market conditions and increased regulation or fees, since owners who purchased the land recently may be reluctant to take a loss and others may be hesitant to adjust their expectations downward.

Land prices are also volatile in response to economic cycles and factors beyond the control of local government. For example, land will lose value in higher cap rate environments. If rates of return are far below target levels, or residual land values are very low or negative with little to no room for downward adjustment, it indicates that capitalized values are not sufficient to cover the other development costs besides land, and new development will be slowed or halted until market conditions change. This will be the case whether the loss in values is due to changing market conditions and cap rates or to governmental fees or regulations.



**Table 3**  
**Summary of Economic Feasibility Analysis Results**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                 | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail    | Warehouse |
|-------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-----------|-----------|
| <i>Tenure</i>                                   | <i>Owner</i>         | <i>Owner</i>    | <i>Owner</i>   | <i>Renter</i>  | <i>Renter</i>   |                |                 |               |           |           |
| <i>Residential Units</i>                        | 1                    | 10              | 232            | 300            | 285             |                |                 |               |           |           |
| <i>Residential Net SF</i>                       | 2,800                | 20,000          | 227,250        | 212,250        | 230,800         | -              | -               | -             | -         | -         |
| <i>Site Area (SF)</i>                           | 6,250                | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734        | 121,968   | 696,960   |
| <i>Total Net SF</i>                             | 2,800                | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000        | 25,000    | 250,000   |
| <i>Parking Spaces</i>                           | 2 Spaces             | 10 Spaces       | 292 Spaces     | 450 Spaces     | 257 Spaces      | 163 Spaces     | 175 Spaces      | 105 Spaces    | 83 Spaces | 83 Spaces |
| <i>Approximate Building Stories</i>             | 2 Stories            | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories     | 1 Stories | 1 Stories |
| <b>Assumed Land Price</b>                       |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    |                      |                 |                |                |                 |                |                 |               |           |           |
| Per Unit (or Hotel Room)                        | \$200,000            | \$70,000        | \$20,000       | \$26,250       | \$13,500        | N/A            | N/A             | \$12,000      | N/A       | N/A       |
| Per SF Site Area                                | \$32                 | \$70            | \$107          | \$60           | \$147           | \$41           | \$81            | \$19          | \$10      | \$7       |
| Middle Scenario                                 |                      |                 |                |                |                 |                |                 |               |           |           |
| Per Unit (or Hotel Room)                        | \$275,000            | \$90,000        | \$30,000       | \$30,000       | \$21,000        | N/A            | N/A             | \$15,000      | N/A       | N/A       |
| Per SF Site Area                                | \$44                 | \$90            | \$160          | \$69           | \$229           | \$45           | \$90            | \$24          | \$15      | \$10      |
| High Scenario                                   |                      |                 |                |                |                 |                |                 |               |           |           |
| Per Unit (or Hotel Room)                        | \$350,000            | \$200,000       | \$40,000       | \$45,000       | \$28,500        | N/A            | \$30            | \$20,000      | \$0       | \$0       |
| Per SF Site Area                                | \$56                 | \$200           | \$213          | \$103          | \$311           | \$60           | \$120           | \$32          | \$20      | \$15      |
| <b>Assumed Cap Rate</b>                         | N/A                  | N/A             | N/A            | 4.50%          | 4.50%           | 5.00%          | 5.00%           | 7.00%         | 5.00%     | 5.50%     |
| <b>Assumed Min. Unleveraged ROC (1)</b>         | 15%                  | 15%             | 15%            | 6.50%          | 6.50%           | 7.00%          | 7.00%           | 9.00%         | 7.00%     | 7.50%     |
| <b>Assumed Min. ROE (2)</b>                     | 10%                  | 10%             | 10%            | 8%             | 8%              | 8%             | 8%              | 8%            | 8%        | 8%        |
| <b>Assumed Investment Period (Months)</b>       | 15 Months            | 24 Months       | 48 Months      | 30 Months      | 48 Months       | 18 Months      | 21 Months       | 15 Months     | 9 Months  | 9 Months  |
| <b>Unleveraged Return on Cost (1)</b>           |                      |                 |                |                |                 |                |                 |               |           |           |
| No Fee                                          |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 16.53%               | 12.04%          | 8.22%          | 6.01%          | 5.38%           | 4.15%          | 6.39%           | 7.93%         | 6.28%     | 5.97%     |
| Middle Scenario                                 | 17.00%               | 17.71%          | 26.21%         | 6.04%          | 5.82%           | 5.09%          | 6.20%           | 8.75%         | 5.96%     | 6.30%     |
| High Scenario                                   | 17.35%               | 17.37%          | 24.42%         | 5.79%          | 6.24%           | 5.95%          | 5.93%           | 9.38%         | 6.19%     | 6.68%     |
| Fee of \$1.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 16.04%               | 11.49%          | 7.84%          | 5.99%          | 5.36%           | 4.14%          | 6.37%           | 7.91%         | 6.26%     | 5.92%     |
| Middle Scenario                                 | 16.58%               | 17.25%          | 25.78%         | 6.01%          | 5.80%           | 5.07%          | 6.17%           | 8.73%         | 5.94%     | 6.25%     |
| High Scenario                                   | 16.98%               | 17.00%          | 24.04%         | 5.77%          | 6.22%           | 5.93%          | 5.91%           | 9.36%         | 6.17%     | 6.63%     |
| Fee of \$2.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 15.56%               | 10.94%          | 7.46%          | 5.96%          | 5.34%           | 4.12%          | 6.34%           | 7.88%         | 6.23%     | 5.87%     |
| Middle Scenario                                 | 16.16%               | 16.79%          | 25.36%         | 5.99%          | 5.78%           | 5.06%          | 6.15%           | 8.70%         | 5.91%     | 6.20%     |
| High Scenario                                   | 16.61%               | 16.62%          | 23.66%         | 5.75%          | 6.20%           | 5.91%          | 5.90%           | 9.33%         | 6.15%     | 6.58%     |
| Fee of \$3.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 15.09%               | 10.40%          | 7.09%          | 5.94%          | 5.32%           | 4.11%          | 6.32%           | 7.86%         | 6.20%     | 5.82%     |
| Middle Scenario                                 | 15.75%               | 16.34%          | 24.94%         | 5.97%          | 5.76%           | 5.04%          | 6.13%           | 8.67%         | 5.89%     | 6.15%     |
| High Scenario                                   | 16.25%               | 16.25%          | 23.29%         | 5.73%          | 6.18%           | 5.89%          | 5.88%           | 9.30%         | 6.13%     | 6.54%     |
| Fee of \$5.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 14.14%               | 9.34%           | 6.34%          | 5.89%          | 5.28%           | 4.08%          | 6.27%           | 7.81%         | 6.15%     | 5.73%     |
| Middle Scenario                                 | 14.93%               | 15.45%          | 24.11%         | 5.92%          | 5.72%           | 5.01%          | 6.09%           | 8.63%         | 5.85%     | 6.05%     |
| High Scenario                                   | 15.53%               | 15.51%          | 22.55%         | 5.69%          | 6.14%           | 5.85%          | 5.84%           | 9.25%         | 6.09%     | 6.45%     |
| Fee of \$7.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 13.22%               | 8.30%           | 5.61%          | 5.85%          | 5.25%           | 4.05%          | 6.23%           | 7.77%         | 6.09%     | 5.63%     |
| Middle Scenario                                 | 14.12%               | 14.56%          | 23.29%         | 5.88%          | 5.68%           | 4.98%          | 6.05%           | 8.58%         | 5.80%     | 5.96%     |
| High Scenario                                   | 14.81%               | 14.78%          | 21.82%         | 5.65%          | 6.10%           | 5.82%          | 5.80%           | 9.21%         | 6.05%     | 6.37%     |
| <b>Return on Equity (ROE) (2)</b>               |                      |                 |                |                |                 |                |                 |               |           |           |
| No Fee                                          |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 44.1%                | 20.1%           | 6.9%           | 44.8%          | 16.2%           | -28.3%         | 39.7%           | 21.3%         | 68.5%     | 22.9%     |
| Middle Scenario                                 | 45.3%                | 29.5%           | 21.8%          | 45.6%          | 24.4%           | 3.0%           | 34.2%           | 40.0%         | 51.1%     | 38.6%     |
| High Scenario                                   | 46.3%                | 29.0%           | 20.3%          | 38.2%          | 32.3%           | 31.5%          | 26.7%           | 54.4%         | 63.3%     | 57.0%     |
| Fee of \$1.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 42.8%                | 19.1%           | 6.5%           | 44.1%          | 15.9%           | -28.8%         | 39.0%           | 20.7%         | 67.0%     | 20.5%     |
| Middle Scenario                                 | 44.2%                | 28.7%           | 21.5%          | 44.9%          | 24.1%           | 2.4%           | 33.6%           | 39.4%         | 49.9%     | 36.2%     |
| High Scenario                                   | 45.3%                | 28.3%           | 20.0%          | 37.6%          | 31.9%           | 30.9%          | 26.1%           | 53.8%         | 62.3%     | 54.7%     |
| Fee of \$2.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 41.5%                | 18.2%           | 6.2%           | 43.4%          | 15.5%           | -29.2%         | 38.4%           | 20.2%         | 65.5%     | 18.0%     |
| Middle Scenario                                 | 43.1%                | 28.0%           | 21.1%          | 44.2%          | 23.7%           | 1.9%           | 32.9%           | 38.9%         | 48.7%     | 33.8%     |
| High Scenario                                   | 44.3%                | 27.7%           | 19.7%          | 37.0%          | 31.5%           | 30.3%          | 25.6%           | 53.3%         | 61.2%     | 52.5%     |
| Fee of \$3.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 40.2%                | 17.3%           | 5.9%           | 42.7%          | 15.2%           | -29.7%         | 37.7%           | 19.6%         | 64.0%     | 15.6%     |
| Middle Scenario                                 | 42.0%                | 27.2%           | 20.8%          | 43.5%          | 23.3%           | 1.4%           | 32.3%           | 38.3%         | 47.5%     | 31.4%     |
| High Scenario                                   | 43.3%                | 27.1%           | 19.4%          | 36.4%          | 31.1%           | 29.7%          | 25.0%           | 52.7%         | 60.2%     | 50.4%     |
| Fee of \$5.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 37.7%                | 15.6%           | 5.3%           | 41.3%          | 14.5%           | -30.6%         | 36.4%           | 18.6%         | 61.1%     | 10.9%     |
| Middle Scenario                                 | 39.8%                | 25.7%           | 20.1%          | 42.1%          | 22.6%           | 0.3%           | 31.1%           | 37.1%         | 45.2%     | 26.8%     |
| High Scenario                                   | 41.4%                | 25.9%           | 18.8%          | 35.3%          | 30.4%           | 28.5%          | 23.9%           | 51.5%         | 58.1%     | 46.1%     |
| Fee of \$7.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 35.2%                | 13.8%           | 4.7%           | 40.0%          | 13.8%           | -31.5%         | 35.1%           | 17.5%         | 58.3%     | 6.4%      |
| Middle Scenario                                 | 37.7%                | 24.3%           | 19.4%          | 40.8%          | 21.9%           | -0.8%          | 29.9%           | 36.0%         | 42.9%     | 22.3%     |
| High Scenario                                   | 39.5%                | 24.6%           | 18.2%          | 34.2%          | 29.6%           | 27.3%          | 22.8%           | 50.4%         | 56.1%     | 42.0%     |
| <b>Resid. Land Value (RLV) Per SF Site Area</b> |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    |                      |                 |                |                |                 |                |                 |               |           |           |
| No Fee                                          |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | \$47.47              | \$102.75        | \$90.11        | \$193.73       | \$480.44        | (\$115.90)     | \$388.56        | \$40.07       | \$20.66   | \$9.53    |
| Middle Scenario                                 | \$62.76              | \$160.19        | \$518.93       | \$490.51       | \$2,731.35      | \$24.12        | \$355.87        | \$76.41       | \$24.24   | \$15.40   |
| High Scenario                                   | \$78.06              | \$287.59        | \$572.70       | \$235.76       | \$1,333.13      | \$176.72       | \$323.18        | \$112.74      | \$33.93   | \$24.92   |
| Fee of \$1.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | \$47.02              | \$100.75        | \$83.13        | \$191.84       | \$468.97        | (\$118.40)     | \$383.56        | \$39.33       | \$20.45   | \$9.17    |
| % Change from 100% Market                       | -1%                  | -2%             | -8%            | -1%            | -2%             | 2%             | -1%             | -2%           | -1%       | -4%       |
| Middle Scenario                                 | \$62.46              | \$162.13        | \$515.30       | \$488.51       | \$2,718.78      | \$23.23        | \$353.28        | \$76.07       | \$24.14   | \$15.03   |



**Table 3**  
**Summary of Economic Feasibility Analysis Results**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                         | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail  | Warehouse |
|-----------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|---------|-----------|
| % Change from 100% Market High Scenario | 0%                   | 1%              | -1%            | 0%             | 0%              | -4%            | -1%             | 0%            | 0%      | -2%       |
| % Change from 100% Market               | \$77.60              | \$285.49        | \$565.05       | \$233.77       | \$1,320.56      | \$174.10       | \$317.90        | \$111.96      | \$33.72 | \$24.56   |
| Fee of \$2.00 Per GSF                   | -1%                  | -1%             | -1%            | -1%            | -1%             | -1%            | -2%             | -1%           | -1%     | -1%       |
| Low Scenario                            | \$46.57              | \$98.74         | \$76.15        | \$189.96       | \$457.51        | (\$120.90)     | \$378.56        | \$38.58       | \$20.25 | \$8.81    |
| % Change from 100% Market               | -2%                  | -4%             | -15%           | -2%            | -5%             | 4%             | -3%             | -4%           | -2%     | -8%       |
| Middle Scenario                         | \$62.00              | \$160.03        | \$507.65       | \$486.52       | \$2,706.21      | \$20.61        | \$348.00        | \$75.29       | \$23.92 | \$14.66   |
| % Change from 100% Market               | -1%                  | 0%              | -2%            | -1%            | -1%             | -15%           | -2%             | -1%           | -1%     | -5%       |
| High Scenario                           | \$77.14              | \$283.39        | \$557.39       | \$231.77       | \$1,307.99      | \$171.48       | \$312.62        | \$111.18      | \$33.50 | \$24.19   |
| % Change from 100% Market               | -1%                  | -1%             | -3%            | -2%            | -2%             | -3%            | -3%             | -1%           | -1%     | -3%       |
| Fee of \$3.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$46.13              | \$96.74         | \$69.17        | \$188.08       | \$446.04        | (\$123.40)     | \$373.56        | \$37.84       | \$20.04 | \$8.46    |
| % Change from 100% Market               | -3%                  | -6%             | -23%           | -3%            | -7%             | 6%             | -4%             | -6%           | -3%     | -11%      |
| Middle Scenario                         | \$61.38              | \$153.90        | \$495.98       | \$484.52       | \$2,693.64      | \$16.26        | \$340.03        | \$74.07       | \$23.60 | \$14.29   |
| % Change from 100% Market               | -2%                  | -4%             | -4%            | -1%            | -1%             | -33%           | -4%             | -3%           | -3%     | -7%       |
| High Scenario                           | \$76.68              | \$281.30        | \$549.74       | \$229.77       | \$1,295.42      | \$168.86       | \$307.34        | \$110.40      | \$33.29 | \$23.82   |
| % Change from 100% Market               | -2%                  | -2%             | -4%            | -3%            | -3%             | -4%            | -5%             | -2%           | -2%     | -4%       |
| Fee of \$5.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$45.23              | \$92.74         | \$55.21        | \$184.31       | \$423.10        | (\$128.40)     | \$363.56        | \$36.35       | \$19.63 | \$7.74    |
| % Change from 100% Market               | -5%                  | -10%            | -39%           | -5%            | -12%            | 11%            | -6%             | -9%           | -5%     | -19%      |
| Middle Scenario                         | \$60.46              | \$149.70        | \$480.68       | \$480.53       | \$2,668.50      | \$11.02        | \$329.47        | \$72.51       | \$23.18 | \$13.55   |
| % Change from 100% Market               | -4%                  | -7%             | -7%            | -2%            | -2%             | -54%           | -7%             | -5%           | -4%     | -12%      |
| High Scenario                           | \$75.75              | \$277.10        | \$534.44       | \$225.78       | \$1,270.28      | \$163.62       | \$296.78        | \$108.84      | \$32.87 | \$23.08   |
| % Change from 100% Market               | -3%                  | -4%             | -7%            | -4%            | -5%             | -7%            | -8%             | -3%           | -3%     | -7%       |
| Fee of \$7.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$44.24              | \$88.07         | \$36.56        | \$179.75       | \$392.45        | (\$134.24)     | \$351.60        | \$34.61       | \$19.18 | \$6.95    |
| % Change from 100% Market               | -7%                  | -14%            | -59%           | -7%            | -18%            | 16%            | -10%            | -14%          | -7%     | -27%      |
| Middle Scenario                         | \$59.53              | \$145.51        | \$465.37       | \$476.53       | \$2,643.36      | \$5.78         | \$318.91        | \$70.94       | \$22.76 | \$12.82   |
| % Change from 100% Market               | -5%                  | -9%             | -10%           | -3%            | -3%             | -76%           | -10%            | -7%           | -6%     | -17%      |
| High Scenario                           | \$74.83              | \$272.91        | \$519.14       | \$221.79       | \$1,245.14      | \$158.38       | \$286.22        | \$107.28      | \$32.45 | \$22.34   |
| % Change from 100% Market               | -4%                  | -5%             | -9%            | -6%            | -7%             | -10%           | -11%            | -5%           | -4%     | -10%      |

(1) For owner housing, equals net profit/fee (net sales revenues less total development costs, excluding builder fee/profit). For all others, equals net operating income divided by total development costs.  
(2) Return on equity measured as net project value divided by the number of years equity investment divided by total equity investment.

Source: DRA.

**Table 4**  
**Summary of Economic Feasibility Analysis Results**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                 | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail    | Warehouse |
|-------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-----------|-----------|
| <i>Tenure</i>                                   | <i>Owner</i>         | <i>Owner</i>    | <i>Owner</i>   | <i>Renter</i>  | <i>Renter</i>   |                |                 |               |           |           |
| <i>Residential Units</i>                        | 1                    | 10              | 232            | 300            | 285             |                |                 |               |           |           |
| <i>Residential Net SF</i>                       | 2,800                | 20,000          | 227,250        | 212,250        | 230,800         | -              | -               | -             | -         | -         |
| <i>Site Area (SF)</i>                           | 6,250                | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734        | 121,968   | 696,960   |
| <i>Total Net SF</i>                             | 2,800                | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000        | 25,000    | 250,000   |
| <i>Parking Spaces</i>                           | 2 Spaces             | 10 Spaces       | 292 Spaces     | 450 Spaces     | 257 Spaces      | 163 Spaces     | 175 Spaces      | 105 Spaces    | 83 Spaces | 83 Spaces |
| <i>Approximate Building Stories</i>             | 2 Stories            | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories     | 1 Stories | 1 Stories |
| <b>Assumed Land Price</b>                       |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    |                      |                 |                |                |                 |                |                 |               |           |           |
| Per Unit (or Hotel Room)                        | \$200,000            | \$70,000        | \$20,000       | \$26,250       | \$13,500        | N/A            | N/A             | \$12,000      | N/A       | N/A       |
| Per SF Site Area                                | \$32                 | \$70            | \$107          | \$60           | \$147           | \$41           | \$81            | \$19          | \$10      | \$7       |
| Middle Scenario                                 |                      |                 |                |                |                 |                |                 |               |           |           |
| Per Unit (or Hotel Room)                        | \$275,000            | \$90,000        | \$30,000       | \$30,000       | \$21,000        | N/A            | N/A             | \$15,000      | N/A       | N/A       |
| Per SF Site Area                                | \$44                 | \$90            | \$160          | \$69           | \$229           | \$45           | \$90            | \$24          | \$15      | \$10      |
| High Scenario                                   |                      |                 |                |                |                 |                |                 |               |           |           |
| Per Unit (or Hotel Room)                        | \$350,000            | \$200,000       | \$40,000       | \$45,000       | \$28,500        | N/A            | \$30            | \$20,000      | \$0       | \$0       |
| Per SF Site Area                                | \$56                 | \$200           | \$213          | \$103          | \$311           | \$60           | \$120           | \$32          | \$20      | \$15      |
| <b>Assumed Cap Rate</b>                         |                      |                 |                |                |                 |                |                 |               |           |           |
|                                                 | N/A                  | N/A             | N/A            | 5.00%          | 5.00%           | 5.50%          | 5.50%           | 7.50%         | 5.50%     | 6.00%     |
| <b>Assumed Min. Unleveraged ROC (1)</b>         |                      |                 |                |                |                 |                |                 |               |           |           |
|                                                 | 15%                  | 15%             | 15%            | 6.50%          | 6.50%           | 7.00%          | 7.00%           | 9.00%         | 7.00%     | 7.50%     |
| <b>Assumed Min. ROE (2)</b>                     |                      |                 |                |                |                 |                |                 |               |           |           |
|                                                 | 10%                  | 10%             | 10%            | 8%             | 8%              | 8%             | 8%              | 8%            | 8%        | 8%        |
| <b>Assumed Investment Period (Months)</b>       |                      |                 |                |                |                 |                |                 |               |           |           |
|                                                 | 15 Months            | 24 Months       | 48 Months      | 30 Months      | 48 Months       | 18 Months      | 21 Months       | 15 Months     | 9 Months  | 9 Months  |
| <b>Unleveraged Return on Cost (1)</b>           |                      |                 |                |                |                 |                |                 |               |           |           |
| No Fee                                          |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 16.53%               | 12.04%          | 8.22%          | 6.01%          | 5.38%           | 4.15%          | 6.39%           | 7.93%         | 6.28%     | 5.97%     |
| Middle Scenario                                 | 17.00%               | 17.71%          | 26.21%         | 6.04%          | 5.82%           | 5.09%          | 6.20%           | 8.75%         | 5.96%     | 6.30%     |
| High Scenario                                   | 17.35%               | 17.37%          | 24.42%         | 5.79%          | 6.24%           | 5.95%          | 5.93%           | 9.38%         | 6.19%     | 6.68%     |
| Fee of \$1.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 16.04%               | 11.49%          | 7.84%          | 5.99%          | 5.36%           | 4.14%          | 6.37%           | 7.91%         | 6.26%     | 5.92%     |
| Middle Scenario                                 | 16.58%               | 17.25%          | 25.78%         | 6.01%          | 5.80%           | 5.07%          | 6.17%           | 8.73%         | 5.94%     | 6.25%     |
| High Scenario                                   | 16.98%               | 17.00%          | 24.04%         | 5.77%          | 6.22%           | 5.93%          | 5.91%           | 9.36%         | 6.17%     | 6.63%     |
| Fee of \$2.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 15.56%               | 10.94%          | 7.46%          | 5.96%          | 5.34%           | 4.12%          | 6.34%           | 7.88%         | 6.23%     | 5.87%     |
| Middle Scenario                                 | 16.16%               | 16.79%          | 25.36%         | 5.99%          | 5.78%           | 5.06%          | 6.15%           | 8.70%         | 5.91%     | 6.20%     |
| High Scenario                                   | 16.61%               | 16.62%          | 23.66%         | 5.75%          | 6.20%           | 5.91%          | 5.90%           | 9.33%         | 6.15%     | 6.58%     |
| Fee of \$3.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 15.09%               | 10.40%          | 7.09%          | 5.94%          | 5.32%           | 4.11%          | 6.32%           | 7.86%         | 6.20%     | 5.82%     |
| Middle Scenario                                 | 15.75%               | 16.34%          | 24.94%         | 5.97%          | 5.76%           | 5.04%          | 6.13%           | 8.67%         | 5.89%     | 6.15%     |
| High Scenario                                   | 16.25%               | 16.25%          | 23.29%         | 5.73%          | 6.18%           | 5.89%          | 5.88%           | 9.30%         | 6.13%     | 6.54%     |
| Fee of \$5.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 14.14%               | 9.34%           | 6.34%          | 5.89%          | 5.28%           | 4.08%          | 6.27%           | 7.81%         | 6.15%     | 5.73%     |
| Middle Scenario                                 | 14.93%               | 15.45%          | 24.11%         | 5.92%          | 5.72%           | 5.01%          | 6.09%           | 8.63%         | 5.85%     | 6.05%     |
| High Scenario                                   | 15.53%               | 15.51%          | 22.55%         | 5.69%          | 6.14%           | 5.85%          | 5.84%           | 9.25%         | 6.09%     | 6.45%     |
| Fee of \$7.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 13.22%               | 8.30%           | 5.61%          | 5.85%          | 5.25%           | 4.05%          | 6.23%           | 7.77%         | 6.09%     | 5.63%     |
| Middle Scenario                                 | 14.12%               | 14.56%          | 23.29%         | 5.88%          | 5.68%           | 4.98%          | 6.05%           | 8.58%         | 5.80%     | 5.96%     |
| High Scenario                                   | 14.81%               | 14.78%          | 21.82%         | 5.65%          | 6.10%           | 5.82%          | 5.80%           | 9.21%         | 6.05%     | 6.37%     |
| <b>Return on Equity (ROE) (2)</b>               |                      |                 |                |                |                 |                |                 |               |           |           |
| No Fee                                          |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 44.1%                | 20.1%           | 6.9%           | 27.0%          | 6.3%            | -40.9%         | 23.1%           | 9.2%          | 38.0%     | -1.2%     |
| Middle Scenario                                 | 45.3%                | 29.5%           | 21.8%          | 27.7%          | 13.7%           | -12.4%         | 18.1%           | 26.7%         | 22.2%     | 13.2%     |
| High Scenario                                   | 46.3%                | 29.0%           | 20.3%          | 21.0%          | 20.7%           | 13.5%          | 11.3%           | 40.1%         | 33.3%     | 30.0%     |
| Fee of \$1.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 42.8%                | 19.1%           | 6.5%           | 26.3%          | 5.9%            | -41.3%         | 22.5%           | 8.7%          | 36.6%     | -3.5%     |
| Middle Scenario                                 | 44.2%                | 28.7%           | 21.5%          | 27.0%          | 13.3%           | -12.9%         | 17.5%           | 26.1%         | 21.1%     | 10.9%     |
| High Scenario                                   | 45.3%                | 28.3%           | 20.0%          | 20.5%          | 20.4%           | 12.9%          | 10.8%           | 39.6%         | 32.4%     | 28.0%     |
| Fee of \$2.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 41.5%                | 18.2%           | 6.2%           | 25.7%          | 5.6%            | -41.7%         | 21.9%           | 8.2%          | 35.3%     | -5.7%     |
| Middle Scenario                                 | 43.1%                | 28.0%           | 21.1%          | 26.4%          | 13.0%           | -13.4%         | 17.0%           | 25.6%         | 20.0%     | 8.7%      |
| High Scenario                                   | 44.3%                | 27.7%           | 19.7%          | 20.0%          | 20.0%           | 12.4%          | 10.3%           | 39.0%         | 31.4%     | 25.9%     |
| Fee of \$3.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 40.2%                | 17.3%           | 5.9%           | 25.1%          | 5.3%            | -42.2%         | 21.3%           | 7.7%          | 33.9%     | -7.9%     |
| Middle Scenario                                 | 42.0%                | 27.2%           | 20.8%          | 25.8%          | 12.7%           | -13.9%         | 16.4%           | 25.1%         | 19.0%     | 6.6%      |
| High Scenario                                   | 43.3%                | 27.1%           | 19.4%          | 19.5%          | 19.7%           | 11.8%          | 9.8%            | 38.5%         | 30.5%     | 23.9%     |
| Fee of \$5.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 37.7%                | 15.6%           | 5.3%           | 23.8%          | 4.7%            | -43.0%         | 20.1%           | 6.7%          | 31.3%     | -12.2%    |
| Middle Scenario                                 | 39.8%                | 25.7%           | 20.1%          | 24.6%          | 12.0%           | -14.9%         | 15.3%           | 24.0%         | 16.8%     | 2.3%      |
| High Scenario                                   | 41.4%                | 25.9%           | 18.8%          | 18.5%          | 19.0%           | 10.8%          | 8.8%            | 37.4%         | 28.6%     | 20.0%     |
| Fee of \$7.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | 35.2%                | 13.8%           | 4.7%           | 22.6%          | 4.1%            | -43.8%         | 18.9%           | 5.7%          | 28.7%     | -16.4%    |
| Middle Scenario                                 | 37.7%                | 24.3%           | 19.4%          | 23.4%          | 11.4%           | -15.9%         | 14.2%           | 23.0%         | 14.8%     | -1.8%     |
| High Scenario                                   | 39.5%                | 24.6%           | 18.2%          | 17.5%          | 18.3%           | 9.7%           | 7.8%            | 36.4%         | 26.8%     | 16.2%     |
| <b>Resid. Land Value (RLV) Per SF Site Area</b> |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    |                      |                 |                |                |                 |                |                 |               |           |           |
| No Fee                                          |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | \$47.47              | \$102.75        | \$90.11        | \$130.73       | \$93.23         | (\$170.80)     | \$229.86        | \$21.79       | \$15.44   | \$5.78    |
| Middle Scenario                                 | \$62.76              | \$160.19        | \$518.93       | \$397.84       | \$2,119.04      | (\$46.94)      | \$195.53        | \$55.08       | \$18.35   | \$11.16   |
| High Scenario                                   | \$78.06              | \$287.59        | \$572.70       | \$163.77       | \$860.65        | \$89.50        | \$161.21        | \$88.37       | \$26.70   | \$19.71   |
| Fee of \$1.00 Per GSF                           |                      |                 |                |                |                 |                |                 |               |           |           |
| Low Scenario                                    | \$47.02              | \$100.75        | \$83.13        | \$128.85       | \$81.76         | (\$173.30)     | \$224.86        | \$21.05       | \$15.23   | \$5.42    |
| % Change from 100% Market                       | -1%                  | -2%             | -8%            | -1%            | -12%            | 1%             | -2%             | -3%           | -1%       | -6%       |
| Middle Scenario                                 | \$62.46              | \$162.13        | \$515.30       | \$395.84       | \$2,106.47      | (\$47.83)      | \$192.94        | \$54.75       | \$18.25   | \$10.79   |

**Table 4**  
**Summary of Economic Feasibility Analysis Results**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                         | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail  | Warehouse |
|-----------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|---------|-----------|
| % Change from 100% Market High Scenario | 0%                   | 1%              | -1%            | -1%            | -1%             | 2%             | -1%             | -1%           | -1%     | -3%       |
|                                         | \$77.60              | \$285.49        | \$565.05       | \$161.78       | \$848.08        | \$86.88        | \$155.93        | \$87.59       | \$26.49 | \$19.34   |
| % Change from 100% Market               | -1%                  | -1%             | -1%            | -1%            | -1%             | -3%            | -3%             | -1%           | -1%     | -2%       |
| Fee of \$2.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$46.57              | \$98.74         | \$76.15        | \$126.97       | \$70.29         | (\$175.80)     | \$219.86        | \$20.30       | \$15.03 | \$5.06    |
| % Change from 100% Market               | -2%                  | -4%             | -15%           | -3%            | -25%            | 3%             | -4%             | -7%           | -3%     | -12%      |
| Middle Scenario                         | \$62.00              | \$160.03        | \$507.65       | \$393.85       | \$2,093.90      | (\$50.45)      | \$187.66        | \$53.96       | \$18.04 | \$10.42   |
| % Change from 100% Market               | -1%                  | 0%              | -2%            | -1%            | -1%             | 7%             | -4%             | -2%           | -2%     | -7%       |
| High Scenario                           | \$77.14              | \$283.39        | \$557.39       | \$159.78       | \$835.51        | \$84.26        | \$150.65        | \$86.81       | \$26.27 | \$18.97   |
| % Change from 100% Market               | -1%                  | -1%             | -3%            | -2%            | -3%             | -6%            | -7%             | -2%           | -2%     | -4%       |
| Fee of \$3.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$46.13              | \$96.74         | \$69.17        | \$125.08       | \$58.82         | (\$178.30)     | \$214.86        | \$19.56       | \$14.82 | \$4.71    |
| % Change from 100% Market               | -3%                  | -6%             | -23%           | -4%            | -37%            | 4%             | -7%             | -10%          | -4%     | -19%      |
| Middle Scenario                         | \$61.38              | \$153.90        | \$495.98       | \$391.85       | \$2,081.33      | (\$54.80)      | \$179.69        | \$52.74       | \$17.71 | \$10.05   |
| % Change from 100% Market               | -2%                  | -4%             | -4%            | -2%            | -2%             | 17%            | -8%             | -4%           | -3%     | -10%      |
| High Scenario                           | \$76.68              | \$281.30        | \$549.74       | \$157.78       | \$822.94        | \$81.64        | \$145.37        | \$86.03       | \$26.06 | \$18.60   |
| % Change from 100% Market               | -2%                  | -2%             | -4%            | -4%            | -4%             | -9%            | -10%            | -3%           | -2%     | -6%       |
| Fee of \$5.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$45.23              | \$92.74         | \$55.21        | \$121.32       | \$35.88         | (\$183.30)     | \$204.86        | \$18.07       | \$14.41 | \$3.99    |
| % Change from 100% Market               | -5%                  | -10%            | -39%           | -7%            | -62%            | 7%             | -11%            | -17%          | -7%     | -31%      |
| Middle Scenario                         | \$60.46              | \$149.70        | \$480.68       | \$387.86       | \$2,056.19      | (\$60.04)      | \$169.13        | \$51.18       | \$17.29 | \$9.32    |
| % Change from 100% Market               | -4%                  | -7%             | -7%            | -3%            | -3%             | 28%            | -14%            | -7%           | -6%     | -17%      |
| High Scenario                           | \$75.75              | \$277.10        | \$534.44       | \$153.79       | \$797.80        | \$76.40        | \$134.81        | \$84.47       | \$25.64 | \$17.86   |
| % Change from 100% Market               | -3%                  | -4%             | -7%            | -6%            | -7%             | -15%           | -16%            | -4%           | -4%     | -9%       |
| Fee of \$7.00 Per GSF                   |                      |                 |                |                |                 |                |                 |               |         |           |
| Low Scenario                            | \$44.24              | \$88.07         | \$36.56        | \$116.76       | \$5.24          | (\$189.14)     | \$192.90        | \$16.33       | \$13.96 | \$3.20    |
| % Change from 100% Market               | -7%                  | -14%            | -59%           | -11%           | -94%            | 11%            | -16%            | -25%          | -10%    | -45%      |
| Middle Scenario                         | \$59.53              | \$145.51        | \$465.37       | \$383.86       | \$2,031.05      | (\$65.28)      | \$158.57        | \$49.62       | \$16.87 | \$8.58    |
| % Change from 100% Market               | -5%                  | -9%             | -10%           | -4%            | -4%             | 39%            | -19%            | -10%          | -8%     | -23%      |
| High Scenario                           | \$74.83              | \$272.91        | \$519.14       | \$149.80       | \$772.66        | \$71.16        | \$124.25        | \$82.91       | \$25.22 | \$17.12   |
| % Change from 100% Market               | -4%                  | -5%             | -9%            | -9%            | -10%            | -20%           | -23%            | -6%           | -6%     | -13%      |

(1) For owner housing, equals net profit/fee (net sales revenues less total development costs, excluding builder fee/profit). For all others, equals net operating income divided by total development costs.  
(2) Return on equity measured as net project value divided by the number of years equity investment divided by total equity investment.

Source: DRA.



## Introduction

This report describes an affordable housing nexus study addressing the relationship between market-rate residential and non-residential development and the need for affordable housing in the City of Denver. The nexus analysis estimates the number of low and moderate income households associated with development of new market-rate housing and non-residential development in the City and calculates the maximum legally justifiable nexus fee based on the cost to produce housing affordable to these households. The study also examines the potential effect of alternative levels of a nexus fee on the economic feasibility of new residential and non-residential development using a series of residential and non-residential development prototypes.

## Contents of Report

This report is presented in the following major sections:

### ■ Residential Nexus Analysis

The first section of the report calculates the estimated number of low and moderate income households generated by the development of market-rate residential uses.

### ■ Non-Residential Nexus Analysis

The second section of the report calculates the estimated number of low and moderate income households generated by the development of market-rate non-residential uses.

### ■ Affordability Gap Analysis

The third section of the report calculates the affordability gap between the cost of developing new affordable housing and the amount that households at various income levels can afford to pay for housing.

### ■ Estimated Maximum Justifiable Nexus Fees



The fourth section of the report estimates maximum justifiable nexus fees for residential and non-residential land uses by applying the per unit affordability gap to the number of households by income level generated by new market rate development as determined by the nexus analysis.

### ■ Economic Feasibility Analysis

The final section of the report presents an economic feasibility analysis of the impact of a potential affordable housing nexus fee on the economic feasibility of new residential and non-residential development in Denver using the development prototypes.

## Target Income Levels

The nexus study uses income limits commonly defined by the U.S. Department of Housing and Urban Development (HUD) and the Low Income Housing Tax Credit program. This study estimates maximum justifiable nexus fees for the following income categories in Denver County in 2016:

- Households with incomes up to 30 percent of area median income (AMI), or approximately \$24,250 for a four-person household;
- Households with incomes between 31 percent and 60 percent of AMI, or between \$24,250 and \$48,060 for a four-person household;
- Households with incomes between 61 percent and 80 percent of AMI, or between \$48,060 and \$63,900 for a four-person household; and
- Households with incomes between 81 percent and 120 percent of AMI, or between \$63,900 and \$96,120 for a four-person household.

All of these income limits are based on the 2016 median family income (MFI) of \$80,100 for the Denver-Aurora-Lakewood HUD Metro FMR Area (HMFA)<sup>1</sup>, adjusted by household size. **Table 5** shows 2016 income limits for the City of Denver for these income categories for household sizes of one to six persons.

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<sup>1</sup>FMR stands for Fair Market Rent. The Denver-Aurora-Lakewood HMFA is a HUD-defined metropolitan area comprised of Adams, Arapahoe, Broomfield, Clear Creek, Denver, Douglas, Elbert, Gilpin, Jefferson and Park Counties (same boundaries as the MSA).

**Table 5**  
**2016 Affordable Housing Income Limits by Household Size**  
**City of Denver Affordable Housing Impact and Inclusionary Housing Study**

| <b>Household Size</b> | <b>30% AMI</b> | <b>60% AMI</b> | <b>80% AMI</b> | <b>120% AMI</b> |
|-----------------------|----------------|----------------|----------------|-----------------|
| One Person            | \$16,800       | \$33,640       | \$44,750       | \$67,280        |
| Two Persons           | \$19,200       | \$38,450       | \$51,150       | \$76,900        |
| Three Persons         | \$21,600       | \$43,250       | \$57,550       | \$86,510        |
| Four Persons          | \$24,250       | \$48,060       | \$63,900       | \$96,120        |
| Five Persons          | \$28,410       | \$51,910       | \$69,050       | \$103,810       |
| Six Persons           | \$32,570       | \$55,750       | \$74,150       | \$111,500       |

Sources: Based on 2016 median household income for the Denver-Aurora-Lakewood HMFA of \$80,100. Equals published HUD limits for the extremely low income (30% AMI) and low income (80% AMI) categories. Limits for the other categories calculated using HUD household size adjustment factors, rounded to the nearest \$10; DRA.

## Development Prototypes

The nexus analysis and economic feasibility analysis are conducted using prototypical residential and non-residential developments. The prototypes analyzed include high-rise residential and office prototypes appropriate to zoning in and around Downtown Denver, and several low- and mid-rise residential and non-residential prototypes that could be built in multiple locations within the City.

The development prototypes reflect the range of densities permitted by current zoning categories in the City, with a focus on the type and densities of projects currently being developed. Since the fee is calculated per square foot and the methodological assumptions do not vary by the height or size of the prototype buildings, the height or size of the buildings does not affect the resulting supportable nexus fees.

The development prototypes used in this analysis are described in **Table 6**.

**Table 6**  
**Development Prototypes**  
**Denver Affordable Housing Residential Nexus Study**

|                                                        | Prototype 1          | Prototype 2      | Prototype 3             | Prototype 4        | Prototype 5             | Prototype 6       | Prototype 7             | Prototype 8       | Prototype 9      | Prototype 10     | Prototype 11    |
|--------------------------------------------------------|----------------------|------------------|-------------------------|--------------------|-------------------------|-------------------|-------------------------|-------------------|------------------|------------------|-----------------|
|                                                        | Residential Owner    |                  |                         | Resid. Rental      |                         |                   |                         |                   |                  |                  |                 |
|                                                        | Single-Family Infill | Owner Townhomes  | 12-Story Owner          | 5-Story Rental     | 20-Story Rental         | 4-Story Office    | 12-Story Office         | Hotel             | Retail           | Warehouse        | Manufacturing   |
| Zoning                                                 |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Zip Code(s)                                            |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Neighborhood/Geographic Subarea                        |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Primary Land Use                                       | Residential          | Residential      | Residential             | Residential        | Residential             | Office            | Office                  | Hotel             | Retail           | Warehouse        | Manufacturing   |
| Other Land Use                                         |                      |                  | Grnd. Floor Retail      | Grnd. Floor Retail |                         |                   | Grnd. Floor Retail      |                   |                  |                  |                 |
| Residential Tenure (Renter/Owner)                      | Owner                | Owner            | Owner                   | Renter             | Renter                  |                   |                         |                   |                  |                  |                 |
| Total Residential Units                                | 1                    | 10               | 233                     | 300                | 285                     |                   |                         |                   |                  |                  |                 |
| Total DU's/Acre                                        | 7                    | 44               | 233                     | 100                | 475                     |                   |                         |                   |                  |                  |                 |
| Total Hotel Rooms                                      |                      |                  |                         |                    |                         |                   |                         | 143               |                  |                  |                 |
| Ave. Hotel Room Size (Net SF)                          |                      |                  |                         |                    |                         |                   |                         | 350               |                  |                  |                 |
| Total Site Area (Acre)                                 | 0.14 Acres           | 0.23 Acres       | 1.00 Acres              | 3.00 Acres         | 0.60 Acres              | 0.73 Acres        | 0.73 Acres              | 2.06 Acres        | 2.80 Acres       | 16.00 Acres      | 6.40 Acres      |
| Total Site Area (SF)                                   | 6,250                | 10,000           | 43,560                  | 130,680            | 26,136                  | 32,000            | 32,000                  | 89,734            | 121,968          | 696,960          | 278,784         |
| Construction Type                                      | Type V               | Type V           | Type 1                  | Type V over Type 1 | Type 1                  | Type II           | Type 1                  | Type V            | Type V           | Type V           | Type V          |
| Parking Type                                           | Above Grade Garage   | Garage           | Subterranean/Structured | Structured         | Subterranean/Structured | Subterranean      | Subterranean/Structured | Surface           | Surface          | Surface          | Surface         |
| Approximate Building Stories                           | 2 Stories            | 3 Stories        | 12 Stories              | 5 Stories          | 20 Stories              | 5 Stories         | 12 Stories              | 4 Stories         | 1 Stories        | 1 Stories        | 1 Stories       |
| <b>Total Gross Building SF (Excluding Parking)</b>     | <b>2,800</b>         | <b>20,010</b>    | <b>304,063</b>          | <b>246,167</b>     | <b>299,750</b>          | <b>80,000</b>     | <b>160,000</b>          | <b>66,700</b>     | <b>25,000</b>    | <b>250,000</b>   | <b>100,000</b>  |
| <b>FAR</b>                                             | <b>7.0</b>           | <b>1.9</b>       | <b>7.0</b>              | <b>1.9</b>         | <b>11.5</b>             | <b>2.5</b>        | <b>5.0</b>              | <b>0.7</b>        | <b>0.2</b>       | <b>0.4</b>       | <b>0.4</b>      |
| Total Gross Building SF, Incl. Struct./Underg. Pkg (1) | 2,800                | 20,000           | 420,863                 | 381,167            | 389,700                 | 84,900            | 221,250                 | 66,700            | 25,000           | 250,000          | 100,000         |
| Building Efficiency Ratio (%)                          | 100%                 | 100%             | 80%                     | 90%                | 80%                     | 80%               | 80%                     | 75%               | 100%             | 100%             | 100%            |
| Site Coverage (Bldg. Footprint) (%)                    | N/A                  | N/A              | 85%                     | 72%                | 80%                     | 81%               | 81%                     | 19%               | 20%              | 36%              | 36%             |
| Average Floor Plate                                    |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Net Rentable SF Office                                 | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 60,000 SF         | 120,000 SF              | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Net Rentable SF Hotel                                  | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 0 SF              | 0 SF                    | 50,000 SF         | 0 SF             | 0 SF             | 0 SF            |
| Net Rentable SF Retail                                 | 0 SF                 | 0 SF             | 16,000 SF               | 3,000 SF           | 3,000 SF                | 4,000 SF          | 8,000 SF                | 0 SF              | 25,000 SF        | 0 SF             | 0 SF            |
| Net Rentable SF Warehouse                              | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 250,000 SF       | 0 SF            |
| Net Rentable SF Manufacturing                          | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 0 SF             | 100,000 SF      |
| Net Rentable SF Residential                            | 2,800 SF             | 20,000 SF        | 227,250 SF              | 212,250 SF         | 230,800 SF              | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Net Rentable SF Total                                  | 2,800 SF             | 20,000 SF        | 243,250 SF              | 215,250 SF         | 233,800 SF              | 64,000 SF         | 128,000 SF              | 50,000 SF         | 25,000 SF        | 250,000 SF       | 100,000 SF      |
| Net SF Community Space                                 | 0 SF                 | 0 SF             | 0 SF                    | 6,300 SF           | 6,000 SF                | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Total Net Bldg. SF                                     | 2,800 SF             | 20,000 SF        | 243,250 SF              | 221,550 SF         | 239,800 SF              | 64,000 SF         | 128,000 SF              | 50,000 SF         | 25,000 SF        | 250,000 SF       | 100,000 SF      |
| Gross SF Office                                        | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 75,000 SF         | 150,000 SF              | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Gross SF Hotel                                         | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 0 SF              | 0 SF                    | 66,700 SF         | 0 SF             | 0 SF             | 0 SF            |
| Gross SF Retail                                        | 0 SF                 | 0 SF             | 20,000 SF               | 3,333 SF           | 3,750 SF                | 5,000 SF          | 10,000 SF               | 0 SF              | 25,000 SF        | 0 SF             | 0 SF            |
| Gross SF Warehouse                                     | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 250,000 SF       | 0 SF            |
| Gross SF Manufacturing                                 | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 0 SF             | 100,000 SF      |
| Gross SF Residential                                   | 2,800 SF             | 20,000 SF        | 284,063 SF              | 235,833 SF         | 288,500 SF              | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Gross SF Community Space                               | 0 SF                 | 0 SF             | 0 SF                    | 7,000 SF           | 7,500 SF                | 0 SF              | 0 SF                    | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Total Gross Bldg. SF                                   | 2,800 SF             | 20,000 SF        | 304,063 SF              | 246,167 SF         | 299,750 SF              | 80,000 SF         | 160,000 SF              | 66,700 SF         | 25,000 SF        | 250,000 SF       | 100,000 SF      |
| Unit Bedroom Count Distribution                        |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Studio                                                 | 0%                   | 0%               | 0%                      | 20%                | 20%                     |                   |                         |                   |                  |                  |                 |
| One Bedroom                                            | 0%                   | 0%               | 55%                     | 65%                | 55%                     |                   |                         |                   |                  |                  |                 |
| Two Bedroom                                            | 0%                   | 0%               | 40%                     | 15%                | 25%                     |                   |                         |                   |                  |                  |                 |
| Three Bedroom                                          | 100%                 | 100%             | 5%                      | 0%                 | 0%                      |                   |                         |                   |                  |                  |                 |
| Total                                                  | 100%                 | 100%             | 100%                    | 100%               | 100%                    |                   |                         |                   |                  |                  |                 |
| <b>Units by BR Count</b>                               |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Studio                                                 | 0                    | 0                | 0                       | 60                 | 57                      |                   |                         |                   |                  |                  |                 |
| One Bedroom                                            | 0                    | 0                | 128                     | 195                | 157                     |                   |                         |                   |                  |                  |                 |
| Two Bedroom                                            | 0                    | 0                | 93                      | 45                 | 71                      |                   |                         |                   |                  |                  |                 |
| Three Bedroom                                          | 1                    | 10               | 12                      | 0                  | 0                       |                   |                         |                   |                  |                  |                 |
| <b>Total Residential Units</b>                         | <b>1</b>             | <b>10</b>        | <b>233</b>              | <b>300</b>         | <b>285</b>              |                   |                         |                   |                  |                  |                 |
| <b>Residential Density (units per acre)</b>            | <b>7 du/a</b>        | <b>44 du/a</b>   | <b>233 du/a</b>         | <b>100 du/a</b>    | <b>475 du/a</b>         |                   |                         |                   |                  |                  |                 |
| Unit Size (Net SF)                                     |                      |                  |                         |                    |                         |                   |                         |                   |                  |                  |                 |
| Studio                                                 | 0 SF                 | 0 SF             | 0 SF                    | 0 SF               | 0 SF                    |                   |                         |                   |                  |                  |                 |
| One Bedroom                                            | 0 SF                 | 0 SF             | 0 SF                    | 550 SF             | 600 SF                  |                   |                         |                   |                  |                  |                 |
| Two Bedroom                                            | 0 SF                 | 0 SF             | 950 SF                  | 950 SF             | 950 SF                  |                   |                         |                   |                  |                  |                 |
| Three Bedroom                                          | 2,800 SF             | 0 SF             | 1,200 SF                | 950 SF             | 1,000 SF                |                   |                         |                   |                  |                  |                 |
| Average Unit Size                                      | 2,800 SF             | 2,000 SF         | 975 SF                  | 708 SF             | 810 SF                  |                   |                         |                   |                  |                  |                 |
| <b>Parking Ratio - Residential (Spaces/Unit)</b>       |                      |                  |                         |                    |                         |                   |                         | N/A               | N/A              | N/A              | 0.70            |
| Studio                                                 | 1.00                 | 1.00             | 1.00                    | 1.00               | 1.00                    |                   |                         | N/A               | N/A              | N/A              | 0.00            |
| One Bedroom                                            | 1.00                 | 1.00             | 1.00                    | 1.00               | 1.00                    |                   |                         | N/A               | N/A              | N/A              | 0.00            |
| Two Bedrooms                                           | 1.50                 | 1.50             | 1.50                    | 1.50               | 1.50                    |                   |                         | N/A               | N/A              | N/A              | 0.00            |
| Three Bedrooms                                         | 2.00                 | 2.00             | 2.00                    | 2.00               | 2.00                    |                   |                         | N/A               | N/A              | N/A              | 0.00            |
| <b>Parking Spaces Based on Ratio--Residential</b>      | <b>2.00</b>          | <b>2.00</b>      | <b>2.00</b>             | <b>2.00</b>        | <b>2.00</b>             |                   |                         |                   |                  |                  | <b>0</b>        |
| <b>Parking Ratio - Office or Warehouse (GSF/Space)</b> |                      |                  |                         |                    |                         | 500               | 1,000                   | 0                 | 350              | 3,000            | 0               |
| <b>Parking Spaces Based on Ratio--Office</b>           |                      |                  |                         |                    |                         | 150               | 150                     | 0                 | 0                | 83               | 0               |
| <b>Parking Ratio - Retail (Spaces/1000 GSF)</b>        |                      |                  |                         |                    |                         | 400               | 400                     | 0                 | 300              | 300              | 0               |
| <b>Parking Spaces Based on Ratio--Retail</b>           |                      |                  |                         |                    |                         | 13                | 25                      | 0                 | 83               | 0                | 0               |
| <b>Parking Spaces - Total Based on Ratio</b>           |                      |                  |                         |                    |                         | 163               | 175                     | 0                 | 83               | 83               | 0               |
| No. of Underground Parking Spaces                      | 0 Spaces             | 0 Spaces         | 126 Spaces              | 0 Spaces           | 110 Spaces              | 149 Spaces        | 149 Spaces              | 0 Spaces          | 0 Spaces         | 0 Spaces         | 0 Spaces        |
| No. of Structured Parking Spaces                       | 0 Spaces             | 0 Spaces         | 166 Spaces              | 450 Spaces         | 147 Spaces              | 14 Spaces         | 26 Spaces               | 0 Spaces          | 0 Spaces         | 0 Spaces         | 0 Spaces        |
| No. of Surface/Garage Parking Spaces                   | 2 Spaces             | 10 Spaces        | 0 Spaces                | 0 Spaces           | 0 Spaces                | 0 Spaces          | 0 Spaces                | 150 Spaces        | 83 Spaces        | 83 Spaces        | 0 Spaces        |
| <b>Total Parking Spaces Provided</b>                   | <b>2 Spaces</b>      | <b>10 Spaces</b> | <b>292 Spaces</b>       | <b>450 Spaces</b>  | <b>257 Spaces</b>       | <b>163 Spaces</b> | <b>175 Spaces</b>       | <b>105 Spaces</b> | <b>83 Spaces</b> | <b>83 Spaces</b> | <b>0 Spaces</b> |
| Total Parking Spaces Provided Per Unit or per 1000 SF  | 2 Spaces             | 10 Spaces        | 292 Spaces              | 450 Spaces         | 257 Spaces              | 163 Spaces        | 175 Spaces              | 105 Spaces        | 83 Spaces        | 83 Spaces        | 0 Spaces        |
| Gross SF/Parking Space (Incl. Circulation)             | 200 SF               | 180 SF           | 400 SF                  | 300 SF             | 350 SF                  | 350 SF            | 350 SF                  | 400 SF            | 350 SF           | 400 SF           | 0 SF            |
| Total Parking SF                                       | 400 SF               | 1,800 SF         | 116,800 SF              | 135,000 SF         | 89,775 SF               | 57,050 SF         | 61,250 SF               | 42,000 SF         | 29,050 SF        | 33,200 SF        | 0 SF            |
| Parking SF Underground                                 | 0 SF                 | 0 SF             | 50,400 SF               | 0 SF               | 38,500 SF               | 0 SF              | 52,150 SF               | 0 SF              | 0 SF             | 0 SF             | 0 SF            |
| Parking SF Structured                                  | 0 SF                 | 0 SF             | 66,400 SF               | 135,000 SF         | 51,450 SF               | 4,900 SF          | 9,100 SF                | 0 SF              | 0 SF             | 0 SF             | 0 SF            |

Source: City of Denver; DRA

## Residential Nexus Analysis

The methodology used by DRA for the residential nexus quantifies the estimated increase in low and moderate income households associated with new market-rate residential development, and estimates the costs of providing housing affordable to these new households. These costs are then translated into a maximum justifiable nexus fee on market-rate residential development that addresses or mitigates the impacts of the prototype.

### Nexus Methodology and Use of the IMPLAN Model

This analysis uses a number of conservative assumptions that understate the number of low and moderate income households and maximum justifiable nexus fee amounts. Therefore, the housing impacts are likely even greater than indicated in the analysis.

The methodology used for the residential nexus analysis begins with the estimated sales prices of a prototypical single-family home or condominium development, or rents at an apartment complex, and moves through a series of linkages to the incomes of the households that purchase or rent the units, the annual expenditures of those households on goods and services, the jobs associated with the delivery of these goods and services, the income of the workers performing those jobs, the household income of those worker households, and finally to the affordability level of the housing needed by those worker households. The steps of the analysis are as follows:

1. Define a prototypical market-rate residential development.
2. Estimate the household income distribution of the households purchasing or renting these homes.
3. Estimate the disposable household income of those households.
4. Estimate the number of new full-time employees required to provide the goods and services purchased by these households.
5. Estimate the number of new households associated with this employment growth.
6. Estimate the income distribution of these new employee households.



7. Estimate the number of new households requiring affordable housing.

The result of these steps is the estimated number of households by prototype living in the City and qualifying as low and moderate income based on new market-rate residential development in the City. DRA uses the results of the housing affordability gap analysis to calculate the nexus fee required to make housing affordable to the low and moderate income households who will need to find housing in the City in connection with new market-rate residential development in the City.

For owner housing, DRA estimated the household income distribution of households purchasing the new homes based on the estimated minimum income necessary to afford the mortgage principal and interest, property taxes and property insurance required to purchase the home using typical underwriting standards. For renters, tenant household income is calculated from typical income to rent standards used by apartment owners. DRA estimated 2016 sales prices and rents estimated for each prototype and unit size.

The consumer expenditures of the new owner and renter households and the jobs generated by these expenditures are estimated using the IMPLAN model, a model widely used for the past 25 years to quantify employment impacts from personal income. Using the employment generation by industry from the IMPLAN model, DRA applies the results of the housing affordability gap analysis to calculate the nexus fee required to make housing affordable to the low and moderate income households who will need to find housing in the City in connection with new market-rate residential development.

#### **THE IMPLAN MODEL**

The IMPLAN model is an economic analysis software package now commercially available through the Minnesota IMPLAN Group (MIG). IMPLAN was originally developed by the U.S. Forest Service, the Federal Emergency Management Agency, and the U.S. Department of the Interior Bureau of Land Management. It has been in use since 1979 and refined over time. IMPLAN has become one of the industry standards widely used across the United States to predict economic impacts in a broad range of applications from major construction projects to natural resource programs. IMPLAN's clients include more than 20 federal government agencies, 60 state agencies across the country, and academic, local government, nonprofit and private sector clients numbering in the hundreds.

The IMPLAN model projects the number of employees needed to produce a given amount of goods and services, based on actual 2014 economic data for Denver County. More specifically, IMPLAN is based on an input-output accounting of commodity flows within an economy from producers to intermediate and final consumers. The model establishes a matrix of supply chain relationships between industries and also between households and the producers of household goods and services. The model tracks changes in purchases for final consumption through the supply chain. Industries that produce goods and services for final consumption must purchase inputs from other producers that, in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle.

IMPLAN's industry sectoring scheme is tied to the Bureau of Economic Analysis (BEA) Input-Output Study. The most recent 2007 BEA Benchmark study uses a 440-sector scheme. This scheme approximates 6-digit North American Industrial Classification System (NAICS) for manufacturing, and is more highly aggregated for service sectors. IMPLAN data sets are available for each county and state, so the model can be tailored to the specific economic conditions of the region being analyzed. This analysis uses the most current 2014 data set for Denver County.

Economic impacts are estimated using the change in household spending component of the IMPLAN model. The model estimates the induced impacts resulting from increased demand for local-serving retail and service businesses as the new households spend their income in the local economy.

## **Disposable Income of New Households**

The nexus analysis uses estimated 2016 sales prices and rents for each unit size and prototype. The gross household income of the new households moving into these units is estimated based on the estimated average sales price or rent for each prototype.

To estimate the average gross household income for the buyers of new for-sale homes, this analysis assumes the average incomes are approximately equal to the minimum qualifying income criteria for a new home loan. This calculation assumes that buyers pay a 10 percent down payment and secure a mortgage equal to 90 percent of the home's sale price. Monthly principal and interest payments on the mortgage are calculated assuming a 30-year fixed rate mortgage at 5.0 percent interest. Qualifying gross household income is estimated assuming households pay

35 percent of gross household income for principal, income, taxes and insurance (PITI), a typical standard used by mortgage lenders.

For renters, the income distribution of tenants in the new apartments is estimated assuming tenants on average spend 33 percent of their household income for rent.

These are conservative assumptions, since many of the new buyers and renters will have incomes in excess of the required minimums.

The IMPLAN model uses disposable household income as the primary upfront input. To arrive at disposable income, gross income for residents of prototypical units must be adjusted downward to account for Federal and State income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Other taxes, including sales tax, gas tax and property tax, are handled internally within the model. Housing expenses are not deducted from disposable income as they are also handled internally with the IMPLAN model. Based on a review of data from the Tax Policy Center (a joint venture of the Brookings Institution and the Urban Institute), disposable income for households in the income levels projected for the buyers and renters of the prototypical market-rate housing units is estimated at 65 percent of total household income.

**Tables 7, 8 and 9** project average household income, total household income, and total disposable household income of new homebuyers in the owner housing prototypes under low-, middle- and high-cost scenarios, respectively. **Tables 10, 11 and 12** project the rent, total housing income, and disposable household income of tenants in the rental housing prototypes under low-, middle- and high-cost scenarios. These tables, and many of the tables referred to below, are presented following the text.

## Projected Employment Generation

The IMPLAN model has been used to link household disposable household income and consumption patterns to job growth occurring in the City. As noted above, the projected disposable household income of the new renters and homebuyers is the key input to the IMPLAN model. The IMPLAN model distributes spending from disposable household income among various types of goods and services, and therefore industry sectors, based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark Input-Output study to estimate induced employment generated.

**Table 13** summarizes the projected employment generation by industry for the residential prototypes under low-, middle- and high-cost scenarios. **Table 14** details the projections of employment by industry for these prototypes under the middle-cost scenario.

## Projected Household Growth

The next step in this analysis is to translate projected new employees into the number of new households that will be established in the City. The 2014 Five-Year ACS indicates that the City of Denver had an average of 1.61 workers per worker household.<sup>1</sup> Therefore, DRA divided the number of new employees by 1.61 to estimate the number of new households created.

## Projected Low and Moderate Income Households

This step estimates the number of new employee households that will require affordable housing. The IMPLAN model provides estimates of the number of employees by occupational grouping. To estimate household incomes, DRA multiplied each payroll per employee figure by 1.61, the citywide average number of workers per worker household.

Next, occupation is translated to income based on May 2015 wage and salary information for the Denver-Aurora-Lakewood MSA from the U.S. Department of Labor, Bureau of Labor Statistics. Data on mean, median, 10<sup>th</sup> percentile, 25<sup>th</sup> percentile, 75<sup>th</sup> percentile and 90<sup>th</sup> percentile hourly wages by occupation were used to estimate the distribution of employee households by income category based on HUD income limits for the Denver-Aurora-Lakewood HMFA. This approach assumes that all workers in a household earn wages within the same income category.

Since household income is derived primarily from wages, particularly at lower income levels, these percentage distributions should remain relatively constant over short time frames. The wage data used in the analysis, detailed in **Table 15**, is for the metro area and thus is generalizable to locations across the City.

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<sup>1</sup> 334,730 employed residents divided by 207,599 households with at least one worker.

The average household size in the City of Denver based on data from the 2010 to 2014 American Community Survey was 2.28 persons.<sup>1</sup> To estimate the percentage of employees in each occupational category qualifying for each income category, this analysis uses 2015 income limits (to match the year of the wage data) for a household size of two and one-half persons<sup>2</sup> of approximately \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI, and \$81,500 at 120% AMI.

**Table 16** summarizes DRA's estimates of low and moderate income households that would be expected to move to the City as a result of the development of the original residential prototypes under the low-, middle- and high-cost scenarios. **Tables 17** through **21** detail the calculation of low and moderate income households for each residential prototype, respectively. These calculations are shown for the middle-cost scenario.

The number of low and moderate income housing units necessary to house the new households equals the performance requirement or build alternative for each prototype. The performance requirements that are equivalent to the maximum justifiable nexus fees, expressed as a percentage of total units in the prototype, are summarized in **Table 22** for the housing prototypes by income level.

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<sup>1</sup> Total household population of 618,903 divided by 271,054 households.

<sup>2</sup> This is more conservative than using an average household size of two persons since it results in higher income limits.

**Table 22**  
**Estimated Affordable Housing Performance Requirements**  
**Residential Prototypes**  
**Denver Affordable Housing Nexus and Inclusionary Housing Study**

| Prototype            | Percent of Total Units in Prototype |                    |                    |                     |
|----------------------|-------------------------------------|--------------------|--------------------|---------------------|
|                      | Under 30% AMI                       | 30% AMI to 60% AMI | 60% AMI to 80% AMI | 80% AMI to 120% AMI |
| Single-Family Infill | N/A                                 | N/A                | N/A                | N/A                 |
| Owner Townhomes      | 3%                                  | 8%                 | 3%                 | 3%                  |
| 12-Story Owner       | 2%                                  | 6%                 | 2%                 | 2%                  |
| 5-Story Rental       | 1%                                  | 4%                 | 1%                 | 1%                  |
| 20-Story Rental      | 2%                                  | 6%                 | 2%                 | 2%                  |

Source: DRA





## Non-Residential Nexus Analysis

The methodology used by DRA in this report quantifies the estimated increase in low and moderate income households associated with new non-residential development, and estimates the costs of providing housing affordable to these new households. These costs are then translated into a nexus fee on non-residential development that addresses or mitigates the impacts of the prototype.

### Overview of Non-Residential Nexus Methodology

This analysis uses a number of conservative assumptions that understate the number of low and moderate income households and nexus fee amounts. Therefore, the housing impacts are likely even greater than indicated in the analysis.

The non-residential nexus methodology employs the following steps:

1. Estimate total new employees in prototype buildings;
2. Estimate new employees living in the City;
3. Adjust for potential future increase in labor force participation, as appropriate;
4. Adjust from employees to employee households;
5. Distribute employee households by occupation for each prototype;
6. Estimate wages by occupation; and
7. Estimate low and moderate income households.

The result of these steps is the estimated number of households by prototype living in the City and qualifying as low and moderate income based on new non-

residential development in the City. DRA uses the results of the housing affordability gap analysis to calculate the nexus fee required to make housing affordable to the low and moderate income households who will need to find housing in the City in connection with new non-residential development.

## **Non-Residential Nexus Methodology and Assumptions**

The nexus analysis requires a number of assumptions. DRA strives to consistently employ conservative assumptions that serve to understate the number of low and moderate income households and the nexus fee calculation. We expect that the cumulative effect of these assumptions is to understate the nexus fee calculation for each building type. We do not believe, therefore, that changing individual assumptions would fundamentally alter the conclusions of the analysis.

Each of the steps in the analysis is described below, along with corresponding assumptions.

### **ESTIMATE TOTAL NEW EMPLOYEES IN PROTOTYPE BUILDINGS**

The first step estimates the total number of direct employees who will work at or in the prototype being analyzed. This step implicitly assumes that all employees are new employees to the City. When firms and their employees relocate from other buildings in the City, they will have vacated spaces that will likely be filled by other firms and employees.

The estimate of the number of employees that will be working in each prototype building is based on an employment density factor for each land use (i.e., number of gross square feet per employee). The gross square feet of building are divided by the employment density factor to calculate employment.

The employment density factors used in this analysis are listed below by land use. These factors are based on industry standards, DRA's experience with prior nexus fee studies, and available data and surveys from the Urban Land Institute, the Institute of Transportation Engineers, the U.S. Department of Energy, the U.S. Green Building Council, the Building Owners and Managers Association, and the San Diego Association of Governments (SANDAG). DRA considers these conservative assumptions, as the general trend is toward higher employment densities (or a smaller number of square feet per employee) across non-residential land uses.

Based on these data sources, DRA used the following employment densities by land use in the nexus analysis:

**Office:** 333 gross square feet per employee, for a standard office building.

**Hotel:** 0.75 employees per room and an average of 350 gross square feet per hotel room for a mid-range hotel.

A full service or luxury hotel would have a higher employee density.

**Stand-Alone Retail:** 300 gross square feet per employee.

The employment density would be higher for small retail shops, restaurants to fast food and lower for a grocery store.

**Warehouse:** 1,000 gross square feet per employee.

**Manufacturing:** 750 gross square feet per employee.

#### **ESTIMATE NEW EMPLOYEES LIVING IN THE CITY OF DENVER**

This step estimates the number of new employees associated with new employment growth in the City that would live in the City.

The 2008 to 2010 journey-to-work data from the ACS indicates that 40.5% percent of total workers in Denver aged 16 years and older lived in the City<sup>1</sup>. For the purposes of this analysis, we have assumed that 50.6 percent of new City workers will reside in the City. This assumption understates the impacts, as it is likely that more employees would live in the City if they could afford it.

#### **ADJUST FOR POTENTIAL INCREASE IN FUTURE LABOR FORCE PARTICIPATION**

In periods of economic recession, the typical pattern is for unemployment rates to increase as people lose their jobs or can't find work, and for labor force participation rates to decrease as some people give up looking for work altogether. In periods of high unemployment and low labor force participation, a significant share of new jobs may be filled by existing residents in the area who are currently unemployed or who are drawn back into the labor force. As of May 2016, according to the U.S. Bureau of Labor Statistics (BLS) Local Area Unemployment

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<sup>1</sup> Based on 451,562 total workers in the City of Denver, and 183,050 workers in the City of Denver that lived and worked in the same place.

Statistics, Denver's unemployment rate was at 3.3%. These rates indicate a relatively tight labor market, in which job growth will be accompanied by an influx of new workers. Therefore, no adjustment was made for increased labor force participation.

#### **ADJUST FROM EMPLOYEES TO EMPLOYEE HOUSEHOLDS**

The next step in the analysis converts the number of employees living in the City to the number of employee households that will work at or in the building type being analyzed. This step recognizes that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers must be reduced. The worker per worker household ratio also eliminates all non-working households, including retired persons, students, and those on public assistance.

As noted above, the 2014 Five-Year ACS indicates that the City of Denver had an average of 1.61 workers per worker household.<sup>1</sup> Using the 1.61 workers per household figure in the nexus fee calculations is a conservative assumption because it includes part time and full-time workers. If only full-time workers were included, the ratio of workers per household would be smaller, leading to a larger estimate of new households created. In addition, wages by occupation and industry assume full-time employment. Household incomes will be lower for households with part-time workers, generating a larger impact than projected in this study.

#### **DISTRIBUTE EMPLOYEE HOUSEHOLDS BY OCCUPATION**

This step distributes households by occupational groupings for each land use. This step is necessary to estimate new workers' incomes. DRA used the most recent data available from the May 2012 U.S. Bureau of Labor Statistics, National Industry-Specific Occupational Employment and Wage Estimates to estimate the percentage distribution of employment by industry occupational category for the non-residential land uses. This data is based on national estimates, the best data available, and therefore is generalizable to locations across the City. These distributions are shown in **Table 23** for the non-residential uses analyzed. The projected numbers of new employee households by occupational category are shown in **Table 24** for the non-residential prototypes.

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<sup>1</sup> 334,730 employed residents divided by 207,599 households with at least one worker.

## ESTIMATE WAGES BY OCCUPATION

In this step, occupation is translated to income based on May 2015 wage and salary information for the Denver-Aurora-Lakewood Metropolitan Division from the U.S. Department of Labor, Bureau of Labor Statistics. Data on mean, median, 10<sup>th</sup> percentile, 25<sup>th</sup> percentile, 75<sup>th</sup> percentile and 90<sup>th</sup> percentile hourly wages by occupation were used to estimate the percentage of employees earning salaries in the low and moderate income categories based on the 2015 HUD income limits (to match the year of the 2015 wage data) for the Denver-Aurora-Lakewood HMFA. Since household income is derived primarily from wages, particularly at lower income levels, these percentage distributions should remain relatively constant over short time frames. The wage data used in the analysis, summarized in **Table 15**, is for the Denver metro area and thus is generalizable to locations across the City.

## ESTIMATE LOW AND MODERATE INCOME HOUSEHOLDS

The estimated percentage and number of households with incomes under 30 percent AMI, between 31 percent and 60 percent AMI, between 61 percent and 80 percent AMI, and between 81 percent and 120 percent are shown in **Tables 25** through **28**, respectively for the non-residential prototypes. To estimate the percentage of employees in each occupational category qualifying for each income category, this analysis uses 2015 income limits (to match the year of the wage data) for a household size of two and one-half persons<sup>1</sup> of approximately \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI, and \$81,500 at 120% AMI.

Individual employee income data was used to calculate the number of households that fall into these income categories by assuming that multiple earner households are, on average, formed of individuals with incomes within the same income category (very low income or low income).

It should be noted that there will be some overlap between the nexus calculations for residential and non-residential development, particularly in the retail and service categories. The employees needed to provide the goods and services to new residents will be based in non-residential buildings, such as retail stores. If proposed nexus fees are close to the justifiable maximums, this overlap should be taken into account to avoid double-charging for the same affordable housing

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<sup>1</sup> This is more conservative than using an average household size of two persons since it results in higher income limits.

impacts. At fee levels well below justifiable maximums, this issue should not be a problem.

The number of low and moderate income housing units necessary to house the new households equals the performance requirement for each prototype. For non-residential land uses, the performance requirement can be expressed as the number and/or percentage of gross square feet of building area required, based on the average unit size of affordable units needed. The performance requirements that are equivalent to the maximum justifiable nexus fees, expressed as a percentage of the total square feet of land use, are summarized in **Table 29** for the non-residential land uses.<sup>1</sup>

| <b>Table 29</b>                                                       |                                        |                           |                           |                            |
|-----------------------------------------------------------------------|----------------------------------------|---------------------------|---------------------------|----------------------------|
| <b>Estimated Affordable Housing Performance Requirements</b>          |                                        |                           |                           |                            |
| <b>Non-Residential Land Uses</b>                                      |                                        |                           |                           |                            |
| <b>Denver Affordable Housing Nexus and Inclusionary Housing Study</b> |                                        |                           |                           |                            |
| <b>Land Use</b>                                                       | <b>Nexus Fee per Gross Square Foot</b> |                           |                           |                            |
|                                                                       | <b>Under 30%<br/>AMI</b>               | <b>30% to 60%<br/>AMI</b> | <b>60% to 80%<br/>AMI</b> | <b>80% to 120%<br/>AMI</b> |
| Office                                                                | 4%                                     | 17%                       | 12%                       | 12%                        |
| Hotel                                                                 | 13%                                    | 19%                       | 5%                        | 3%                         |
| Retail                                                                | 20%                                    | 23%                       | 9%                        | 6%                         |
| Warehouse                                                             | 2%                                     | 9%                        | 4%                        | 3%                         |
| Manufacturing                                                         | 2%                                     | 9%                        | 6%                        | 7%                         |

Source: DRA

<sup>1</sup> Calculated by multiplying the estimated number of new low and moderate income households by an average unit size of 833 gross square feet (750 net square feet for an average of one- and two-bedroom units, divided by 90% efficiency ratio for the 5-story residential prototype used in the gap analysis), divided by total gross square feet.





## Affordability Gap Analysis

The affordability gap analysis compares the cost of developing housing in the City with the amount low and moderate income households can afford to pay for housing. The affordability gap represents the capital subsidy required to develop housing affordable to families at target income levels. The methodology, key assumptions and findings of the affordability gap analysis are summarized below.

The gap analysis is based on the costs to build new mid-rise multifamily rental housing in Denver, which DRA considers the most cost-effective means of housing these low and moderate income employee households. The estimated nexus fees will understate the justifiable fee for high-rise construction of affordable housing in Downtown, since high-rise construction is more costly to build.

### Methodology

The first step in the gap analysis establishes the amount a tenant or homebuyer can afford to contribute to the cost of renting or owning a dwelling unit. The second step estimates the costs of constructing or preserving affordable housing in the City. For the purposes of calculating nexus fees, DRA estimated total development costs of \$350 per net square foot and assumed average unit sizes of 600 square feet for a one-bedroom unit and 900 square feet for a two-bedroom unit based on a review of pro formas from the Denver Housing Authority for recent mid-rise affordable housing developments. Given the average household size of 2.28<sup>1</sup> persons in the City, the average affordability gap for a one-bedroom and a two-bedroom unit is used to calculate the nexus fees.

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<sup>1</sup>Based on a household population of 618,903 divided by 271,054 households in the City of Denver as of the 2010 to 2014 American Community Survey.

The third step in the gap analysis establishes the housing expenses borne by the tenants and owners. These costs can be categorized into operating costs, and financing or mortgage obligations. Operating costs are the maintenance expenses of the unit, including utilities, property maintenance, property taxes, management fees, property insurance, replacement reserve, and insurance. For the rental prototype used in this analysis, DRA assumed that the landlord pays all but certain tenant-paid utilities as an annual operating cost of the unit paid from rental income. Operating costs for the affordable unit are estimated at \$6,100 per unit, excluding reserves, based on recent pro formas from the Denver Housing Authority.

Financing or mortgage obligations are the costs associated with the purchase or development of the housing unit itself. These costs occur when all or a portion of the development cost is financed. This cost is always an obligation of the landlord or owner. Supportable financing is deducted from the total development cost, to determine the capital subsidy required to develop the prototypical housing unit affordable to an eligible family at each income level.

For the rental housing prototype used in this analysis, the gap analysis calculates the difference between total development costs and the conventional mortgage supportable by net operating income from restricted rents.

The results of the gap analysis are used to determine the fee amount that would be required to mitigate the impacts of market-rate development. Therefore, no other housing subsidies, or leverage, are assumed.

### Calculation of Per Unit Affordability Gaps

The per unit costs to make new housing affordable to households at the target income levels were calculated by subtracting per unit development costs from the per unit mortgage supportable from affordable rents. No leverage (e.g., use of tax credits) is assumed. The resulting per unit subsidy requirements by income level and cost scenario are shown in **Table 30**. The results of the gap analysis show significant affordability gaps at income levels up to 80% of AMI. At 30% of AMI, affordable rents do not fully cover operating costs so the affordability gap is the full cost of the unit. No gap is indicated at 120% of AMI.

| <b>Table 30</b><br><b>Estimated Per Unit Affordability Gaps</b><br><b>New Construction Multifamily Housing</b><br><b>City of Denver Affordable Housing Nexus and Inclusionary Housing Study</b> |                                        |                                                                          |           |           |          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------|-----------|-----------|----------|
| Unit Size                                                                                                                                                                                       | Per Unit Development Cost <sup>1</sup> | Per Unit Affordability Gap by Percent of Area Median Income <sup>2</sup> |           |           |          |
|                                                                                                                                                                                                 |                                        | 30% AMI                                                                  | 60% AMI   | 80% AMI   | 120% AMI |
| One-Bedroom                                                                                                                                                                                     | \$210,000                              | \$210,000                                                                | \$129,400 | \$62,200  | \$0      |
| Two-Bedroom                                                                                                                                                                                     | \$315,000                              | \$315,000                                                                | \$197,500 | \$116,800 | \$0      |
| Average of One- and Two-Bedroom Units                                                                                                                                                           | \$262,500                              | \$262,500                                                                | \$163,450 | \$179,000 | \$0      |

<sup>1</sup>Assumes average unit size of 600 NSF for a one-bedroom unit and 900 NSF for a two-bedroom unit) and development costs of \$350 per net square foot (NSF).

<sup>2</sup>Based on per unit supportable mortgage by income level less total development cost, assuming affordable rents at 30% of gross income and utility allowances of \$79 for a one-bedroom unit and \$95 for a two-bedroom unit, annual operating costs of \$6,100 per unit, and a 30-year fixed mortgage at an interest rate of 4.0%.

Source: DRA.

Detailed affordability gap calculations for the mid-rise rental prototype are shown in **Table 31**.

## Estimated Maximum Justifiable Nexus Fees

The maximum justifiable nexus fees for the residential and non-residential prototypes represent the estimated cost of mitigating their impact on the need for affordable housing in Denver. DRA multiplied the per unit housing affordability gaps by the estimated number of new low income households generated by each of the market-rate housing prototypes to estimate the total cost of mitigating each prototype. The total mitigation cost was then divided by the total gross square feet of residential space (excluding parking) in each prototype to calculate the maximum supportable nexus fee per gross square foot. Nexus fees are typically, but not always, assessed on a gross square foot basis because those are the measurements that are commonly included as part of the planning documents submitted to the City.

### Residential Nexus Fees

**Table 32** summarizes the estimated maximum supportable residential nexus fees per gross square foot of building area for the Downtown housing prototypes, under low-, middle- and high-cost scenarios.

As noted above, the nexus fee estimates are based on the costs to build new mid-rise multifamily housing in Denver, the most cost-effective means of housing these low and moderate income employee households. Given the average household size of 2.06<sup>1</sup> persons in the City, the average per unit affordability gap for one-bedroom and two-bedroom units is used to calculate the nexus fees. The results of the nexus analysis show significant supportable nexus fees for all prototypes and income levels up to 80% AMI. No fees are indicated at 120% of AMI.

**Tables 33** through **35** show the calculations of the residential nexus fees under low-, middle- and high-cost areas, respectively.

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<sup>1</sup>Based on a household population of 583,735 divided by 283,510 households in the City of Denver as of the 2010 census.

**Table 32**  
**Estimated Maximum Justifiable Residential Nexus Fees**  
**Residential Prototypes**  
**Denver Affordable Housing Nexus and Inclusionary Housing Study**

| Prototype Description/<br>Scenario | Nexus Fee per Gross Square Foot |                   |                   |                    |         |
|------------------------------------|---------------------------------|-------------------|-------------------|--------------------|---------|
|                                    | Under<br>30% AMI                | 30% to<br>60% AMI | 60% to<br>80% AMI | 80% to<br>120% AMI | Total   |
| <b>Single-Family Infill</b>        |                                 |                   |                   |                    |         |
| Low Scenario                       | \$2.71                          | \$4.55            | \$0.96            | \$0.00             | \$8.23  |
| Middle Scenario                    | \$3.17                          | \$5.31            | \$1.12            | \$0.00             | \$9.60  |
| High Scenario                      | \$3.60                          | \$6.04            | \$1.28            | \$0.00             | \$10.92 |
| <b>Owner Townhomes</b>             |                                 |                   |                   |                    |         |
| Low Scenario                       | \$3.89                          | \$6.58            | \$1.34            | \$0.00             | \$11.81 |
| Middle Scenario                    | \$5.09                          | \$8.61            | \$1.75            | \$0.00             | \$15.45 |
| High Scenario                      | \$6.17                          | \$10.43           | \$2.12            | \$0.00             | \$18.72 |
| <b>12-Story Owner</b>              |                                 |                   |                   |                    |         |
| Low Scenario                       | \$5.07                          | \$8.58            | \$1.75            | \$0.00             | \$15.40 |
| Middle Scenario                    | \$6.10                          | \$10.32           | \$2.10            | \$0.00             | \$18.52 |
| High Scenario                      | \$8.26                          | \$13.98           | \$2.85            | \$0.00             | \$25.09 |
| <b>5-Story Rental</b>              |                                 |                   |                   |                    |         |
| Low Scenario                       | \$4.87                          | \$8.45            | \$1.70            | \$0.00             | \$15.02 |
| Middle Scenario                    | \$5.19                          | \$9.01            | \$1.82            | \$0.00             | \$16.02 |
| High Scenario                      | \$6.49                          | \$11.26           | \$2.27            | \$0.00             | \$20.02 |
| <b>20-Story Rental</b>             |                                 |                   |                   |                    |         |
| Low Scenario                       | \$5.78                          | \$9.91            | \$1.99            | \$0.00             | \$17.68 |
| Middle Scenario                    | \$6.36                          | \$10.90           | \$2.19            | \$0.00             | \$19.44 |
| High Scenario                      | \$8.67                          | \$14.86           | \$2.99            | \$0.00             | \$26.52 |

Source: DRA

## Non-Residential Nexus Fees

**Table 36** summarizes the estimated maximum supportable non-residential nexus fees per gross square foot of building area for the non-residential land uses examined. Like the residential nexus fees, the non-residential nexus fees are derived from the development costs for the five-story mid-rise rental prototype.

**Table 37** shows the calculation of estimated maximum non-residential mitigation fees per gross square foot.

| <b>Table 36</b><br><b>Estimated Maximum Justifiable Non-Residential Nexus Fees</b><br><b>Non-Residential Prototypes</b><br><b>Denver Affordable Housing Nexus and Inclusionary Housing Study</b> |                                 |                |                |                 |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------|----------------|-----------------|----------|
| Land Use                                                                                                                                                                                         | Nexus Fee per Gross Square Foot |                |                |                 |          |
|                                                                                                                                                                                                  | Under 30% AMI                   | 30% to 60% AMI | 60% to 80% AMI | 80% to 120% AMI | Total    |
| Office                                                                                                                                                                                           | \$11.17                         | \$32.72        | \$12.86        | \$0.00          | \$56.74  |
| Hotel                                                                                                                                                                                            | \$40.85                         | \$37.20        | \$4.97         | \$0.00          | \$83.02  |
| Retail                                                                                                                                                                                           | \$63.40                         | \$46.09        | \$9.81         | \$0.00          | \$119.29 |
| Warehouse                                                                                                                                                                                        | \$6.59                          | \$17.47        | \$4.45         | \$0.00          | \$28.51  |
| Manufacturing                                                                                                                                                                                    | \$6.17                          | \$17.00        | \$6.39         | \$0.00          | \$29.57  |

Source: DRA



## Economic Feasibility Analysis

DRA prepared an economic analysis to assist the City in evaluating the potential impact of a new nexus fee on residential and commercial development. In order for a project to be financially feasible, developers must achieve certain returns. Otherwise, the project will not go forward. Therefore, the analysis of the impacts of nexus fee levels housing on development prototypes uses expected returns in order to determine at what fee levels the prototypes are no longer financially feasible. For the nexus fee to be effective in raising funds for the production of affordable units, projects need to be economically feasible.

DRA conducted the economic analysis using the nine housing prototypes<sup>1</sup> described previously in this report. The prototypes include low-, mid- and high-rise residential developments appropriate to a range of current zoning designations in the City, and reflect the range of construction types from stick built, to podium to high-rise concrete and steel that have a major effect on the cost of construction.

The findings of the analysis will assist the City in evaluating alternative nexus fee levels that will generate funds for affordable housing (and potentially units), while being sensitive to current and potential future real estate market conditions.

DRA met with the Technical Advisory Groups and individually interviewed a number of residential and non-residential developers to review the prototypes, revenue, operating cost and development cost assumptions used in the analysis. DRA considered and incorporated comments received into the analysis as considered appropriate. DRA also reviewed available cost data and pro formas from the Denver Housing Authority.

## Methodology and Definition of Key Terms

DRA evaluated the economic feasibility of the prototype developments using Return on Cost (ROC), Return on Equity (ROE) and Residual Land Value (RLV) analyses. The Return on Cost approach divides annual net cash flow (also known as net operating income), by the total development cost of the project. This method does not consider the financial benefits or risks of leverage.

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<sup>1</sup> Excluding the manufacturing prototype. Economic feasibility was not evaluated for manufacturing uses.

The ROE approach calculates the value of a development based on its stabilized income potential and subtracts the costs of development (including land) to determine the net value of the investment, or developer/investor profit. Under the ROE approach, the financial feasibility of the prototypes is measured by the rate of the ROE that the resulting net investment value (profit or loss) represents. Land costs are held fixed at an estimated market land price and the economic impact of the program is shown as a change in the dollar amount of the net value of investment in the prototype and as a change in the ROE.

Residual Land Value analysis methodology calculates the value of a development based on its income potential and subtracts the costs of development (excluding land but including an assumed ROE), to yield the underlying value of the land. When evaluating alternative land uses, the alternative that generates the highest value to a site is considered its highest and best use. An alternative that generates a value to the land that is negative, or well below market land sales prices, is financially infeasible.

All three approaches calculate the value of rental prototypes at a point in time based on the estimated stabilized net operating income of the prototype (see definition below). A development and stabilization/sales period of 9 to 48 months is assumed, depending on the prototype.

DRA estimated the costs of developing each prototype, including land, site improvement, building and parking construction, and soft costs, based on a review of available pro forma data, meetings with the Technical Advisory Groups, and one-on-one interviews with developers and others active in the Denver market.

DRA calculated the net operating income (NOI) from each prototype based on estimated market rents and operating costs for the rental units and condominium sales prices for the owner units. Net operating income for the apartment uses is capitalized at estimated capitalization rates to determine the value of the developed property. Net operating income and net sales income were calculated for the prototypes with no nexus fee, and under alternative nexus fee levels. This allows a comparison of the relative impact of alternative levels of nexus fees on the financial performance of the prototypes.

Key terms and assumptions used in this analysis are as follows:

Stabilized net operating income: Stabilized net operating income is used in the analysis of the rental housing and non-residential prototypes. During the lease-up period, a rental development will see a gradual increase in occupancy until

the development is almost fully occupied and considered stabilized. Even after initial lease-up is completed, the development will experience some level of vacancy on an annual basis as the turnover of existing tenants occurs. DRA analyzed the prototypes' estimated net operating income (which equals total possible gross rental income at full occupancy less an assumed vacancy less operating costs) assuming a stabilized vacancy rate of 7% for the residential apartment prototypes, 28% for the hotel prototype, and 10% for the other non-residential uses.

Return on Cost (ROC): ROE is defined as stabilized net operating income divided by total development costs. Minimum ROC thresholds are estimated at 15% for the owner housing prototypes and 1.5% above the assumed cap rate for the remaining prototypes.

Return on Equity (ROE): ROE is defined as net project value (capitalized net operating income for the rental prototypes or net sales proceeds for the condo prototypes, less total development costs), divided by the total amount of the equity investment, which is then divided by the estimated term of the equity investment, equity (including developer equity, investor equity, and mezzanine debt) is assumed to finance 50% to 70% of total development costs, depending on the prototype. For the ROE analysis, feasibility threshold returns are estimated at 10% for the owner housing prototypes and 8% for the remaining prototypes.

Residual Land Value (RLV): Land residual analysis calculates the value of a development based on its income potential and subtracts the costs of development and an assumed Return on Equity to yield the underlying value of the land. RLV is generally measured as the dollar value per square foot of site area. For the land residual analysis, feasibility is measured by residual land values that approach or exceed current market land sales prices after deducting development costs and an assumed Return on Equity of 8%. Equity is again assumed to finance 30% of total development costs.

Cap rate: A capitalization (or "cap") rate is the ratio of net operating income to project fair market value, or project sales price, exhibited in the market and reflects the rate of return required by investors in rental property. Cap rates are tracked by land use and market area based on observed property sales. This analysis uses cap rates to estimate the fair market value of the rental prototypes. Net operating income for the apartment and non-residential uses is capitalized at an estimated cap rate to determine the estimated fair market value of the developed and stabilized property.

The analysis was conducted under two capitalization (“cap”) rate scenarios representing a “low” rate and a “high” rate” for each prototype. The “low” cap rate represents the estimated current rate for each prototype based on developer interviews and input at the TAG meetings. The low and high rates also correspond to the range of cap rates for each product type from the CBRE Cap Rate Survey for Denver for the Second Half of 2015. Developer input generally agreed that current rates are at the higher end of the range.

## Estimated Prototype Development Costs

DRA estimated development costs for each of the prototypes, including land acquisition costs, hard construction costs, soft or indirect costs, and sales/marketing costs.

DRA worked with the Technical Advisory Groups to develop “baseline” assumptions regarding land and development costs representing current 2016 costs. Development projects coming on line today started construction several months to several years ago, and land and construction costs have increased substantially since that time period. Therefore, the “final” cost assumptions used in the analysis adjusted land costs down by 25% for the prototypes with the longest development periods, namely the 5-story rental apartment, 20-story rental apartment, 5-story office building and 12-story office building prototypes. This adjustment was based on input from the Technical Advisory Groups. In addition, TAG members agreed that construction costs have risen rapidly in recent years, by as much as 7% to 8% per year. Therefore, DRA adjusted the hard construction costs for the same four prototypes listed above downward by 20%. Since the prototypes are intended to reflect projects being completed in today’s market, no escalation of rents and operating costs is assumed.

The “baseline” development cost assumptions used in this analysis and the resulting development cost budgets for each prototype are detailed in **Table 38**. The “final” development cost assumptions and budgets used in this analysis are shown in **Table 39**.

### LAND ACQUISITION COSTS

Land acquisition costs were estimated for the prototypes based on a review of data from the County Assessor’s Office and interviews with the TAGs and local developers. The costs are intended to reflect recent purchases in the market. Land costs are shown on an estimated per housing unit and a per site square foot basis.

Since both residential and commercial development is allowed on many sites, residential and commercial developers compete for some of the same sites.

Data from the Assessor's Office on recent land sales was broken out by zoning (commercial, residential, industrial) and divided into thirds with the median of each third representing a low-, medium and high-cost figure. A second analysis was conducting separating out the top 3% of sales before dividing the remainder by thirds into low, medium and high cost. The analysis was also done separately for vacant, improved and combined vacant and improved properties.

The results of the analysis generated land values that are significantly lower than the assumptions developed in conjunction with the TAGs. Partly, this is due to the lag in the data, which represent sales from several years ago. For example, the top 3% of sales ranged from \$80 per square foot to \$250 per square foot, while the high commercial land value was \$37.50 per square foot. Therefore, the analysis relied more heavily on the assumptions generated in association with the TAGs. As noted above, estimated "baseline" land costs were adjusted downwards by 25% for selected prototypes to represent the costs for projects that started constructed several years ago and are being completed currently.

#### **HARD CONSTRUCTION COSTS**

Hard construction costs were estimated for the prototypes based on a review of recent pro formas, input from the TAGs and developer interviews. As noted above, the "baseline" assumptions for hard building construction costs are assumed to reflect costs for projects beginning construction in the current market. These were reduced by 20% for selected prototypes with long development time frames to reflect the costs for projects that began construction several years ago and are coming on the market today. Hard costs include on-site improvements, building and parking costs.

#### **SOFT (INDIRECT) DEVELOPMENT COSTS**

Soft or indirect costs were estimated based on DRA's experience with development nationwide, as well as information on local development projects. Soft costs include:

- Architectural, engineering and design fees;
- Legal and closing costs;
- Taxes and insurance (during the construction period);

- Interest during construction (land and construction loans);
- Financing fees;
- Marketing and leasing (for the rental prototypes); and
- Marketing costs (for the owner prototypes).

Total soft costs are estimated to equal 20% of hard costs.

### **TOTAL DEVELOPMENT COSTS**

Total development costs equal the sum of the above categories of development costs.

### **NEXUS FEES**

Alternative levels of nexus fees, ranging from \$1.00 to \$7.00 per square foot of gross building area excluding parking, are added to total development costs to test the impact of a fee on financial feasibility.

## **Estimated Market Rents and Sales Prices**

### **APARTMENT RENTS, VACANCY RATES AND OPERATING COSTS**

DRA developed residential rents, non-residential lease rates, and operating cost assumptions for the rental prototypes (based on an analysis of market data, review of available pro formas, and interviews with local developers and other professionals involved in the Denver rental market. Estimated rental income is calculated based on an average rent per net square foot that varies by prototype. Assumptions were developed for low-, middle-and high-cost scenarios. Rent assumptions were derived from input from the TAGs, as well as a review of published sources. For rental apartments, DRA reviewed data from Apartment Insights for the first quarter of 2016, with a focus on rents for unfurnished units, no utilities for projects in the lease-up phase. For the office prototypes, DRA reviewed data from Office Insight for the first quarter of 2016. For the warehouse prototype, DRA reviewed advertised asking rents for projects listed on loopnet.com.

The net operating income calculations assume a 7% vacancy rate on the rental apartment units, 28% for the hotel prototypes, and 10% for the remaining non-residential prototypes.



DRA developed estimated per unit stabilized operating costs for the rental properties. Operating costs vary depending upon the level of services and amenities expected with a certain rent level and the property taxes associated with the location of the property. The highest operating costs are for the high-rise properties, which offer a high level of services and amenities and have the highest property taxes because of their high property values.

Net operating income assumptions and calculations for the market-rate housing units and for the non-residential prototypes are shown in **Tables 40** and **41**, respectively.

### **OWNER SALES PRICES**

DRA estimated sales prices for new single-family infill homes and new townhomes based on TAG and developer input.

Due to construction defect litigation issues and a lack of available financing for condominiums, most of the higher density residential development since 2010 has served the rental market. Therefore, little data is available on recent condo sales.

Condominium sales costs are estimated at 7% of the gross sales price for single-family homes and 9% for townhomes and condos.

Estimated condominium sales prices and projected net sales income are shown in **Table 42**.

### **Return on Equity and Residual Land Value Analysis Results**

**Tables 43** and **44** detail the Return on Equity analysis calculations for the prototypes assuming different levels of a nexus fee, at lower and higher cap rates, respectively.

**Tables 45** and **46** detail the Residual Land Value analysis calculations for the prototypes by nexus fee level, at lower and higher cap rates, respectively. Residual land value is shown per square foot of site area and per housing unit.

**Tables 47** and **48** show the unleveraged Return on Cost calculations.

The findings of the economic feasibility analysis are summarized as follows:

1. Returns for all three owner housing prototypes (single-family infill, townhomes and 12-story condos) exceed threshold returns for the ROC and ROE measures (15% and 10%, respectively) and the RLV exceeds estimated current land costs with no nexus fee. The ROC begins to fall below the threshold with a \$5.00 per square foot nexus fee under the low- and middle-cost scenarios and with a \$7.00 per square foot nexus fee under the high-cost scenario. The ROE measure exceeds the threshold and the RLV exceeds estimated land acquisition costs with fee levels up to \$7.00 per square foot at low-, middle- and high-cost scenarios.
2. For the 5-story rental prototype, the ROC measure is below the threshold of 6.5% with no fee and with all levels of the nexus fee tested. Under the high-cost scenario, the ROC declines from 5.79% with no fee to 5.65% with a \$7.00 per square foot nexus fee, a reduction of 2% from the no fee alternative. With a \$2.00 per square foot nexus fee, the ROC is 5.75%, a decline of 0.3% from the no fee baseline. However, the ROE measure exceeds the threshold of 8%, and the RLV exceeds estimated land acquisition costs at all fee levels up to \$7.00 under the low-, middle- and high-cost scenarios.
3. For the 20-story rental prototype, the ROC is below the threshold of 6.5% with no fee. Under the high-cost scenario, the ROC declines from 6.24% with no fee to 6.20% with a nexus fee of \$2.00 per square foot and to 6.10% with a nexus fee of \$7.00 per square foot, reductions of 0.6% and 2%, respectively. The ROE measure exceeds the threshold of 8% and the RLV exceeds estimated land costs at all fee levels under low-, middle-, and high-cost scenarios.
4. The 5-story office prototype also does not meet the ROC threshold of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 5.95% with no fee to 5.91% with a \$2.00 nexus fee and to 5.82% with a fee of \$7.00 per square foot, reductions of 0.7% and 2%, respectively. The ROE is also below the threshold of 8% for the low- and middle-cost scenarios. However, under the high-cost scenario, the ROE exceeds the threshold of 8% and the RLV exceeds estimated land acquisition costs at fee levels up to \$7.00 per square foot.
5. Similarly, the 12-story office prototype does not meet the ROC threshold of 7.0% even without a nexus fee. Under the high-cost scenario, the ROC declines from 5.93% with no fee to 5.90% with a fee of \$2.00 per square foot and to 5.80% with a fee of \$7.00 per square foot, reductions of 0.5% and 2%, respectively. This prototype performs best under the low-cost and middle-cost scenarios. For the high-rise office prototype, which is expected to be built only

in high-cost areas such as the Downtown or Cherry Creek where rents are highest and higher density is allowed, the difference in these scenarios represents a sensitivity analysis of alternative cost and revenue assumptions that reflect specific site locational factors rather than larger geographic market variations. Under the low- and middle-cost scenarios, the ROE exceeds the threshold of 8% at all levels of a nexus fee up to \$7.00 per square foot. Under the high-cost scenario, the ROE falls below the threshold only with the \$7.00 fee.

6. For the 4-story hotel, the ROC exceeds the threshold of 9% only under the high-cost scenario. For this scenario, the ROC stays above the threshold at all fee levels up to \$7.00 per square foot, declining from 9.38% with no fee to 9.33% with a \$2.00 fee and to 9.21% with a \$7.00 fee, reductions of 0.5% and 2%, respectively.
7. The retail prototype does not meet the threshold ROC of 7.0%, even without a nexus fee. Under the high-cost scenario, the ROC declines from 6.19% with no fee to 6.17% with a \$2.00 per square foot fee and to 6.05% with a \$7.00 per square foot fee, reductions of 0.3% and 2%, respectively. The ROE exceeds the threshold of 8.0% for all fee levels under low-, middle- and high-cost scenarios.
8. The warehouse prototype also does not meet the threshold ROC of 7.5% even without a nexus fee. Under the high-cost scenario, the ROC declines from 6.68% with no fee to 6.58% with a \$2.00 per square foot fee and to 6.37% with a \$7.00 per square foot fee, reductions of 1% and 5%, respectively.

In summary, the analysis indicates that nexus fees up to \$7.00 per square foot have a relatively small effect on returns, with reductions in the ROC generally under 2%, based on the ROC, ROE and RLV measures for the prototypes analyzed. To the extent that fees at the levels analyzed do affect project feasibility, DRA expects that the market will adjust to fees at the moderate levels proposed over time. Regulation and development impact fees on residential development that increase the costs of development, including nexus fees, will ultimately be passed through to the landowner in the form of reduced land prices. In order for developers to profitably develop new projects, they will bid down land prices to the level that makes development feasible, given market economics and zoning regulations affecting the amount of development that can be built on a particular site. Land prices typically react quickly to factors that increase land prices, such as increases in rents and sales prices. Land prices tend to be slower to respond to factors that depress land prices, such as changing market conditions and increased regulation or fees,

since owners who purchased the land recently may be reluctant to take a loss and others may be hesitant to adjust their expectations downward.

Land prices are also volatile in response to economic cycles and factors beyond the control of local government. For example, land will lose value in higher cap rate environments. If rates of return are far below target levels, or residual land values are very low or negative with little to no room for downward adjustment, it indicates that capitalized values are not sufficient to cover the other development costs besides land, and new development will be slowed or halted until market conditions change. This will be the case whether the loss in values is due to changing market conditions and cap rates or to governmental fees or regulations.

## Policy Recommendations

DRA's policy recommendations with regards to the adoption of nexus fees to support the production of affordable housing in Denver are as follows:

1. Set affordable housing impact fees (nexus fees) for residential and non-residential development below the maximum supportable nexus fees.
2. Review fee levels annually to reflect the actual costs for the City to produce affordable units.
  - a. Adjust nexus fees annually based on a readily available index, such as the Consumer Price Index, a construction cost index, or the median home price in the City of Denver. Using an index will adjust for changes in the local economy over time.
  - b. Update the nexus and feasibility analysis approximately every five years to ensure the necessary relationship between market-rate real estate development and affordable housing is maintained. If fee levels are low relative to maximum justifiable fees, regular update of the nexus analysis may not be required. DRA recommends that the City update the feasibility assessment prior to implementing fee increases that are materially greater than the annual adjustment for inflation.
3. Development impact fee programs may include the cost of administering the program that funds affordable housing, including:
  - a. The administrative costs of assessing, collecting, cost accounting, and public reporting of the fee;

- b. The cost of justification analyses, legal support, and other costs of annual and/or periodic updates to the fee; and
- c. Costs of capital planning and programming, including project management costs associated with the share of projects funded by the fee.

Administration charges typically range from 1.0 percent up to 5.0 percent and may be added to the maximum fee level.

- 4. To incentivize the building of housing units in lieu of paying the fee, the City may adopt a performance requirement or build alternative that requires residential projects to provide fewer affordable units on site than the economic equivalent of paying the fee.
- 5. The relationship between non-residential development and the need for affordable housing varies by land use, as demonstrated by the range of justifiable nexus fees. Some jurisdictions adopt lower fees with broader applicability across non-residential land uses, while others adopt higher fees that vary by non-residential land use. If fee levels are adopted that are low relative to the maximum justifiable fee, the City may find that the ease of administration of a uniform fee for all types of non-residential development outweighs the benefit of assessing different fees for subcategories of non-residential development. If fees are adopted closer to the maximum justifiable fees, a fee that varies by type of non-residential development may better allow the City to maximum fee revenue.
- 6. Many local jurisdictions adopt project size thresholds below which fees are not levied. These thresholds range from as low as 500 square feet or two residential units to as high as 100,000 square feet. Typically, the rationale for thresholds is that a fee may have a greater effect on the economic feasibility of smaller projects. The downside of the use of thresholds is that it may result in projects being redesigned or phased to keep the project size below threshold levels. Thresholds are less important if fee levels are low.
- 7. Some local jurisdictions levy fees on single-family and duplex home construction and expansion of existing units, while others exempt such residential uses from the fee. In Denver, most larger single-family tract developments are currently under inclusionary housing agreements, and would not be subject to the fee. Therefore, a fee on single-family and duplex homes would mainly fall on infill development/redevelopment, as would a fee on residential additions. DRA is not aware of any economic or other factors that

warrant excluding such residential uses from the fee. DRA is not aware of any jurisdictions that have adopted fees on renovation projects that do not expand the size of the unit.

8. The most common practice with nexus fees is to charge a uniform citywide fee that does not vary by geography. A few jurisdictions have adopted nexus fees that vary by geographic subarea. For example, the City of Pasadena, California varies residential fees for four geographic subareas, in order to incentivize development in more economically challenged areas of the City by setting lower fees there relative to stronger market areas within the City. The City of Seattle, Washington varies commercial nexus fees for low-, medium- and high-cost areas of the City to maximize potential fee revenue by setting fees closer to the maximum justifiable fees in each type of geographic area. If fees are varied by geography, DRA recommends increased monitoring of changing market conditions and boundaries of geographic subareas to avoid unintended consequences on the location of new development. Where adopted fees are low relative to maximum justifiable fees, the ease of administration of a citywide fee may well outweigh the advantages of varying fees by geography.

**Table 7**  
**Projected Disposable Household Income of New Owner Households**  
**Owner Housing Prototypes**  
**Low Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                   | Single-Family Infill | Owner Townhomes | 12-Story Owner |
|---------------------------------------------------|----------------------|-----------------|----------------|
| Average Unit Size (SF)                            | 2,800                | 1,500           | 975            |
| Average Sales Price Per SF (1)                    | \$300                | \$333           | \$450          |
| Average Sales Price Per Unit (2)                  | \$840,000            | \$500,000       | \$438,900      |
| Mortgage Amount (3)                               | \$756,000            | \$450,000       | \$395,010      |
| Monthly Principal and Interest Payment (4)        | \$4,058              | \$2,416         | \$2,120        |
| Monthly Property Taxes (5)                        | \$420                | \$250           | \$219          |
| Monthly HOA Dues Plus Insurance                   | \$75                 | \$75            | \$250          |
| Total Monthly Housing Cost                        | \$4,553              | \$2,741         | \$2,590        |
| Estimated Average Annual Income (6)               | \$156,000            | \$94,000        | \$89,000       |
| Sales Price to Income Ratio                       | 5.38                 | 5.32            | 4.93           |
| Percent of Income Available for Expenditures (7)  | 65%                  | 65%             | 65%            |
| Ave. Disposable Income Available for Expenditures | \$101,400            | \$61,100        | \$57,850       |
| Number of Units in Prototype                      | 1                    | 10              | 233            |
| Total Disposable Household Income of Resident HHs | \$101,400            | \$611,000       | \$13,479,050   |

(1) Based on market data.

(2) Average sales price per SF multiplied by average unit size.

(3) At a 90% loan to value (price) ratio, assuming a 10% buyer downpayment.

(4) Monthly mortgage principal and interest payment assuming a 5.0% fixed-rate loan for 30 years.

(5) Monthly property taxes estimated at 0.6% annual tax rate.

(6) Assumes principal, interest, taxes and insurance (PITI) at 35% of gross annual household income.

(7) After deductions for federal and state income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Based on data from the Tax Policy Center for households at the income levels projected for the housing

Source: DRA.



**Table 8**  
**Projected Disposable Household Income of New Owner Households**  
**Owner Housing Prototypes**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                   | Single-Family Infill | Owner Townhomes | 12-Story Owner |
|---------------------------------------------------|----------------------|-----------------|----------------|
| Average Unit Size (SF)                            | 2,800                | 2,000           | 975            |
| Average Sales Price Per SF (1)                    | \$350                | \$330           | \$550          |
| Average Sales Price Per Unit (2)                  | \$980,000            | \$660,000       | \$536,400      |
| Mortgage Amount (3)                               | \$882,000            | \$594,000       | \$482,760      |
| Monthly Principal and Interest Payment (4)        | \$4,735              | \$3,189         | \$2,592        |
| Monthly Property Taxes (5)                        | \$490                | \$330           | \$268          |
| Monthly HOA Dues Plus Insurance                   | \$75                 | \$75            | \$250          |
| Total Monthly Housing Cost                        | \$5,300              | \$3,594         | \$3,110        |
| Estimated Average Annual Income (6)               | \$182,000            | \$123,000       | \$107,000      |
| Sales Price to Income Ratio                       | 5.38                 | 5.37            | 5.01           |
| Percent of Income Available for Expenditures (7)  | 65%                  | 65%             | 65%            |
| Ave. Disposable Income Available for Expenditures | \$118,300            | \$79,950        | \$69,550       |
| Number of Units in Prototype                      | 1                    | 10              | 233            |
| Total Disposable Household Income of Resident HHs | \$118,300            | \$799,500       | \$16,205,150   |

(1) Based on market data.

(2) Average sales price per SF multiplied by average unit size.

(3) At a 90% loan to value (price) ratio, assuming a 10% buyer downpayment.

(4) Monthly mortgage principal and interest payment assuming a 5.0% fixed-rate loan for 30 years.

(5) Monthly property taxes estimated at 0.6% annual tax rate.

(6) Assumes principal, interest, taxes and insurance (PITI) at 35% of gross annual household income.

(7) After deductions for federal and state income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Based on data from the Tax Policy Center for households at the income levels projected for the housing

Source: DRA.

**Table 9**  
**Projected Disposable Household Income of New Owner Households**  
**Owner Housing Prototypes**  
**High Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                   | Single-Family Infill | Owner Townhomes | 12-Story Owner |
|---------------------------------------------------|----------------------|-----------------|----------------|
| Average Unit Size (SF)                            | 2,800                | 2,300           | 975            |
| Average Sales Price Per SF (1)                    | \$400                | \$348           | \$600          |
| Average Sales Price Per Unit (2)                  | \$1,120,000          | \$800,000       | \$585,200      |
| Mortgage Amount (3)                               | \$1,008,000          | \$720,000       | \$526,680      |
| Monthly Principal and Interest Payment (4)        | \$5,411              | \$3,865         | \$2,827        |
| Monthly Property Taxes (5)                        | \$560                | \$400           | \$293          |
| Monthly HOA Dues Plus Insurance                   | \$75                 | \$75            | \$250          |
| Total Monthly Housing Cost                        | \$6,046              | \$4,340         | \$3,370        |
| Estimated Average Annual Income (6)               | \$207,000            | \$149,000       | \$116,000      |
| Sales Price to Income Ratio                       | 5.41                 | 5.37            | 5.04           |
| Percent of Income Available for Expenditures (7)  | 65%                  | 65%             | 65%            |
| Ave. Disposable Income Available for Expenditures | \$134,550            | \$96,850        | \$75,400       |
| Number of Units in Prototype                      | 1                    | 10              | 233            |
| Total Disposable Household Income of Resident HHs | \$134,550            | \$968,500       | \$17,568,200   |

(1) Based on market data.

(2) Average sales price per SF multiplied by average unit size.

(3) At a 90% loan to value (price) ratio, assuming a 10% buyer downpayment.

(4) Monthly mortgage principal and interest payment assuming a 5.0% fixed-rate loan for 30 years.

(5) Monthly property taxes estimated at 0.6% annual tax rate.

(6) Assumes principal, interest, taxes and insurance (PITI) at 35% of gross annual household income.

(7) After deductions for federal and state income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Based on data from the Tax Policy Center for households at the income levels projected for the housing prototypes.

Source: DRA.

**Table 10**  
**Projected Disposable Household Income of New Renter Households**  
**Rental Housing Prototypes**  
**Low Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                   | <b>5-Story Rental</b> | <b>20-Story Rental</b> |
|---------------------------------------------------|-----------------------|------------------------|
| Average Unit Size (SF)                            | 708                   | 810                    |
| Average Monthly Rent Per SF                       | \$2.15                | \$2.50                 |
| Average Monthly Rent Per Unit (1)                 | \$1,500               | \$2,000                |
| Average Household Income (2)                      | \$60,000              | \$80,000               |
| Annual Household Income to Rent Ratio             | 3.3                   | 3.3                    |
| Percent of Income Available for Expenditures (3)  | 65%                   | 65%                    |
| Disposable Income Available for Expenditures      | \$39,000              | \$52,000               |
| Number of Units in Prototype                      | 300                   | 285                    |
| Total Disposable Household Income of Resident HHs | \$11,700,000          | \$14,820,000           |

(1) Based on market data.

(2) Assumes rent at 33% of household income.

(3) After deductions for federal and state income taxes, Social Security and Medicare (FICA) taxes, and person savings. Based on data from the Tax Policy Center for households at the income levels projected for the housing prototypes.

Source: DRA

**Table 11**  
**Projected Disposable Household Income of New Renter Households**  
**Rental Housing Prototypes**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                   | <b>5-Story Rental</b> | <b>20-Story Rental</b> |
|---------------------------------------------------|-----------------------|------------------------|
| Average Unit Size (SF)                            | 708                   | 810                    |
| Average Monthly Rent Per SF                       | \$2.25                | \$2.75                 |
| Average Monthly Rent Per Unit (1)                 | \$1,600               | \$2,200                |
| Average Household Income (2)                      | \$64,000              | \$88,000               |
| Annual Household Income to Rent Ratio             | 3.3                   | 3.3                    |
| Percent of Income Available for Expenditures (3)  | 65%                   | 65%                    |
| Disposable Income Available for Expenditures      | \$41,600              | \$57,200               |
| Number of Units in Prototype                      | 300                   | 285                    |
| Total Disposable Household Income of Resident HHs | \$12,480,000          | \$16,302,000           |

(1) Based on market data.

(2) Assumes rent at 33% of household income.

(3) After deductions for federal and state income taxes, Social Security and Medicare (FICA) taxes, and person savings. Based on data from the Tax Policy Center for households at the income levels projected for the housing prototypes.

Source: DRA

**Table 12**  
**Projected Disposable Household Income of New Renter Households**  
**Rental Housing Prototypes**  
**High Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                   | <b>5-Story Rental</b> | <b>20-Story Rental</b> |
|---------------------------------------------------|-----------------------|------------------------|
| Average Unit Size (SF)                            | 708                   | 810                    |
| Average Monthly Rent Per SF                       | \$2.50                | \$3.00                 |
| Average Monthly Rent Per Unit (1)                 | \$1,800               | \$2,400                |
| Average Household Income (2)                      | \$72,000              | \$96,000               |
| Annual Household Income to Rent Ratio             | 3.3                   | 3.3                    |
| Percent of Income Available for Expenditures (3)  | 65%                   | 65%                    |
| Disposable Income Available for Expenditures      | \$46,800              | \$62,400               |
| Number of Units in Prototype                      | 300                   | 285                    |
| Total Disposable Household Income of Resident HHs | \$14,040,000          | \$17,784,000           |

(1) Based on market data.

(2) Assumes rent at 33% of household income.

(3) After deductions for federal and state income taxes, Social Security and Medicare (FICA) taxes, and person savings. Based on data from the Tax Policy Center for households at the income levels projected for the housing prototypes.

Source: DRA

**Table 13**  
**Projected Employment Generation**  
**Residential Prototypes**  
**Low, Middle and High Cost Scenarios**  
**Denver Affordable Housing Residential Nexus Study**

|                             | <b>Prototype Tenure</b> | <b>Total Employees<br/>Generated</b> |
|-----------------------------|-------------------------|--------------------------------------|
| <b>Single-Family Infill</b> | Owner                   |                                      |
| Low Scenario                |                         | 0.31                                 |
| Middle Scenario             |                         | 0.36                                 |
| High Scenario               |                         | 0.41                                 |
| <b>Owner Townhomes</b>      | Owner                   |                                      |
| Low Scenario                |                         | 3.10                                 |
| Middle Scenario             |                         | 4.05                                 |
| High Scenario               |                         | 4.91                                 |
| <b>12-Story Owner</b>       | Owner                   |                                      |
| Low Scenario                |                         | 57.39                                |
| Middle Scenario             |                         | 69.00                                |
| High Scenario               |                         | 74.80                                |
| <b>5-Story Rental</b>       | Renter                  |                                      |
| Low Scenario                |                         | 46.71                                |
| Middle Scenario             |                         | 49.83                                |
| High Scenario               |                         | 56.05                                |
| <b>20-Story Rental</b>      | Renter                  |                                      |
| Low Scenario                |                         | 66.86                                |
| Middle Scenario             |                         | 73.55                                |
| High Scenario               |                         | 80.23                                |

Source: DRA

**Table 14**  
**Projected Employment Generation by Industry**  
**Residential Prototypes**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                             | <b>Single-Family Infill</b> | <b>Owner Townhomes</b> | <b>12-Story Owner</b> | <b>5-Story Rental</b> | <b>20-Story Rental</b> |
|---------------------------------------------|-----------------------------|------------------------|-----------------------|-----------------------|------------------------|
| <b>Total Household Expenditures</b>         | \$118,300                   | \$799,500              | \$16,205,150          | \$12,480,000          | \$16,302,000           |
| <b>Total Jobs Generated by Industry (1)</b> |                             |                        |                       |                       |                        |
| Manufacturing                               | 0.0071                      | 0.0845                 | 1.4365                | 1.1062                | 1.6206                 |
| Wholesale Trade                             | 0.0113                      | 0.1261                 | 2.1439                | 1.4776                | 2.1676                 |
| Retail Trade                                | 0.0490                      | 0.5432                 | 9.2352                | 6.2647                | 9.1984                 |
| Transportation                              | 0.0077                      | 0.0771                 | 1.3111                | 0.8759                | 1.3267                 |
| Warehousing and Storage                     | 0.0015                      | 0.0165                 | 0.2806                | 0.1934                | 0.2847                 |
| Information and Communication               | 0.0057                      | 0.0695                 | 1.1818                | 0.9564                | 1.3477                 |
| Finance and Insurance                       | 0.0312                      | 0.3432                 | 5.8358                | 4.0018                | 6.0216                 |
| Real Estate, Rentals and Leasing            | 0.0128                      | 0.1557                 | 2.6479                | 2.6302                | 3.3426                 |
| Professional, Scientific and Technical      | 0.0153                      | 0.1727                 | 2.9356                | 2.1149                | 3.1099                 |
| Management and Administrative Services      | 0.0207                      | 0.2390                 | 4.0641                | 3.0319                | 4.4417                 |
| Educational Services                        | 0.0237                      | 0.1802                 | 3.0633                | 1.5417                | 2.6803                 |
| Health Care and Social Assistance           | 0.0713                      | 0.8871                 | 15.0831               | 11.5712               | 16.7416                |
| Arts, Entertainment and Recreation          | 0.0098                      | 0.1028                 | 1.7474                | 1.2569                | 1.8493                 |
| Other Services                              | 0.0874                      | 1.0241                 | 17.4132               | 12.3225               | 18.7839                |
| Government                                  | 0.0033                      | 0.0333                 | 0.6183                | 0.4810                | 0.6309                 |
| <b>Total</b>                                | <b>0.3577</b>               | <b>4.0550</b>          | <b>68.9979</b>        | <b>49.8261</b>        | <b>73.5475</b>         |

(1) Includes total employment, full-time and part-time.

Source: IMPLAN Input/Output Model; DRA.



**Table 15**  
**Wages by Occupational Grouping**  
**Denver-Aurora-Lakewood CO MSA**  
**May 2015**

| SOC Code Prefix (1) | Occupational Category                         | Employment | % of Total Employment | Mean Hourly Wage | Mean Annual Wage | 10th Percentile Hourly Wage | 25th Percentile Hourly Wage | Median (50th Percentile) Hourly Wage | 75th Percentile Hourly Wage | 90th Percentile Hourly Wage |
|---------------------|-----------------------------------------------|------------|-----------------------|------------------|------------------|-----------------------------|-----------------------------|--------------------------------------|-----------------------------|-----------------------------|
| 11                  | Management                                    | 65,770     | 5%                    | \$60.88          | \$126,640        | \$27.07                     | \$38.89                     | \$55.98                              | \$77.61                     | N/A                         |
| 13                  | Business and Financial Operations             | 111,080    | 8%                    | \$36.80          | \$76,550         | \$19.63                     | \$25.54                     | \$34.08                              | \$44.99                     | \$59.14                     |
| 15                  | Computer and Mathematical                     | 63,100     | 5%                    | \$43.47          | \$90,410         | \$23.77                     | \$32.33                     | \$43.43                              | \$55.61                     | \$67.32                     |
| 17                  | Architecture and Engineering                  | 36,740     | 3%                    | \$42.46          | \$88,320         | \$22.19                     | \$30.21                     | \$39.46                              | \$52.41                     | \$68.00                     |
| 19                  | Life, Physical and Social Science             | 14,500     | 1%                    | \$35.41          | \$73,640         | \$16.40                     | \$22.46                     | \$32.13                              | \$46.99                     | \$61.37                     |
| 21                  | Community and Social Services                 | 16,480     | 1%                    | \$22.85          | \$47,530         | \$13.30                     | \$16.66                     | \$21.76                              | \$28.53                     | \$36.27                     |
| 23                  | Legal                                         | 15,660     | 1%                    | \$50.25          | \$104,520        | \$18.67                     | \$25.45                     | \$38.17                              | \$66.16                     | N/A                         |
| 25                  | Education, Training, and Library              | 72,830     | 5%                    | \$25.62          | \$53,280         | \$11.83                     | \$16.15                     | \$22.71                              | \$32.04                     | \$42.49                     |
| 27                  | Arts, Design, Entertainment, Sports, Media    | 20,710     | 2%                    | \$25.53          | \$53,100         | \$9.57                      | \$14.79                     | \$22.88                              | \$32.65                     | \$45.17                     |
| 29                  | Healthcare Practitioners and Technical        | 72,500     | 5%                    | \$38.27          | \$79,590         | \$17.34                     | \$24.75                     | \$33.49                              | \$44.35                     | \$61.56                     |
| 31                  | Healthcare Support                            | 33,610     | 2%                    | \$15.95          | \$33,180         | \$10.32                     | \$12.43                     | \$15.25                              | \$18.51                     | \$23.78                     |
| 33                  | Protective Service                            | 28,340     | 2%                    | \$22.51          | \$46,830         | \$9.65                      | \$11.71                     | \$17.37                              | \$31.80                     | \$40.59                     |
| 35                  | Food Preparation and Serving-Related          | 122,870    | 9%                    | \$10.82          | \$22,510         | \$8.45                      | \$8.79                      | \$9.36                               | \$11.55                     | \$16.33                     |
| 37                  | Building and Grounds Cleaning and Maintenance | 41,980     | 3%                    | \$12.46          | \$25,920         | \$8.79                      | \$9.62                      | \$11.58                              | \$14.49                     | \$19.14                     |

**Table 15**  
**Wages by Occupational Grouping**  
**Denver-Aurora-Lakewood CO MSA**  
**May 2015**

| SOC Code Prefix (1) | Occupational Category                | Employment | % of Total Employment | Mean Hourly Wage | Mean Annual Wage | 10th Percentile Hourly Wage | 25th Percentile Hourly Wage | Median (50th Percentile) Hourly Wage | 75th Percentile Hourly Wage | 90th Percentile Hourly Wage |
|---------------------|--------------------------------------|------------|-----------------------|------------------|------------------|-----------------------------|-----------------------------|--------------------------------------|-----------------------------|-----------------------------|
| 39                  | Personal Care and Service            | 44,510     | 3%                    | \$12.70          | \$26,420         | \$8.60                      | \$9.15                      | \$10.68                              | \$13.76                     | \$19.89                     |
| 41                  | Sales and Related                    | 155,440    | 11%                   | \$21.62          | \$44,980         | \$8.79                      | \$9.83                      | \$14.63                              | \$26.88                     | \$45.51                     |
| 43                  | Office and Administrative Support    | 206,720    | 15%                   | \$18.53          | \$38,550         | \$10.64                     | \$13.72                     | \$17.80                              | \$23.15                     | \$28.61                     |
| 45                  | Farming, Fishing, Forestry           | 1,600      | 0%                    | \$13.45          | \$27,970         | \$8.62                      | \$9.21                      | \$12.31                              | \$14.87                     | \$18.78                     |
| 47                  | Construction and Extraction          | 64,880     | 5%                    | \$21.64          | \$45,020         | \$12.91                     | \$15.94                     | \$20.17                              | \$26.75                     | \$34.41                     |
| 49                  | Installation, Maintenance and Repair | 50,910     | 4%                    | \$23.62          | \$49,120         | \$12.52                     | \$16.45                     | \$22.70                              | \$30.05                     | \$37.19                     |
| 51                  | Production                           | 51,110     | 4%                    | \$17.54          | \$36,490         | \$9.67                      | \$11.72                     | \$15.69                              | \$21.57                     | \$29.15                     |
| 53                  | Transportation and Material Moving   | 82,930     | 6%                    | \$19.06          | \$39,640         | \$9.13                      | \$11.19                     | \$15.79                              | \$22.13                     | \$29.92                     |
| TOTAL               |                                      | 1,374,270  | 100%                  |                  |                  |                             |                             |                                      |                             |                             |

(1) The first two digits of the six digit Standard Occupational Classification (SOC) code.  
(2) Based on the 2015 income limits for the Denver, adjusted for a 2.5 person household.

Source: U.S. Department of Labor, Bureau of Labor Statistics, May 2015 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates; DRA.

**Table 15**  
**Wages by Occupational Grouping**  
**Denver-Aurora-Lakewood CO MSA**  
**May 2015**

| SOC Code Prefix (1) | Occupational Category                         | Employment | 10th Percentile Annual Wage | 25th Percentile Annual Wage | Median (50th Percentile) Annual Wage | 75th Percentile Annual Wage | 90th Percentile Annual Wage | Est. % of Jobs Below 30% AMI (2) | Est. % of Jobs Between 30%-60% AMI (2) | Est. % of Jobs Between 60%-80% AMI (2) | Est. % of Jobs Between 80%-120% AMI (2) |
|---------------------|-----------------------------------------------|------------|-----------------------------|-----------------------------|--------------------------------------|-----------------------------|-----------------------------|----------------------------------|----------------------------------------|----------------------------------------|-----------------------------------------|
| 11                  | Management                                    | 65,770     | \$56,300                    | \$80,900                    | \$116,440                            | \$161,440                   | N/A                         | 0%                               | 0%                                     | 10%                                    | 15%                                     |
| 13                  | Business and Financial Operations             | 111,080    | \$40,830                    | \$53,120                    | \$70,880                             | \$93,580                    | \$123,010                   | 0%                               | 10%                                    | 15%                                    | 37%                                     |
| 15                  | Computer and Mathematical                     | 63,100     | \$49,440                    | \$67,240                    | \$90,330                             | \$115,660                   | \$140,030                   | 0%                               | 5%                                     | 12%                                    | 23%                                     |
| 17                  | Architecture and Engineering                  | 36,740     | \$46,150                    | \$62,850                    | \$82,070                             | \$109,000                   | \$141,430                   | 0%                               | 5%                                     | 12%                                    | 33%                                     |
| 19                  | Life, Physical and Social Science             | 14,500     | \$34,120                    | \$46,720                    | \$66,830                             | \$97,740                    | \$127,650                   | 0%                               | 17%                                    | 20%                                    | 25%                                     |
| 21                  | Community and Social Services                 | 16,480     | \$27,660                    | \$34,660                    | \$45,270                             | \$59,330                    | \$75,450                    | 5%                               | 32%                                    | 30%                                    | 92%                                     |
| 23                  | Legal                                         | 15,660     | \$38,830                    | \$52,930                    | \$79,390                             | \$137,620                   | N/A                         | 0%                               | 10%                                    | 17%                                    | 39%                                     |
| 25                  | Education, Training, and Library              | 72,830     | \$24,600                    | \$33,590                    | \$47,230                             | \$66,640                    | \$88,370                    | 6%                               | 29%                                    | 26%                                    | 25%                                     |
| 27                  | Arts, Design, Entertainment, Sports, Media    | 20,710     | \$19,900                    | \$30,770                    | \$47,590                             | \$67,900                    | \$93,950                    | 10%                              | 25%                                    | 25%                                    | 23%                                     |
| 29                  | Healthcare Practitioners and Technical        | 72,500     | \$36,070                    | \$51,480                    | \$69,660                             | \$92,240                    | \$128,050                   | 0%                               | 10%                                    | 19%                                    | 34%                                     |
| 31                  | Healthcare Support                            | 33,610     | \$21,470                    | \$25,850                    | \$31,710                             | \$38,500                    | \$49,470                    | 9%                               | 69%                                    | 17%                                    | 5%                                      |
| 33                  | Protective Service                            | 28,340     | \$20,080                    | \$24,350                    | \$36,130                             | \$66,140                    | \$84,420                    | 10%                              | 32%                                    | 23%                                    | 21%                                     |
| 35                  | Food Preparation and Serving-Related          | 122,870    | \$17,580                    | \$18,280                    | \$19,470                             | \$24,020                    | \$33,970                    | 55%                              | 40%                                    | 5%                                     | 0%                                      |
| 37                  | Building and Grounds Cleaning and Maintenance | 41,980     | \$18,280                    | \$20,010                    | \$24,090                             | \$30,140                    | \$39,800                    | 31%                              | 60%                                    | 5%                                     | 4%                                      |

**Table 15**  
**Wages by Occupational Grouping**  
**Denver-Aurora-Lakewood CO MSA**  
**May 2015**

| <b>SOC Code Prefix (1)</b> | <b>Occupational Category</b>         | <b>Employment</b> | <b>10th Percentile Annual Wage</b> | <b>25th Percentile Annual Wage</b> | <b>Median (50th Percentile) Annual Wage</b> | <b>75th Percentile Annual Wage</b> | <b>90th Percentile Annual Wage</b> | <b>Est. % of Jobs Below 30% AMI (2)</b> | <b>Est. % of Jobs Between 30%-60% AMI (2)</b> | <b>Est. % of Jobs Between 60%-80% AMI (2)</b> | <b>Est. % of Jobs Between 80%-120% AMI (2)</b> |
|----------------------------|--------------------------------------|-------------------|------------------------------------|------------------------------------|---------------------------------------------|------------------------------------|------------------------------------|-----------------------------------------|-----------------------------------------------|-----------------------------------------------|------------------------------------------------|
| 39                         | Personal Care and Service            | 44,510            | \$17,890                           | \$19,040                           | \$22,220                                    | \$28,610                           | \$41,360                           | 33%                                     | 53%                                           | 10%                                           | 4%                                             |
| 41                         | Sales and Related                    | 155,440           | \$18,280                           | \$20,440                           | \$30,440                                    | \$55,900                           | \$94,650                           | 25%                                     | 31%                                           | 18%                                           | 12%                                            |
| 43                         | Office and Administrative Support    | 206,720           | \$22,130                           | \$28,530                           | \$37,030                                    | \$48,140                           | \$59,510                           | 9%                                      | 47%                                           | 28%                                           | 13%                                            |
| 45                         | Farming, Fishing, Forestry           | 1,600             | \$17,940                           | \$19,160                           | \$25,610                                    | \$30,940                           | \$39,050                           | 25%                                     | 70%                                           | 3%                                            | 2%                                             |
| 47                         | Construction and Extraction          | 64,880            | \$26,840                           | \$33,160                           | \$41,960                                    | \$55,640                           | \$71,570                           | 5%                                      | 42%                                           | 27%                                           | 20%                                            |
| 49                         | Installation, Maintenance and Repair | 50,910            | \$26,030                           | \$34,210                           | \$47,220                                    | \$62,510                           | \$77,360                           | 6%                                      | 31%                                           | 25%                                           | 30%                                            |
| 51                         | Production                           | 51,110            | \$20,100                           | \$24,390                           | \$32,630                                    | \$44,860                           | \$60,630                           | 14%                                     | 53%                                           | 17%                                           | 12%                                            |
| 53                         | Transportation and Material Moving   | 82,930            | \$18,990                           | \$23,270                           | \$32,840                                    | \$46,030                           | \$62,230                           | 13%                                     | 56%                                           | 14%                                           | 12%                                            |
|                            | <b>TOTAL</b>                         | <b>1,374,270</b>  |                                    |                                    |                                             |                                    |                                    |                                         |                                               |                                               |                                                |

**Table 16**  
**Summary of Estimated Very Low and Low Income Households**  
**Residential Prototypes**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                             |                      |                   |                   |                    |        | Household Expenditures |           |
|-----------------------------|----------------------|-------------------|-------------------|--------------------|--------|------------------------|-----------|
|                             | Less than 30%<br>AMI | 30% to 60%<br>AMI | 60% to 80%<br>AMI | 80% to 120%<br>AMI | Total  | HH Expend              |           |
| <b>Single-Family Infill</b> |                      |                   |                   |                    |        |                        |           |
| Low Scenario                | 0.029                | 0.078             | 0.030             | 0.026              | 0.163  | \$101,400              | 0.8571429 |
| Middle Scenario             | 0.034                | 0.091             | 0.035             | 0.030              | 0.190  | \$118,300              | 1         |
| High Scenario               | 0.038                | 0.103             | 0.040             | 0.034              | 0.216  | \$134,550              | 1.1373626 |
| <b>Owner Townhomes</b>      |                      |                   |                   |                    |        |                        |           |
| Low Scenario                | 0.296                | 0.805             | 0.299             | 0.253              | 1.654  | \$611,000              | 0.7642276 |
| Middle Scenario             | 0.388                | 1.054             | 0.392             | 0.331              | 2.164  | \$799,500              | 1         |
| High Scenario               | 0.470                | 1.277             | 0.475             | 0.401              | 2.622  | \$968,500              | 1.2113821 |
| <b>12-Story Owner</b>       |                      |                   |                   |                    |        |                        |           |
| Low Scenario                | 5.487                | 14.916            | 5.548             | 4.683              | 30.633 | \$13,479,050           | 0.8317757 |
| Middle Scenario             | 6.596                | 17.932            | 6.670             | 5.630              | 36.828 | \$16,205,150           | 1         |
| High Scenario               | 7.151                | 19.441            | 7.231             | 6.103              | 39.926 | \$17,568,200           | 1.0841121 |
| <b>5-Story Rental</b>       |                      |                   |                   |                    |        |                        |           |
| Low Scenario                | 4.372                | 12.187            | 4.490             | 3.820              | 24.868 | \$11,700,000           | 0.9375    |
| Middle Scenario             | 4.663                | 13.000            | 4.789             | 4.075              | 26.526 | \$12,480,000           | 1         |
| High Scenario               | 5.246                | 14.624            | 5.387             | 4.584              | 29.842 | \$14,040,000           | 1.125     |
| <b>20-Story Rental</b>      |                      |                   |                   |                    |        |                        |           |
| Low Scenario                | 6.351                | 17.486            | 6.419             | 5.421              | 35.678 | \$14,820,000           | 0.9090909 |
| Middle Scenario             | 6.986                | 19.235            | 7.061             | 5.964              | 39.246 | \$16,302,000           | 1         |
| High Scenario               | 7.621                | 20.984            | 7.703             | 6.506              | 42.813 | \$17,784,000           | 1.0909091 |

Source: IMPLAN Input/Output Model; DRA.

**Table 17**  
**Estimated Very Low and Low Income Households**  
**Single-Family Infill**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

| Economic Sector                        | Total New FTE Employees Generated by Development (1) | No. of New Households (2) | Estimated Percent of HH Earning Incomes: |                             |                             |                              | Estimated Households Earning Incomes: |                         |                         |                          |               |
|----------------------------------------|------------------------------------------------------|---------------------------|------------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------|-------------------------|--------------------------|---------------|
|                                        |                                                      |                           | Below 30% AMI (3)                        | Between 31% and 60% AMI (3) | Between 61% and 80% AMI (3) | Between 81% and 120% AMI (3) | Below 30% AMI                         | Between 31% and 60% AMI | Between 61% and 80% AMI | Between 81% and 120% AMI | Total         |
| Manufacturing                          | 0.0071                                               | 0.0044                    | 14%                                      | 53%                         | 17%                         | 12%                          | 0.0006                                | 0.0023                  | 0.0007                  | 0.0005                   | 0.0042        |
| Wholesale Trade                        | 0.0113                                               | 0.0070                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0009                                | 0.0039                  | 0.0010                  | 0.0008                   | 0.0067        |
| Retail Trade                           | 0.0490                                               | 0.0304                    | 25%                                      | 31%                         | 18%                         | 12%                          | 0.0076                                | 0.0094                  | 0.0055                  | 0.0036                   | 0.0262        |
| Transportation                         | 0.0077                                               | 0.0048                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0006                                | 0.0027                  | 0.0007                  | 0.0006                   | 0.0045        |
| Warehousing and Storage                | 0.0015                                               | 0.0009                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0001                                | 0.0005                  | 0.0001                  | 0.0001                   | 0.0009        |
| Information and Communication          | 0.0057                                               | 0.0036                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0003                                | 0.0017                  | 0.0010                  | 0.0005                   | 0.0035        |
| Finance and Insurance                  | 0.0312                                               | 0.0194                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.0019                  | 0.0029                  | 0.0072                   | 0.0120        |
| Real Estate, Rentals and Leasing       | 0.0128                                               | 0.0079                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.0008                  | 0.0012                  | 0.0029                   | 0.0049        |
| Professional, Scientific and Technical | 0.0153                                               | 0.0095                    | 0%                                       | 17%                         | 20%                         | 25%                          | 0.0000                                | 0.0016                  | 0.0019                  | 0.0024                   | 0.0059        |
| Management and Administrative Services | 0.0207                                               | 0.0129                    | 0%                                       | 0%                          | 10%                         | 15%                          | 0.0000                                | 0.0000                  | 0.0013                  | 0.0019                   | 0.0032        |
| Educational Services                   | 0.0237                                               | 0.0147                    | 6%                                       | 29%                         | 26%                         | 25%                          | 0.0009                                | 0.0043                  | 0.0038                  | 0.0037                   | 0.0127        |
| Health Care and Social Assistance      | 0.0713                                               | 0.0443                    | 9%                                       | 69%                         | 17%                         | 5%                           | 0.0040                                | 0.0306                  | 0.0075                  | 0.0022                   | 0.0443        |
| Arts, Entertainment and Recreation     | 0.0098                                               | 0.0061                    | 10%                                      | 25%                         | 25%                         | 23%                          | 0.0006                                | 0.0015                  | 0.0015                  | 0.0014                   | 0.0050        |
| Other Services                         | 0.0874                                               | 0.0543                    | 33%                                      | 53%                         | 10%                         | 4%                           | 0.0179                                | 0.0288                  | 0.0054                  | 0.0022                   | 0.0543        |
| Government                             | 0.0033                                               | 0.0020                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0002                                | 0.0010                  | 0.0006                  | 0.0003                   | 0.0020        |
| <b>Total/Average</b>                   | <b>0.3577</b>                                        | <b>0.2222</b>             |                                          |                             |                             |                              | <b>0.0338</b>                         | <b>0.0910</b>           | <b>0.0352</b>           | <b>0.0303</b>            | <b>0.1902</b> |

(1) Includes full-time equivalent employees from the IMPLAN input/output model.

(2) Number of FTE conversion employees divided by 1.61 employees per worker household.

(3) Based on 2015 income limits for a 2.5 person household of \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI and \$81,500 at 120% AMI.

Percentage of employees by income category estimated based on IMPLAN average payroll figures, and BLS wage by occupation survey.

Source: IMPLAN; U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, May 2015; DRA.

**Table 18**  
**Summary of Estimated Very Low and Low Income Households**  
**Owner Townhomes**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

| Economic Sector                        | Total New FTE Employees Generated by Development (1) | No. of New Households (2) | Estimated Percent of HH Earning Incomes: |                             |                             |                              | Estimated Households Earning Incomes: |                         |                         |                          | Total         |
|----------------------------------------|------------------------------------------------------|---------------------------|------------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------|-------------------------|--------------------------|---------------|
|                                        |                                                      |                           | Below 30% AMI (3)                        | Between 31% and 60% AMI (3) | Between 61% and 80% AMI (3) | Between 81% and 120% AMI (3) | Below 30% AMI                         | Between 31% and 60% AMI | Between 61% and 80% AMI | Between 81% and 120% AMI |               |
| Manufacturing                          | 0.0845                                               | 0.0525                    | 14%                                      | 53%                         | 17%                         | 12%                          | 0.0073                                | 0.0278                  | 0.0089                  | 0.0063                   | 0.0504        |
| Wholesale Trade                        | 0.1261                                               | 0.0783                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0102                                | 0.0439                  | 0.0110                  | 0.0094                   | 0.0744        |
| Retail Trade                           | 0.5432                                               | 0.3374                    | 25%                                      | 31%                         | 18%                         | 12%                          | 0.0843                                | 0.1046                  | 0.0607                  | 0.0405                   | 0.2901        |
| Transportation                         | 0.0771                                               | 0.0479                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0062                                | 0.0268                  | 0.0067                  | 0.0057                   | 0.0455        |
| Warehousing and Storage                | 0.0165                                               | 0.0102                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0013                                | 0.0057                  | 0.0014                  | 0.0012                   | 0.0097        |
| Information and Communication          | 0.0695                                               | 0.0432                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0039                                | 0.0203                  | 0.0121                  | 0.0056                   | 0.0419        |
| Finance and Insurance                  | 0.3432                                               | 0.2132                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.0213                  | 0.0320                  | 0.0789                   | 0.1322        |
| Real Estate, Rentals and Leasing       | 0.1557                                               | 0.0967                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.0097                  | 0.0145                  | 0.0358                   | 0.0600        |
| Professional, Scientific and Technical | 0.1727                                               | 0.1072                    | 0%                                       | 17%                         | 20%                         | 25%                          | 0.0000                                | 0.0182                  | 0.0214                  | 0.0268                   | 0.0665        |
| Management and Administrative Services | 0.2390                                               | 0.1485                    | 0%                                       | 0%                          | 10%                         | 15%                          | 0.0000                                | 0.0000                  | 0.0148                  | 0.0223                   | 0.0371        |
| Educational Services                   | 0.1802                                               | 0.1119                    | 6%                                       | 29%                         | 26%                         | 25%                          | 0.0067                                | 0.0325                  | 0.0291                  | 0.0280                   | 0.0962        |
| Health Care and Social Assistance      | 0.8871                                               | 0.5510                    | 9%                                       | 69%                         | 17%                         | 5%                           | 0.0496                                | 0.3802                  | 0.0937                  | 0.0275                   | 0.5510        |
| Arts, Entertainment and Recreation     | 0.1028                                               | 0.0638                    | 10%                                      | 25%                         | 25%                         | 23%                          | 0.0064                                | 0.0160                  | 0.0160                  | 0.0147                   | 0.0530        |
| Other Services                         | 1.0241                                               | 0.6361                    | 33%                                      | 53%                         | 10%                         | 4%                           | 0.2099                                | 0.3371                  | 0.0636                  | 0.0254                   | 0.6361        |
| Government                             | 0.0333                                               | 0.0207                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0019                                | 0.0097                  | 0.0058                  | 0.0027                   | 0.0201        |
| <b>Total/Average</b>                   | <b>4.0550</b>                                        | <b>2.5186</b>             |                                          |                             |                             |                              | <b>0.3878</b>                         | <b>1.0538</b>           | <b>0.3917</b>           | <b>0.3309</b>            | <b>2.1642</b> |

(1) Includes full-time equivalent employees from the IMPLAN input/output model.

(2) Number of FTE conversion employees divided by 1.61 employees per worker household.

(3) Based on 2015 income limits for a 2.5 person household of \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI and \$81,500 at 120% AMI.

Percentage of employees by income category estimated based on IMPLAN average payroll figures, and BLS wage by occupation survey.

Source: IMPLAN; U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, May 2015; DRA.



**Table 19**  
**Summary of Estimated Very Low and Low Income Households**  
**12-Story Owner**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

| Economic Sector                        | Total New FTE Employees Generated by Development (1) | No. of New Households (2) | Estimated Percent of HH Earning Incomes: |                             |                             |                              | Estimated Households Earning Incomes: |                         |                         |                          |                |
|----------------------------------------|------------------------------------------------------|---------------------------|------------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------|-------------------------|--------------------------|----------------|
|                                        |                                                      |                           | Below 30% AMI (3)                        | Between 31% and 60% AMI (3) | Between 61% and 80% AMI (3) | Between 81% and 120% AMI (3) | Below 30% AMI                         | Between 31% and 60% AMI | Between 61% and 80% AMI | Between 81% and 120% AMI | Total          |
|                                        |                                                      |                           | Manufacturing                            | 1.4365                      | 0.8923                      | 14%                          | 53%                                   | 17%                     | 12%                     | 0.1249                   | 0.4729         |
| Wholesale Trade                        | 2.1439                                               | 1.3316                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.1731                                | 0.7457                  | 0.1864                  | 0.1598                   | 1.2651         |
| Retail Trade                           | 9.2352                                               | 5.7362                    | 25%                                      | 31%                         | 18%                         | 12%                          | 1.4340                                | 1.7782                  | 1.0325                  | 0.6883                   | 4.9331         |
| Transportation                         | 1.3111                                               | 0.8144                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.1059                                | 0.4560                  | 0.1140                  | 0.0977                   | 0.7736         |
| Warehousing and Storage                | 0.2806                                               | 0.1743                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0227                                | 0.0976                  | 0.0244                  | 0.0209                   | 0.1656         |
| Information and Communication          | 1.1818                                               | 0.7340                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0661                                | 0.3450                  | 0.2055                  | 0.0954                   | 0.7120         |
| Finance and Insurance                  | 5.8358                                               | 3.6247                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.3625                  | 0.5437                  | 1.3411                   | 2.2473         |
| Real Estate, Rentals and Leasing       | 2.6479                                               | 1.6447                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.1645                  | 0.2467                  | 0.6085                   | 1.0197         |
| Professional, Scientific and Technical | 2.9356                                               | 1.8234                    | 0%                                       | 17%                         | 20%                         | 25%                          | 0.0000                                | 0.3100                  | 0.3647                  | 0.4558                   | 1.1305         |
| Management and Administrative Services | 4.0641                                               | 2.5243                    | 0%                                       | 0%                          | 10%                         | 15%                          | 0.0000                                | 0.0000                  | 0.2524                  | 0.3786                   | 0.6311         |
| Educational Services                   | 3.0633                                               | 1.9027                    | 6%                                       | 29%                         | 26%                         | 25%                          | 0.1142                                | 0.5518                  | 0.4947                  | 0.4757                   | 1.6363         |
| Health Care and Social Assistance      | 15.0831                                              | 9.3684                    | 9%                                       | 69%                         | 17%                         | 5%                           | 0.8432                                | 6.4642                  | 1.5926                  | 0.4684                   | 9.3684         |
| Arts, Entertainment and Recreation     | 1.7474                                               | 1.0854                    | 10%                                      | 25%                         | 25%                         | 23%                          | 0.1085                                | 0.2713                  | 0.2713                  | 0.2496                   | 0.9008         |
| Other Services                         | 17.4132                                              | 10.8157                   | 33%                                      | 53%                         | 10%                         | 4%                           | 3.5692                                | 5.7323                  | 1.0816                  | 0.4326                   | 10.8157        |
| Government                             | 0.6183                                               | 0.3840                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0346                                | 0.1805                  | 0.1075                  | 0.0499                   | 0.3725         |
| <b>Total/Average</b>                   | <b>68.9979</b>                                       | <b>42.8558</b>            |                                          |                             |                             |                              | <b>6.5962</b>                         | <b>17.9324</b>          | <b>6.6698</b>           | <b>5.6297</b>            | <b>36.8282</b> |

(1) Includes full-time equivalent employees from the IMPLAN input/output model.

(2) Number of FTE conversion employees divided by 1.61 employees per worker household.

(3) Based on 2015 income limits for a 2.5 person household of \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI and \$81,500 at 120% AMI.

Percentage of employees by income category estimated based on IMPLAN average payroll figures, and BLS wage by occupation survey.

Source: IMPLAN; U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, May 2015; DRA.

**Table 20**  
**Summary of Estimated Very Low and Low Income Households**  
**5-Story Rental**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

| Economic Sector                        | Total New FTE Employees Generated by Development (1) | No. of New Households (2) | Estimated Percent of HH Earning Incomes: |                             |                             |                              | Estimated Households Earning Incomes: |                         |                         |                          |                |
|----------------------------------------|------------------------------------------------------|---------------------------|------------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------|-------------------------|--------------------------|----------------|
|                                        |                                                      |                           | Below 30% AMI (3)                        | Between 31% and 60% AMI (3) | Between 61% and 80% AMI (3) | Between 81% and 120% AMI (3) | Below 30% AMI                         | Between 31% and 60% AMI | Between 61% and 80% AMI | Between 81% and 120% AMI | Total          |
|                                        |                                                      |                           | Manufacturing                            | 1.1062                      | 0.6871                      | 14%                          | 53%                                   | 17%                     | 12%                     | 0.0962                   | 0.3642         |
| Wholesale Trade                        | 1.4776                                               | 0.9178                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.1193                                | 0.5139                  | 0.1285                  | 0.1101                   | 0.8719         |
| Retail Trade                           | 6.2647                                               | 3.8911                    | 25%                                      | 31%                         | 18%                         | 12%                          | 0.9728                                | 1.2062                  | 0.7004                  | 0.4669                   | 3.3463         |
| Transportation                         | 0.8759                                               | 0.5440                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0707                                | 0.3047                  | 0.0762                  | 0.0653                   | 0.5168         |
| Warehousing and Storage                | 0.1934                                               | 0.1201                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0156                                | 0.0673                  | 0.0168                  | 0.0144                   | 0.1141         |
| Information and Communication          | 0.9564                                               | 0.5940                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0535                                | 0.2792                  | 0.1663                  | 0.0772                   | 0.5762         |
| Finance and Insurance                  | 4.0018                                               | 2.4856                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.2486                  | 0.3728                  | 0.9197                   | 1.5411         |
| Real Estate, Rentals and Leasing       | 2.6302                                               | 1.6336                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.1634                  | 0.2450                  | 0.6044                   | 1.0129         |
| Professional, Scientific and Technical | 2.1149                                               | 1.3136                    | 0%                                       | 17%                         | 20%                         | 25%                          | 0.0000                                | 0.2233                  | 0.2627                  | 0.3284                   | 0.8144         |
| Management and Administrative Services | 3.0319                                               | 1.8831                    | 0%                                       | 0%                          | 10%                         | 15%                          | 0.0000                                | 0.0000                  | 0.1883                  | 0.2825                   | 0.4708         |
| Educational Services                   | 1.5417                                               | 0.9576                    | 6%                                       | 29%                         | 26%                         | 25%                          | 0.0575                                | 0.2777                  | 0.2490                  | 0.2394                   | 0.8235         |
| Health Care and Social Assistance      | 11.5712                                              | 7.1871                    | 9%                                       | 69%                         | 17%                         | 5%                           | 0.6468                                | 4.9591                  | 1.2218                  | 0.3594                   | 7.1871         |
| Arts, Entertainment and Recreation     | 1.2569                                               | 0.7807                    | 10%                                      | 25%                         | 25%                         | 23%                          | 0.0781                                | 0.1952                  | 0.1952                  | 0.1796                   | 0.6479         |
| Other Services                         | 12.3225                                              | 7.6537                    | 33%                                      | 53%                         | 10%                         | 4%                           | 2.5257                                | 4.0565                  | 0.7654                  | 0.3061                   | 7.6537         |
| Government                             | 0.4810                                               | 0.2988                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0269                                | 0.1404                  | 0.0837                  | 0.0388                   | 0.2898         |
| <b>Total/Average</b>                   | <b>49.8261</b>                                       | <b>30.9479</b>            |                                          |                             |                             |                              | <b>4.6631</b>                         | <b>12.9995</b>          | <b>4.7889</b>           | <b>4.0747</b>            | <b>26.5262</b> |

(1) Includes full-time equivalent employees from the IMPLAN input/output model.

(2) Number of FTE conversion employees divided by 1.61 employees per worker household.

(3) Based on 2015 income limits for a 2.5 person household of \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI and \$81,500 at 120% AMI.

Percentage of employees by income category estimated based on IMPLAN average payroll figures, and BLS wage by occupation survey.

Source: IMPLAN; U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, May 2015; DRA.

**Table 21**  
**Summary of Estimated Very Low and Low Income Households**  
**20-Story Rental**  
**Middle Cost Scenario**  
**Denver Affordable Housing Residential Nexus Study**

| Economic Sector                        | Total New FTE Employees Generated by Development (1) | No. of New Households (2) | Estimated Percent of HH Earning Incomes: |                             |                             |                              | Estimated Households Earning Incomes: |                         |                         |                          |                |
|----------------------------------------|------------------------------------------------------|---------------------------|------------------------------------------|-----------------------------|-----------------------------|------------------------------|---------------------------------------|-------------------------|-------------------------|--------------------------|----------------|
|                                        |                                                      |                           | Below 30% AMI (3)                        | Between 31% and 60% AMI (3) | Between 61% and 80% AMI (3) | Between 81% and 120% AMI (3) | Below 30% AMI                         | Between 31% and 60% AMI | Between 61% and 80% AMI | Between 81% and 120% AMI | Total          |
| Manufacturing                          | 1.6206                                               | 1.0066                    | 14%                                      | 53%                         | 17%                         | 12%                          | 0.1409                                | 0.5335                  | 0.1711                  | 0.1208                   | 0.9663         |
| Wholesale Trade                        | 2.1676                                               | 1.3463                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.1750                                | 0.7539                  | 0.1885                  | 0.1616                   | 1.2790         |
| Retail Trade                           | 9.1984                                               | 5.7133                    | 25%                                      | 31%                         | 18%                         | 12%                          | 1.4283                                | 1.7711                  | 1.0284                  | 0.6856                   | 4.9134         |
| Transportation                         | 1.3267                                               | 0.8241                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.1071                                | 0.4615                  | 0.1154                  | 0.0989                   | 0.7829         |
| Warehousing and Storage                | 0.2847                                               | 0.1768                    | 13%                                      | 56%                         | 14%                         | 12%                          | 0.0230                                | 0.0990                  | 0.0248                  | 0.0212                   | 0.1680         |
| Information and Communication          | 1.3477                                               | 0.8371                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0753                                | 0.3934                  | 0.2344                  | 0.1088                   | 0.8120         |
| Finance and Insurance                  | 6.0216                                               | 3.7401                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.3740                  | 0.5610                  | 1.3838                   | 2.3189         |
| Real Estate, Rentals and Leasing       | 3.3426                                               | 2.0761                    | 0%                                       | 10%                         | 15%                         | 37%                          | 0.0000                                | 0.2076                  | 0.3114                  | 0.7682                   | 1.2872         |
| Professional, Scientific and Technical | 3.1099                                               | 1.9316                    | 0%                                       | 17%                         | 20%                         | 25%                          | 0.0000                                | 0.3284                  | 0.3863                  | 0.4829                   | 1.1976         |
| Management and Administrative Services | 4.4417                                               | 2.7588                    | 0%                                       | 0%                          | 10%                         | 15%                          | 0.0000                                | 0.0000                  | 0.2759                  | 0.4138                   | 0.6897         |
| Educational Services                   | 2.6803                                               | 1.6648                    | 6%                                       | 29%                         | 26%                         | 25%                          | 0.0999                                | 0.4828                  | 0.4328                  | 0.4162                   | 1.4317         |
| Health Care and Social Assistance      | 16.7416                                              | 10.3985                   | 9%                                       | 69%                         | 17%                         | 5%                           | 0.9359                                | 7.1750                  | 1.7677                  | 0.5199                   | 10.3985        |
| Arts, Entertainment and Recreation     | 1.8493                                               | 1.1486                    | 10%                                      | 25%                         | 25%                         | 23%                          | 0.1149                                | 0.2872                  | 0.2872                  | 0.2642                   | 0.9534         |
| Other Services                         | 18.7839                                              | 11.6670                   | 33%                                      | 53%                         | 10%                         | 4%                           | 3.8501                                | 6.1835                  | 1.1667                  | 0.4667                   | 11.6670        |
| Government                             | 0.6309                                               | 0.3919                    | 9%                                       | 47%                         | 28%                         | 13%                          | 0.0353                                | 0.1842                  | 0.1097                  | 0.0509                   | 0.3801         |
| <b>Total/Average</b>                   | <b>73.5475</b>                                       | <b>45.6817</b>            |                                          |                             |                             |                              | <b>6.9857</b>                         | <b>19.2351</b>          | <b>7.0613</b>           | <b>5.9635</b>            | <b>39.2457</b> |

(1) Includes full-time equivalent employees from the IMPLAN input/output model.

(2) Number of FTE conversion employees divided by 1.61 employees per worker household.

(3) Based on 2015 income limits for a 2.5 person household of \$20,400 at 30% AMI, \$40,750 at 60% AMI, \$54,300 at 80% AMI and \$81,500 at 120% AMI.

Percentage of employees by income category estimated based on IMPLAN average payroll figures, and BLS wage by occupation survey.

Source: IMPLAN; U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics, May 2015; DRA.

**Table 23**  
**Projected Occupational Distribution of New Employee Households**  
**Non-Residential Uses**

| Industry/Occupation Category                  | Office      | Hotel       | Retail      | Warehouse     | Manufacturing |
|-----------------------------------------------|-------------|-------------|-------------|---------------|---------------|
| Management                                    | 8.9%        | 5.0%        | 3.7%        | 5.7%          | 6.0%          |
| Business and Financial Operations             | 9.7%        | 0.0%        | 0.0%        | 0.0%          | 4.0%          |
| Computer and Mathematical                     | 3.4%        | 0.0%        | 0.0%        | 0.0%          | 2.0%          |
| Architecture and Engineering                  | 4.9%        | 0.0%        | 0.0%        | 0.0%          | 6.0%          |
| Life, Physical and Social Science             | 0.0%        | 0.0%        | 0.0%        | 0.0%          | 1.0%          |
| Community and Social Services                 | 0.0%        | 0.0%        | 0.0%        | 0.0%          | 0.0%          |
| Legal                                         | 3.6%        | 0.0%        | 0.0%        | 0.0%          | 0.0%          |
| Education, Training, and Library              | 0.0%        | 0.0%        | 0.0%        | 0.0%          | 0.0%          |
| Arts, Design, Entertainment, Sports and Media | 0.0%        | 0.0%        | 0.0%        | 0.0%          | 1.0%          |
| Healthcare Practitioners and Technical        | 8.9%        | 0.0%        | 0.0%        | 0.0%          | 0.0%          |
| Healthcare Support                            | 4.4%        | 0.0%        | 0.0%        | 0.0%          | 0.0%          |
| Protective Service                            | 0.0%        | 0.0%        | 0.0%        | 0.0%          | 0.0%          |
| Food Preparation and Serving Related          | 0.0%        | 27.2%       | 33.2%       | 0.0%          | 0.0%          |
| Building and Grounds Cleaning and Maintenance | 0.0%        | 29.0%       | 0.0%        | 1.0%          | 1.0%          |
| Personal Care and Service                     | 0.0%        | 7.3%        | 0.0%        | 0.0%          | 0.0%          |
| Sales and Related                             | 6.6%        | 3.0%        | 35.2%       | 5.8%          | 3.0%          |
| Office and Administrative Support             | 37.4%       | 16.8%       | 11.0%       | 13.1%         | 10.0%         |
| Farming, Fishing and Forestry                 | 0.0%        | 0.0%        | 0.0%        | 0.0%          | 2.0%          |
| Construction and Extraction                   | 0.0%        | 0.0%        | 0.0%        | 22.1%         | 5.0%          |
| Installation, Maintenance and Repair          | 3.8%        | 3.9%        | 3.4%        | 9.1%          | 50.0%         |
| Production                                    | 0.0%        | 0.0%        | 0.0%        | 19.8%         | 9.0%          |
| Transportation and Material Moving            | 0.0%        | 0.0%        | 6.0%        | 20.4%         | 0.0%          |
| All Other Office Related Occupations          | 8.4%        | 7.9%        | 7.5%        | 3.0%          | 0.0%          |
| <b>Industry Total</b>                         | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100.0%</u> | <u>100%</u>   |

Notes: Based on 2012 national industry occupation distributions from the BLS for office and retail workers. The retail distribution is used for grocery store, restaurant and entertainment uses. The office distribution is used for R&D laboratory and medical office uses.

Source: Bureau of Labor Statistics, Occupational Employment Statistics, May 2012 National Industry-Specific Occupational Employment and Wage Estimates; DRA.

**Table 24**  
**Projected New Employee Households**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Residential Nexus Study**

| Steps                                                   | Factor      | Office        |              |       | Hotel         |                               |       | Retail        |              |       | Warehouse     |                |       | Manufacturing |             |              |
|---------------------------------------------------------|-------------|---------------|--------------|-------|---------------|-------------------------------|-------|---------------|--------------|-------|---------------|----------------|-------|---------------|-------------|--------------|
|                                                         |             | %             | No.          | Units | %             | No.                           | Units | %             | No.          | Units | %             | No.            | Units | %             | No.         | Units        |
| 1. Gross Square Feet                                    |             |               | 75,000       |       |               | 66,700                        |       |               | 25,000       |       |               | 250,000        |       |               |             | 100,000      |
| 2. Employment Density Factor                            |             |               | 333 GSF/Emp. |       |               | 0.75 Emp./Rm.<br>350 GSF/Room |       |               | 300 GSF/Emp. |       |               | 1,000 GSF/Emp. |       |               |             | 750 GSF/Emp. |
| Number of Employees                                     |             |               | 225 Emp.     |       |               | 143 Emp.                      |       |               | 83 Emp.      |       |               | 250 Emp.       |       |               |             | 133 Emp.     |
| 3. Employees Living in Denver (1)                       | 40.5%       |               | 91 Emp.      |       |               | 58 Emp.                       |       |               | 34 Emp.      |       |               | 101 Emp.       |       |               |             | 54 Emp.      |
| 4. Adjustment for Number of Employees Per Household (2) | 1.61 Emp/HH |               | 57 HH        |       |               | 36 HH                         |       |               | 21 HH        |       |               | 63 HH          |       |               |             | 33 HH        |
| 5. Household Occupational Distribution (3)              |             |               |              |       |               |                               |       |               |              |       |               |                |       |               |             |              |
| Management                                              |             | 8.9%          | 5.0 HH       |       | 5.0%          | 1.8 HH                        |       | 3.7%          | 0.8 HH       |       | 5.7%          | 3.6 HH         |       | 6.0%          | 2.0 HH      |              |
| Business and Financial Operations                       |             | 9.7%          | 5.5 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 4.0%          | 1.3 HH      |              |
| Computer and Mathematical                               |             | 3.4%          | 1.9 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 2.0%          | 0.7 HH      |              |
| Architecture and Engineering                            |             | 4.9%          | 2.8 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 6.0%          | 2.0 HH      |              |
| Life, Physical and Social Science                       |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 1.0%          | 0.3 HH      |              |
| Community and Social Services                           |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Legal                                                   |             | 3.6%          | 2.1 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Education, Training, and Library                        |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Arts, Design, Entertainment, Sports and Media           |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 1.0%          | 0.3 HH      |              |
| Healthcare Practitioners and Technical                  |             | 8.9%          | 5.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Healthcare Support                                      |             | 4.4%          | 2.5 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Protective Service                                      |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Food Preparation and Serving-Related                    |             | 0.0%          | 0.0 HH       |       | 27.2%         | 9.8 HH                        |       | 33.2%         | 6.9 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Building/Grounds Cleaning and Maintenance               |             | 0.0%          | 0.0 HH       |       | 29.0%         | 10.4 HH                       |       | 0.0%          | 0.0 HH       |       | 1.0%          | 0.6 HH         |       | 1.0%          | 0.3 HH      |              |
| Personal Care and Service                               |             | 0.0%          | 0.0 HH       |       | 7.3%          | 2.6 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 0.0%          | 0.0 HH      |              |
| Sales and Related                                       |             | 6.6%          | 3.7 HH       |       | 3.0%          | 1.1 HH                        |       | 35.2%         | 7.3 HH       |       | 5.8%          | 3.6 HH         |       | 3.0%          | 1.0 HH      |              |
| Office and Administrative Support                       |             | 37.4%         | 21.2 HH      |       | 16.8%         | 6.1 HH                        |       | 11.0%         | 2.3 HH       |       | 13.1%         | 8.2 HH         |       | 10.0%         | 3.3 HH      |              |
| Farming, Fishing and Forestry                           |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH         |       | 2.0%          | 0.7 HH      |              |
| Construction and Extraction                             |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 22.1%         | 13.9 HH        |       | 5.0%          | 1.7 HH      |              |
| Installation, Maintenance and Repair                    |             | 3.8%          | 2.2 HH       |       | 3.9%          | 1.4 HH                        |       | 3.4%          | 0.7 HH       |       | 9.1%          | 5.7 HH         |       | 50.0%         | 16.7 HH     |              |
| Production                                              |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 0.0%          | 0.0 HH       |       | 19.8%         | 12.5 HH        |       | 9.0%          | 3.0 HH      |              |
| Transportation and Material Moving                      |             | 0.0%          | 0.0 HH       |       | 0.0%          | 0.0 HH                        |       | 6.0%          | 1.3 HH       |       | 20.4%         | 12.8 HH        |       | 0.0%          | 0.0 HH      |              |
| All Other Occupations                                   |             | 8.4%          | 4.7 HH       |       | 7.9%          | 2.8 HH                        |       | 7.5%          | 1.6 HH       |       | 3.0%          | 1.9 HH         |       | 0.0%          | 0.0 HH      |              |
| <b>Total</b>                                            |             | <b>100.0%</b> | <b>56.6</b>  |       | <b>100.0%</b> | <b>36.0</b>                   |       | <b>100.0%</b> | <b>20.9</b>  |       | <b>100.0%</b> | <b>62.8</b>    |       | <b>100.0%</b> | <b>33.3</b> |              |

Legend: HH = households; SF = square feet; Emp = employees.

(1) Source: American Community Survey, five-year estimates, 2010-2014.

(2) Source: American Community Survey, five-year estimates, 2010-2014.

(3) From Bureau of Labor Statistics, Occupational Employment Statistics, May 2012 National Industry-Specific Occupational Employment and Wage Estimates.

Source: American Community Survey; Bureau of Labor Statistics; DRA.

**Table 25**  
**Estimated Households Earning Up to 30% AMI**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Residential Nexus Study**

| Steps                                         | % of<br>Employees<br>Earning Up to<br>30% AMI | Office                              |             | Hotel       |              | Retail      |             | Warehouse   |             | Manufacturing |             |
|-----------------------------------------------|-----------------------------------------------|-------------------------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|---------------|-------------|
|                                               |                                               | Percent (1)                         | No. (2)     | Percent (1) | No. (2)      | Percent (1) | No. (2)     | Percent (1) | No. (2)     | Percent (1)   | No. (2)     |
|                                               |                                               | 6. Households Earning Up to 30% AMI |             |             |              |             |             |             |             |               |             |
| Management                                    | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Business and Financial Operations             | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Computer and Mathematical                     | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Architecture and Engineering                  | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Life, Physical and Social Science             | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Community and Social Services                 | 5%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Legal                                         | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Education, Training, and Library              | 6%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Arts, Design, Entertainment, Sports and Media | 10%                                           | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.03        |
| Healthcare Practitioners and Technical        | 0%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Healthcare Support                            | 9%                                            | 0%                                  | 0.23        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Protective Service                            | 10%                                           | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Food Preparation and Serving-Related          | 55%                                           | 0%                                  | 0.00        | 15%         | 5.39         | 18%         | 3.80        | 0%          | 0.00        | 0%            | 0.00        |
| Building/Grounds Cleaning and Maintenance     | 31%                                           | 0%                                  | 0.00        | 9%          | 3.22         | 0%          | 0.00        | 0%          | 0.19        | 0%            | 0.09        |
| Personal Care and Service                     | 33%                                           | 0%                                  | 0.00        | 2%          | 0.86         | 0%          | 0.00        | 0%          | 0.00        | 0%            | 0.00        |
| Sales and Related                             | 25%                                           | 2%                                  | 0.93        | 1%          | 0.28         | 9%          | 1.83        | 1%          | 0.90        | 1%            | 0.25        |
| Office and Administrative Support             | 9%                                            | 3%                                  | 1.91        | 2%          | 0.55         | 1%          | 0.21        | 1%          | 0.74        | 1%            | 0.30        |
| Farming, Fishing and Forestry                 | 25%                                           | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 0%          | 0.00        | 1%            | 0.18        |
| Construction and Extraction                   | 5%                                            | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 1%          | 0.70        | 0%            | 0.09        |
| Installation, Maintenance and Repair          | 6%                                            | 0%                                  | 0.13        | 0%          | 0.08         | 0%          | 0.04        | 1%          | 0.34        | 3%            | 1.00        |
| Production                                    | 14%                                           | 0%                                  | 0.00        | 0%          | 0.00         | 0%          | 0.00        | 3%          | 1.75        | 1%            | 0.42        |
| Transportation and Material Moving            | 13%                                           | 0%                                  | 0.00        | 0%          | 0.00         | 1%          | 0.17        | 3%          | 1.66        | 0%            | 0.00        |
| <b>Total</b>                                  |                                               | <b>6%</b>                           | <b>3.19</b> | <b>29%</b>  | <b>10.38</b> | <b>29%</b>  | <b>6.04</b> | <b>10%</b>  | <b>6.28</b> | <b>7%</b>     | <b>2.35</b> |

(1) Percent distribution of households by occupation by land use multiplied by estimated percent of occupation earning less than 30% AMI.

(2) Percent of occupation earning less than 30% AMI by land use multiplied by total employee households generated by land use.

Source: Bureau of Labor Statistics; DRA

**Table 26**  
**Estimated Households Earning Between 31% and 60% AMI**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Residential Nexus Study**

| Steps                                             | % of Employees Earning 31% to 60% AMI | Office      |         | Hotel       |         | Retail      |         | Warehouse   |         | Manufacturing |         |
|---------------------------------------------------|---------------------------------------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|---------------|---------|
|                                                   |                                       | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1)   | No. (2) |
| 6. Households Earning Between 31% AMI and 60% AMI |                                       |             |         |             |         |             |         |             |         |               |         |
| Management                                        | 0%                                    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Business and Financial Operations                 | 10%                                   | 1%          | 0.55    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.13    |
| Computer and Mathematical                         | 5%                                    | 0%          | 0.10    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.04    |
| Architecture and Engineering                      | 5%                                    | 0%          | 0.14    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.10    |
| Life, Physical and Social Science                 | 17%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.05    |
| Community and Social Services                     | 32%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Legal                                             | 10%                                   | 0%          | 0.21    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Education, Training, and Library                  | 29%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Arts, Design, Entertainment, Sports and Media     | 25%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.08    |
| Healthcare Practitioners and Technical            | 10%                                   | 1%          | 0.50    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Healthcare Support                                | 69%                                   | 3%          | 1.73    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Protective Service                                | 32%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Food Preparation and Serving-Related              | 40%                                   | 0%          | 0.00    | 11%         | 3.92    | 13%         | 2.76    | 0%          | 0.00    | 0%            | 0.00    |
| Building/Grounds Cleaning and Maintenance         | 60%                                   | 0%          | 0.00    | 17%         | 6.24    | 0%          | 0.00    | 1%          | 0.36    | 1%            | 0.18    |
| Personal Care and Service                         | 53%                                   | 0%          | 0.00    | 4%          | 1.38    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Sales and Related                                 | 31%                                   | 2%          | 1.15    | 1%          | 0.34    | 11%         | 2.26    | 2%          | 1.12    | 1%            | 0.31    |
| Office and Administrative Support                 | 47%                                   | 18%         | 9.96    | 8%          | 2.87    | 5%          | 1.08    | 6%          | 3.85    | 5%            | 1.55    |
| Farming, Fishing and Forestry                     | 70%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 1%            | 0.49    |
| Construction and Extraction                       | 42%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 9%          | 5.84    | 2%            | 0.71    |
| Installation, Maintenance and Repair              | 31%                                   | 1%          | 0.68    | 1%          | 0.43    | 1%          | 0.22    | 3%          | 1.77    | 16%           | 5.18    |
| Production                                        | 53%                                   | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 10%         | 6.63    | 5%            | 1.59    |
| Transportation and Material Moving                | 56%                                   | 0%          | 0.00    | 0%          | 0.00    | 3%          | 0.73    | 11%         | 7.17    | 0%            | 0.00    |
| Total                                             |                                       | 26%         | 15.01   | 42%         | 15.18   | 34%         | 7.05    | 43%         | 26.73   | 31%           | 10.40   |

(1) Percent distribution of households by occupation by land use multiplied by estimated percent of occupation earning between 31% and 60% AMI.

(2) Percent of occupation earning between 31% and 60% AMI by land use multiplied by total households generated by land use.

Source: Bureau of Labor Statistics; DRA

**Table 27**  
**Estimated Households Earning Between 61% and 80% AMI**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Residential Nexus Study**

| Steps                                             | % of<br>Employees<br>Earning 61%<br>to 80% AMI | Office      |         | Hotel       |         | Retail      |         | Warehouse   |         | Manufacturing |         |
|---------------------------------------------------|------------------------------------------------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|---------------|---------|
|                                                   |                                                | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1)   | No. (2) |
| 6. Households Earning Between 61% AMI and 80% AMI |                                                |             |         |             |         |             |         |             |         |               |         |
| Management                                        | 10%                                            | 1%          | 0.50    | 0%          | 0.18    | 0%          | 0.08    | 1%          | 0.36    | 1%            | 0.20    |
| Business and Financial Operations                 | 15%                                            | 1%          | 0.83    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 1%            | 0.20    |
| Computer and Mathematical                         | 12%                                            | 0%          | 0.23    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.08    |
| Architecture and Engineering                      | 12%                                            | 1%          | 0.34    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 1%            | 0.24    |
| Life, Physical and Social Science                 | 20%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.06    |
| Community and Social Services                     | 30%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Legal                                             | 17%                                            | 1%          | 0.36    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Education, Training, and Library                  | 26%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Arts, Design, Entertainment, Sports and Media     | 25%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.08    |
| Healthcare Practitioners and Technical            | 19%                                            | 2%          | 0.95    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Healthcare Support                                | 17%                                            | 1%          | 0.43    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Protective Service                                | 23%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Food Preparation and Serving-Related              | 5%                                             | 0%          | 0.00    | 1%          | 0.49    | 2%          | 0.35    | 0%          | 0.00    | 0%            | 0.00    |
| Building/Grounds Cleaning and Maintenance         | 5%                                             | 0%          | 0.00    | 1%          | 0.52    | 0%          | 0.00    | 0%          | 0.03    | 0%            | 0.02    |
| Personal Care and Service                         | 10%                                            | 0%          | 0.00    | 1%          | 0.26    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Sales and Related                                 | 18%                                            | 1%          | 0.67    | 1%          | 0.20    | 6%          | 1.31    | 1%          | 0.65    | 1%            | 0.18    |
| Office and Administrative Support                 | 28%                                            | 10%         | 5.94    | 5%          | 1.71    | 3%          | 0.64    | 4%          | 2.30    | 3%            | 0.92    |
| Farming, Fishing and Forestry                     | 3%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.02    |
| Construction and Extraction                       | 27%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 6%          | 3.75    | 1%            | 0.46    |
| Installation, Maintenance and Repair              | 25%                                            | 1%          | 0.55    | 1%          | 0.35    | 1%          | 0.18    | 2%          | 1.43    | 13%           | 4.18    |
| Production                                        | 17%                                            | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 3%          | 2.13    | 2%            | 0.51    |
| Transportation and Material Moving                | 14%                                            | 0%          | 0.00    | 0%          | 0.00    | 1%          | 0.18    | 3%          | 1.79    | 0%            | 0.00    |
| Total                                             |                                                | 19%         | 10.77   | 10%         | 3.71    | 13%         | 2.74    | 20%         | 12.43   | 21%           | 7.14    |

(1) Percent distribution of households by occupation by land use multiplied by estimated percent of occupation earning between 61% and 80% AMI.

(2) Percent of occupation earning between 61% and 80% AMI by land use multiplied by total households generated by land use.

Source: Bureau of Labor Statistics; DRA



**Table 28**  
**Estimated Households Earning Between 81% and 120% AMI**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Residential Nexus Study**

| Steps                                             | % of<br>Employees<br>Earning 81%<br>to 120% AMI | Office      |         | Hotel       |         | Retail      |         | Warehouse   |         | Manufacturing |         |
|---------------------------------------------------|-------------------------------------------------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|---------------|---------|
|                                                   |                                                 | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1) | No. (2) | Percent (1)   | No. (2) |
| 6. Households Earning Between 61% AMI and 80% AMI |                                                 |             |         |             |         |             |         |             |         |               |         |
| Management                                        | 15%                                             | 1%          | 0.75    | 1%          | 0.27    | 1%          | 0.12    | 1%          | 0.54    | 1%            | 0.30    |
| Business and Financial Operations                 | 37%                                             | 4%          | 2.04    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 1%            | 0.48    |
| Computer and Mathematical                         | 23%                                             | 1%          | 0.44    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.16    |
| Architecture and Engineering                      | 33%                                             | 2%          | 0.92    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 2%            | 0.66    |
| Life, Physical and Social Science                 | 25%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.08    |
| Community and Social Services                     | 92%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Legal                                             | 39%                                             | 1%          | 0.82    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Education, Training, and Library                  | 25%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Arts, Design, Entertainment, Sports and Media     | 23%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.07    |
| Healthcare Practitioners and Technical            | 34%                                             | 3%          | 1.70    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Healthcare Support                                | 5%                                              | 0%          | 0.13    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Protective Service                                | 21%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Food Preparation and Serving-Related              | 0%                                              | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Building/Grounds Cleaning and Maintenance         | 4%                                              | 0%          | 0.00    | 1%          | 0.42    | 0%          | 0.00    | 0%          | 0.02    | 0%            | 0.01    |
| Personal Care and Service                         | 4%                                              | 0%          | 0.00    | 0%          | 0.10    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.00    |
| Sales and Related                                 | 12%                                             | 1%          | 0.44    | 0%          | 0.13    | 4%          | 0.88    | 1%          | 0.43    | 0%            | 0.12    |
| Office and Administrative Support                 | 13%                                             | 5%          | 2.76    | 2%          | 0.79    | 1%          | 0.30    | 2%          | 1.07    | 1%            | 0.43    |
| Farming, Fishing and Forestry                     | 2%                                              | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 0%            | 0.01    |
| Construction and Extraction                       | 20%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 4%          | 2.78    | 1%            | 0.34    |
| Installation, Maintenance and Repair              | 30%                                             | 1%          | 0.66    | 1%          | 0.42    | 1%          | 0.21    | 3%          | 1.71    | 15%           | 5.01    |
| Production                                        | 12%                                             | 0%          | 0.00    | 0%          | 0.00    | 0%          | 0.00    | 2%          | 1.50    | 1%            | 0.36    |
| Transportation and Material Moving                | 12%                                             | 0%          | 0.00    | 0%          | 0.00    | 1%          | 0.16    | 2%          | 1.54    | 0%            | 0.00    |
| Total                                             |                                                 | 19%         | 10.65   | 6%          | 2.14    | 8%          | 1.66    | 15%         | 9.59    | 24%           | 8.03    |

(1) Percent distribution of households by occupation by land use multiplied by estimated percent of occupation earning between 81% and 120% AMI.

(2) Percent of occupation earning between 81% and 120% AMI by land use multiplied by total households generated by land use.

Source: Bureau of Labor Statistics; DRA

**Table 31**  
**Rental Affordability Gap Calculations**  
**New Construction Mid-Rise Rental Prototype**  
**Denver Affordable Housing Nexus Study**

**Assumptions**

|                                                 |               |                  |                  |                  |                  |
|-------------------------------------------------|---------------|------------------|------------------|------------------|------------------|
| HUD Median Household Income, Denver, 2016       |               |                  |                  |                  | \$80,100         |
| Affordable Housing Expense As a % of Income (1) |               |                  |                  |                  | 33%              |
| No. of Bedrooms                                 | <b>Studio</b> | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
| Household Size                                  | 1.0 Persons   | 1.5 Persons      | 3.0 Persons      | 4.5 Persons      | 6.0 Persons      |
| Household Size Income Adjust. Factor            | 70%           | 75%              | 90%              | 104%             |                  |
| Renter Utility Allowance, City of Cambridge (2) |               |                  |                  |                  |                  |
| Low-Rise                                        | \$75          | \$94             | \$114            | \$133            | \$152            |
| Mid-Rise/High-Rise (5+ Stories)                 | \$65          | \$79             | \$95             | \$109            | \$123            |
| Miscellaneous Income Per Unit Per Year          | \$100         |                  |                  |                  |                  |
| Vacancy Rate                                    | 3.00%         |                  |                  |                  |                  |
| Operating Cost Per Unit Per Year                |               |                  |                  |                  |                  |
| Mid-Rise High Rise                              | \$6,100       |                  |                  |                  |                  |
| Mortgage Interest Rate                          | 4.00%         |                  |                  |                  |                  |
| Mortgage Amortization (Years)                   | 30            |                  |                  |                  |                  |
| Debt Coverage Ratio                             | 1.00          |                  |                  |                  |                  |
| Prototype IDC Per Net SF                        | \$350         |                  |                  |                  |                  |
| Average Unit Size (Net SF)                      | 450           | 600              | 900              | 1,000            | 1,100            |
| Average Per Unit Development Cost               | \$157,500     | \$210,000        | \$315,000        | \$350,000        | \$385,000        |

**Affordability Gap Calculations**

30% of Median

|                                     | <b>Studio</b> | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
|-------------------------------------|---------------|------------------|------------------|------------------|------------------|
| Annual Income Limit                 | \$16,821      | \$18,023         | \$21,627         | \$24,991         | \$27,875         |
| Affordable Monthly Housing Expense  | \$463         | \$496            | \$595            | \$687            | \$767            |
| Less: Monthly Utility Allowance     | (\$65)        | (\$79)           | (\$95)           | (\$109)          | (\$123)          |
| Affordable Monthly Rent             | \$398         | \$417            | \$500            | \$578            | \$644            |
| Annual Gross Rental Income Per Unit | \$4,776       | \$5,004          | \$6,000          | \$6,936          | \$7,728          |
| Plus: Miscellaneous Income          | \$100         | \$100            | \$100            | \$100            | \$100            |
| Less: Vacancy                       | (\$143)       | (\$150)          | (\$180)          | (\$208)          | (\$232)          |
| Less: Annual Unit Operating Costs   | (\$6,100)     | (\$6,100)        | (\$6,100)        | (\$6,100)        | (\$6,100)        |
| Net Operating Income Per Unit       | (\$1,367)     | (\$1,146)        | (\$180)          | \$728            | \$1,496          |
| Available for Debt Service          | (\$1,367)     | (\$1,146)        | (\$180)          | \$728            | \$1,496          |
| Supportable Mortgage Per Unit       | (\$23,900)    | (\$20,000)       | (\$3,100)        | \$12,700         | \$26,100         |
| Per Unit Affordability Gap          | \$157,500     | \$210,000        | \$315,000        | \$337,300        | \$358,900        |

60% of Median

|                                     | <b>Studio</b> | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
|-------------------------------------|---------------|------------------|------------------|------------------|------------------|
| Annual Income Limit                 | \$33,642      | \$36,045         | \$43,254         | \$49,982         | \$55,750         |
| Affordable Monthly Housing Expense  | \$925         | \$991            | \$1,189          | \$1,375          | \$1,533          |
| Less: Monthly Utility Allowance     | (\$65)        | (\$79)           | (\$95)           | (\$109)          | (\$123)          |
| Affordable Monthly Rent             | \$860         | \$912            | \$1,094          | \$1,266          | \$1,410          |
| Annual Gross Rental Income Per Unit | \$10,320      | \$10,944         | \$13,128         | \$15,192         | \$16,920         |
| Plus: Miscellaneous Income          | \$100         | \$100            | \$100            | \$100            | \$100            |
| Less: Vacancy                       | (\$310)       | (\$328)          | (\$394)          | (\$456)          | (\$508)          |
| Less: Annual Unit Operating Costs   | (\$6,100)     | (\$6,100)        | (\$6,100)        | (\$6,100)        | (\$6,100)        |
| Net Operating Income Per Unit       | \$4,010       | \$4,616          | \$6,734          | \$8,736          | \$10,412         |
| Available for Debt Service          | \$4,010       | \$4,616          | \$6,734          | \$8,736          | \$10,412         |
| Supportable Mortgage Per Unit       | \$70,000      | \$80,600         | \$117,500        | \$152,500        | \$181,700        |
| Per Unit Affordability Gap          | \$87,500      | \$129,400        | \$197,500        | \$197,500        | \$203,300        |

80% of Median

|                                     | <b>Studio</b> | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
|-------------------------------------|---------------|------------------|------------------|------------------|------------------|
| Annual Income Limit                 | \$44,856      | \$48,060         | \$57,672         | \$66,643         | \$74,333         |
| Affordable Monthly Housing Expense  | \$1,234       | \$1,322          | \$1,586          | \$1,833          | \$2,044          |
| Less: Monthly Utility Allowance     | (\$65)        | (\$79)           | (\$95)           | (\$109)          | (\$123)          |
| Affordable Monthly Rent             | \$1,169       | \$1,243          | \$1,491          | \$1,724          | \$1,921          |
| Annual Gross Rental Income Per Unit | \$14,028      | \$14,916         | \$17,892         | \$20,688         | \$23,052         |
| Plus: Miscellaneous Income          | \$100         | \$100            | \$100            | \$100            | \$100            |
| Less: Vacancy                       | (\$421)       | (\$447)          | (\$537)          | (\$621)          | (\$692)          |
| Less: Annual Unit Operating Costs   | (\$6,100)     | (\$6,100)        | (\$6,100)        | (\$6,100)        | (\$6,100)        |
| Net Operating Income Per Unit       | \$7,607       | \$8,469          | \$11,355         | \$14,067         | \$16,360         |
| Available for Debt Service          | \$7,607       | \$8,469          | \$11,355         | \$14,067         | \$16,360         |
| Supportable Mortgage Per Unit       | \$132,800     | \$147,800        | \$198,200        | \$245,500        | \$285,600        |
| Per Unit Affordability Gap          | \$24,700      | \$62,200         | \$116,800        | \$104,500        | \$99,400         |

120% of AMI

|                                     | <b>Studio</b> | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
|-------------------------------------|---------------|------------------|------------------|------------------|------------------|
| Annual Income Limit                 | \$67,284      | \$72,090         | \$86,508         | \$99,965         | \$111,499        |
| Affordable Monthly Housing Expense  | \$1,850       | \$1,982          | \$2,379          | \$2,749          | \$3,066          |
| Less: Monthly Utility Allowance     | (\$65)        | (\$79)           | (\$95)           | (\$109)          | (\$123)          |
| Affordable Monthly Rent             | \$1,785       | \$1,903          | \$2,284          | \$2,640          | \$2,943          |
| Annual Gross Rental Income Per Unit | \$21,420      | \$22,836         | \$27,408         | \$31,680         | \$35,316         |
| Plus: Miscellaneous Income          | \$100         | \$100            | \$100            | \$100            | \$100            |
| Less: Vacancy                       | (\$643)       | (\$685)          | (\$822)          | (\$950)          | (\$1,059)        |
| Less: Annual Unit Operating Costs   | (\$6,100)     | (\$6,100)        | (\$6,100)        | (\$6,100)        | (\$6,100)        |
| Net Operating Income Per Unit       | \$14,777      | \$16,151         | \$20,586         | \$24,730         | \$28,257         |
| Available for Debt Service          | \$14,777      | \$16,151         | \$20,586         | \$24,730         | \$28,257         |
| Supportable Mortgage Per Unit       | \$257,900     | \$281,900        | \$359,300        | \$431,700        | \$493,200        |
| Per Unit Affordability Gap          | \$0           | \$0              | \$0              | \$0              | \$0              |

**Summary of Affordable Rents**

|                | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
|----------------|------------------|------------------|------------------|------------------|
| 30% of Median  | \$417            | \$500            | \$578            | \$644            |
| 60% of Median  | \$860            | \$912            | \$1,094          | \$1,266          |
| 80% of Median  | \$1,169          | \$1,243          | \$1,491          | \$1,724          |
| 120% of Median | \$1,785          | \$1,903          | \$2,284          | \$2,640          |

| <b>Summary of Per Unit Affordability Gap</b> | <b>Ave. 1 and 2 BR</b> | <b>1 Bedroom</b> | <b>2 Bedroom</b> | <b>3 Bedroom</b> | <b>4 Bedroom</b> |
|----------------------------------------------|------------------------|------------------|------------------|------------------|------------------|
| 30% of Median                                | \$262,500              | \$210,000        | \$315,000        | \$337,300        | \$358,900        |
| 60% of Median                                | \$163,450              | \$129,400        | \$197,500        | \$197,500        | \$203,300        |
| 80% of Median                                | \$89,500               | \$62,200         | \$116,800        | \$104,500        | \$99,400         |
| 120% of Median                               | \$0                    | \$0              | \$0              | \$0              | \$0              |

(1) Source: Denver Housing Authority, effective October 1, 2015.

Source: DRA

**Table 33**  
**Calculation of Estimated Maximum Residential Nexus Fees**  
**Residential Prototypes**  
**Low Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                            | Less than 30% AMI | 30% to 60% AMI | 60% to 80% AMI | 80% to 120% AMI | Total          |
|------------------------------------------------------------|-------------------|----------------|----------------|-----------------|----------------|
| <b>Single-Family Infill</b>                                |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 0.029             | 0.078          | 0.030          | 0.026           | 0.163          |
| Performance Requirement (% of Total Hsg. Units)            | N/A               | N/A            | N/A            | N/A             |                |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$7,599           | \$12,747       | \$2,697        | \$0             |                |
| No. of Units in Prototype                                  | 1                 | 1              | 1              | 1               |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$7,599           | \$12,747       | \$2,697        | \$0             | \$23,043       |
| Average Gross Square Feet Per Unit in Prototype            | 2,800             | 2,800          | 2,800          | 2,800           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$2.71</b>     | <b>\$4.55</b>  | <b>\$0.96</b>  | <b>\$0.00</b>   | <b>\$8.23</b>  |
| <b>Owner Townhomes</b>                                     |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 0.296             | 0.805          | 0.299          | 0.253           | 1.654          |
| Performance Requirement (% of Total Hsg. Units)            | 3%                | 8%             | 3%             | 3%              | 17%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$77,792          | \$131,632      | \$26,795       | \$0             |                |
| No. of Units in Prototype                                  | 10                | 10             | 10             | 10              |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$7,779           | \$13,163       | \$2,679        | \$0             | \$23,622       |
| Average Gross Square Feet Per Unit in Prototype            | 2,000             | 2,000          | 2,000          | 2,000           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$3.89</b>     | <b>\$6.58</b>  | <b>\$1.34</b>  | <b>\$0.00</b>   | <b>\$11.81</b> |
| <b>12-Story Owner</b>                                      |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 5.487             | 14.916         | 5.548          | 4.683           | 30.633         |
| Performance Requirement (% of Total Hsg. Units)            | 2%                | 6%             | 2%             | 2%              | 13%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,440,230       | \$2,437,983    | \$496,527      | \$0             |                |
| No. of Units in Prototype                                  | 233               | 233            | 233            | 233             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$6,181           | \$10,463       | \$2,131        | \$0             | \$18,776       |
| Average Gross Square Feet Per Unit in Prototype            | 1,219             | 1,219          | 1,219          | 1,219           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$5.07</b>     | <b>\$8.58</b>  | <b>\$1.75</b>  | <b>\$0.00</b>   | <b>\$15.40</b> |
| <b>5-Story Rental</b>                                      |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 4.372             | 12.187         | 4.490          | 3.820           | 24.868         |
| Performance Requirement (% of Total Hsg. Units)            | 1%                | 4%             | 1%             | 1%              | 8%             |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,147,549       | \$1,991,977    | \$401,817      | \$0             |                |
| No. of Units in Prototype                                  | 300               | 300            | 300            | 300             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$3,825           | \$6,640        | \$1,339        | \$0             | \$11,804       |
| Average Gross Square Feet Per Unit in Prototype            | 786               | 786            | 786            | 786             |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$4.87</b>     | <b>\$8.45</b>  | <b>\$1.70</b>  | <b>\$0.00</b>   | <b>\$15.02</b> |
| <b>20-Story Rental</b>                                     |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 6.351             | 17.486         | 6.419          | 5.421           | 35.678         |
| Performance Requirement (% of Total Hsg. Units)            | 2%                | 6%             | 2%             | 2%              | 13%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,667,047       | \$2,858,161    | \$574,534      | \$0             |                |
| No. of Units in Prototype                                  | 285               | 285            | 285            | 285             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$5,849           | \$10,029       | \$2,016        | \$0             | \$17,894       |
| Average Square Feet Per Unit in Prototype                  | 1,012             | 1,012          | 1,012          | 1,012           |                |
| <b>Gap Per Net Square Foot (3)</b>                         | <b>\$5.78</b>     | <b>\$9.91</b>  | <b>\$1.99</b>  | <b>\$0.00</b>   | <b>\$17.68</b> |

(1) Based on per unit affordability gap by income level, average for one- and two-bedroom units.

(2) Equals total gap divided by the number of units in each prototype.

(3) Equals gap per unit divided by average square feet per unit for each prototype.

Source: DRA

**Table 34**  
**Calculation of Estimated Maximum Residential Nexus Fees**  
**Residential Prototypes**  
**Middle Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                            | Less than 30% AMI | 30% to 60% AMI | 60% to 80% AMI | 80% to 120% AMI | Total          |
|------------------------------------------------------------|-------------------|----------------|----------------|-----------------|----------------|
| <b>Single-Family Infill</b>                                |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 0.034             | 0.091          | 0.035          | 0.030           | 0.190          |
| Performance Requirement (% of Total Hsg. Units)            | N/A               | N/A            | N/A            | N/A             |                |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$8,865           | \$14,872       | \$3,147        | \$0             |                |
| No. of Units in Prototype                                  | 1                 | 1              | 1              | 1               |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$8,865           | \$14,872       | \$3,147        | \$0             | \$26,883       |
| Average Gross Square Feet Per Unit in Prototype            | 2,800             | 2,800          | 2,800          | 2,800           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$3.17</b>     | <b>\$5.31</b>  | <b>\$1.12</b>  | <b>\$0.00</b>   | <b>\$9.60</b>  |
| <b>Owner Townhomes</b>                                     |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 0.388             | 1.054          | 0.392          | 0.331           | 2.164          |
| Performance Requirement (% of Total Hsg. Units)            | 4%                | 11%            | 4%             | 3%              | 22%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$101,792         | \$172,241      | \$35,061       | \$0             |                |
| No. of Units in Prototype                                  | 10                | 10             | 10             | 10              |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$10,179          | \$17,224       | \$3,506        | \$0             | \$30,909       |
| Average Gross Square Feet Per Unit in Prototype            | 2,000             | 2,000          | 2,000          | 2,000           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$5.09</b>     | <b>\$8.61</b>  | <b>\$1.75</b>  | <b>\$0.00</b>   | <b>\$15.45</b> |
| <b>12-Story Owner</b>                                      |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 6.596             | 17.932         | 6.670          | 5.630           | 36.828         |
| Performance Requirement (% of Total Hsg. Units)            | 3%                | 8%             | 3%             | 2%              | 16%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,731,512       | \$2,931,058    | \$596,948      | \$0             |                |
| No. of Units in Prototype                                  | 233               | 233            | 233            | 233             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$7,431           | \$12,580       | \$2,562        | \$0             | \$22,573       |
| Average Gross Square Feet Per Unit in Prototype            | 1,219             | 1,219          | 1,219          | 1,219           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$6.10</b>     | <b>\$10.32</b> | <b>\$2.10</b>  | <b>\$0.00</b>   | <b>\$18.52</b> |
| <b>5-Story Rental</b>                                      |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 4.663             | 13.000         | 4.789          | 4.075           | 26.526         |
| Performance Requirement (% of Total Hsg. Units)            | 2%                | 4%             | 2%             | 1%              | 9%             |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,224,052       | \$2,124,775    | \$428,605      | \$0             |                |
| No. of Units in Prototype                                  | 300               | 300            | 300            | 300             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$4,080           | \$7,083        | \$1,429        | \$0             | \$12,591       |
| Average Gross Square Feet Per Unit in Prototype            | 786               | 786            | 786            | 786             |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$5.19</b>     | <b>\$9.01</b>  | <b>\$1.82</b>  | <b>\$0.00</b>   | <b>\$16.02</b> |
| <b>20-Story Rental</b>                                     |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 6.99              | 19.24          | 7.06           | 5.96            | 39.25          |
| Performance Requirement (% of Total Hsg. Units)            | 2%                | 7%             | 2%             | 2%              | 14%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,833,752       | \$3,143,977    | \$631,988      | \$0             |                |
| No. of Units in Prototype                                  | 285               | 285            | 285            | 285             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$6,434           | \$11,031       | \$2,218        | \$0             | \$19,683       |
| Average Square Feet Per Unit in Prototype                  | 1,012             | 1,012          | 1,012          | 1,012           |                |
| <b>Gap Per Net Square Foot (3)</b>                         | <b>\$6.36</b>     | <b>\$10.90</b> | <b>\$2.19</b>  | <b>\$0.00</b>   | <b>\$19.44</b> |

(1) Based on per unit affordability gap by income level, average for one- and two-bedroom units.

(2) Equals total gap divided by the number of units in each prototype.

(3) Equals gap per unit divided by average square feet per unit for each prototype.

Source: DRA

**Table 35**  
**Calculation of Estimated Maximum Residential Nexus Fees**  
**Residential Prototypes**  
**High Scenario**  
**Denver Affordable Housing Residential Nexus Study**

|                                                            | Less than 30% AMI | 30% to 60% AMI | 60% to 80% AMI | 80% to 120% AMI | Total          |
|------------------------------------------------------------|-------------------|----------------|----------------|-----------------|----------------|
| <b>Single-Family Infill</b>                                |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 0.038             | 0.103          | 0.040          | 0.034           | 0.216          |
| Performance Requirement (% of Total Hsg. Units)            | N/A               | N/A            | N/A            | N/A             |                |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$10,083          | \$16,915       | \$3,579        | \$0             |                |
| No. of Units in Prototype                                  | 1                 | 1              | 1              | 1               |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$10,083          | \$16,915       | \$3,579        | \$0             | \$30,576       |
| AverageGross Square Feet Per Unit in Prototype             | 2,800             | 2,800          | 2,800          | 2,800           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$3.60</b>     | <b>\$6.04</b>  | <b>\$1.28</b>  | <b>\$0.00</b>   | <b>\$10.92</b> |
| <b>Owner Townhomes</b>                                     |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 0.470             | 1.277          | 0.475          | 0.401           | 2.622          |
| Performance Requirement (% of Total Hsg. Units)            | 5%                | 13%            | 5%             | 4%              | 26%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$123,309         | \$208,650      | \$42,473       | \$0             |                |
| No. of Units in Prototype                                  | 10                | 10             | 10             | 10              |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$12,331          | \$20,865       | \$4,247        | \$0             | \$37,443       |
| AverageGross Square Feet Per Unit in Prototype             | 2,000             | 2,000          | 2,000          | 2,000           |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$6.17</b>     | <b>\$10.43</b> | <b>\$2.12</b>  | <b>\$0.00</b>   | <b>\$18.72</b> |
| <b>12-Story Owner</b>                                      |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 7.151             | 19.441         | 7.231          | 6.103           | 39.926         |
| Performance Requirement (% of Total Hsg. Units)            | 3%                | 8%             | 3%             | 3%              | 17%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,877,153       | \$3,177,595    | \$647,159      | \$0             |                |
| No. of Units in Prototype                                  | 233               | 233            | 233            | 233             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$8,056           | \$13,638       | \$2,778        | \$0             | \$24,472       |
| AverageGross Square Feet Per Unit in Prototype             | 975               | 975            | 975            | 975             |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$8.26</b>     | <b>\$13.98</b> | <b>\$2.85</b>  | <b>\$0.00</b>   | <b>\$25.09</b> |
| <b>5-Story Rental</b>                                      |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 5.246             | 14.624         | 5.387          | 4.584           | 29.842         |
| Performance Requirement (% of Total Hsg. Units)            | 2%                | 5%             | 2%             | 2%              | 10%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$1,377,059       | \$2,390,372    | \$482,181      | \$0             |                |
| No. of Units in Prototype                                  | 300               | 300            | 300            | 300             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$4,590           | \$7,968        | \$1,607        | \$0             | \$14,165       |
| AverageGross Square Feet Per Unit in Prototype             | 708               | 708            | 708            | 708             |                |
| <b>Gap Per Net Square Foot = Supportable Nexus Fee (3)</b> | <b>\$6.49</b>     | <b>\$11.26</b> | <b>\$2.27</b>  | <b>\$0.00</b>   | <b>\$20.02</b> |
| <b>20-Story Rental</b>                                     |                   |                |                |                 |                |
| Est. No. of New Employee Households                        | 7.621             | 20.984         | 7.703          | 6.506           | 42.813         |
| Performance Requirement (% of Total Hsg. Units)            | 3%                | 7%             | 3%             | 2%              | 15%            |
| Gap Per Household (1)                                      | \$262,500         | \$163,450      | \$89,500       | \$0             |                |
| Total Gap                                                  | \$2,000,457       | \$3,429,793    | \$689,441      | \$0             |                |
| No. of Units in Prototype                                  | 285               | 285            | 285            | 285             |                |
| Gap Per Unit in Prototype = Supportable Nexus Fee (2)      | \$7,019           | \$12,034       | \$2,419        | \$0             | \$21,473       |
| Average Square Feet Per Unit in Prototype                  | 810               | 810            | 810            | 810             |                |
| <b>Gap Per Net Square Foot (3)</b>                         | <b>\$8.67</b>     | <b>\$14.86</b> | <b>\$2.99</b>  | <b>\$0.00</b>   | <b>\$26.52</b> |

(1) Based on per unit affordability gap by income level, average for one- and two-bedroom units.

(2) Equals total gap divided by the number of units in each prototype.

(3) Equals gap per unit divided by average square feet per unit for each prototype.

Source: DRA

**Table 37**  
**Calculation of Estimated Maximum Non-Residential Mitigation Fees Per Gross Square Foot**  
**Non-Residential Land Uses**

|                                                                          | <u>Office</u>  | <u>Hotel</u>    | <u>Retail</u>   | <u>Warehouse</u> | <u>Manufacturing</u> |                |
|--------------------------------------------------------------------------|----------------|-----------------|-----------------|------------------|----------------------|----------------|
| Gross Square Feet of Land Use                                            | 75,000         | 66,700          | 25,000          | 250,000          | 100,000              |                |
| Net Leaseable Square Feet of Land Use                                    | 60,000         | 50,000          | 25,000          | 250,000          | 100,000              |                |
| <b>TOTAL EMPLOYEE HOUSEHOLDS BY INCOME LEVEL</b>                         |                |                 |                 |                  |                      |                |
| Households Earning Up to 30% AMI                                         | 3.19           | 10.38           | 6.04            | 6.28             | 2.35                 |                |
| Households Earning Between 31% and 60% AMI                               | 15.01          | 15.18           | 7.05            | 26.73            | 10.40                |                |
| Households Earning Between 61% and 80% AMI                               | 10.77          | 3.71            | 2.74            | 12.43            | 7.14                 |                |
| Households Earning Between 81% and 120% AMI                              | 10.65          | 2.14            | 1.66            | 9.59             | 8.03                 |                |
| Total                                                                    | <u>39.63</u>   | <u>31.40</u>    | <u>17.49</u>    | <u>55.02</u>     | <u>27.92</u>         |                |
| <b>Households Earning Up to 30% AMI</b>                                  |                |                 |                 |                  |                      |                |
| Est.Total Housing Gap at Per Unit Gap of: (1)                            | \$262,500      | \$837,375       | \$2,724,750     | \$1,584,975      | \$1,647,188          | \$617,400      |
| Justifiable Fee Per Gross Square Foot Bldg. Area Performance Requirement |                | <b>\$11.17</b>  | <b>\$40.85</b>  | <b>\$63.40</b>   | <b>\$6.59</b>        | <b>\$6.17</b>  |
| Gross SF of Building Area                                                | 2,657          | 8,647           | 5,030           | 5,227            | 1,959                |                |
| % of Total Gross Building SF                                             | 4%             | 13%             | 20%             | 2%               | 2%                   |                |
| <b>Households Earning Between 31% and 60% AMI</b>                        |                |                 |                 |                  |                      |                |
| Est.Total Housing Gap at Per Unit Gap of: (1)                            | \$163,450      | \$2,453,875     | \$2,481,171     | \$1,152,159      | \$4,368,692          | \$1,700,370    |
| Justifiable Fee Per Gross Square Foot Bldg. Area Performance Requirement |                | <b>\$32.72</b>  | <b>\$37.20</b>  | <b>\$46.09</b>   | <b>\$17.47</b>       | <b>\$17.00</b> |
| Gross SF of Building Area                                                | 12,506         | 12,645          | 5,872           | 22,264           | 8,666                |                |
| % of Total Gross Building SF                                             | 17%            | 19%             | 23%             | 9%               | 9%                   |                |
| <b>Households Earning Between 61% and 80% AMI</b>                        |                |                 |                 |                  |                      |                |
| Est.Total Housing Gap at Per Unit Gap of: (1)                            | \$89,500       | \$964,184       | \$331,687       | \$245,230        | \$1,112,396          | \$638,851      |
| Justifiable Fee Per Gross Square Foot Bldg. Area Performance Requirement |                | <b>\$12.86</b>  | <b>\$4.97</b>   | <b>\$9.81</b>    | <b>\$4.45</b>        | <b>\$6.39</b>  |
| Gross SF of Building Area                                                | 8,974          | 3,087           | 2,282           | 10,353           | 5,946                |                |
| % of Total Gross Building SF                                             | 12%            | 5%              | 9%              | 4%               | 6%                   |                |
| <b>Households Earning Between 81% and 120% AMI</b>                       |                |                 |                 |                  |                      |                |
| Est.Total Housing Gap at Per Unit Gap of: (1)                            | \$0            | \$0             | \$0             | \$0              | \$0                  | \$0            |
| Justifiable Fee Per Gross Square Foot Bldg. Area Performance Requirement |                | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>    | <b>\$0.00</b>        | <b>\$0.00</b>  |
| Gross SF of Building Area                                                | 8,871          | 1,778           | 1,384           | 7,987            | 6,690                |                |
| % of Total Gross Building SF                                             | 12%            | 3%              | 6%              | 3%               | 7%                   |                |
| <b>Total Fee Per Gross Square Foot (Excluding Parking)</b>               | <b>\$56.74</b> | <b>\$83.02</b>  | <b>\$119.29</b> | <b>\$28.51</b>   | <b>\$29.57</b>       |                |
| <b>Total Fee Per Net Square Foot</b>                                     | <b>\$70.92</b> | <b>\$110.75</b> | <b>\$119.29</b> | <b>\$28.51</b>   | <b>\$29.57</b>       |                |

(1) Based on the per unit affordability gap (average for one- and two-bedroom units) at each income level.

Source: DRA

**Table 38**  
**Development Cost Assumptions and Budgets**  
**Development Prototypes**  
**Baseline Assumptions**  
**Denver Affordable Housing Nexus Study**

|                                                          | Single-Family Infill     | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel   | Retail    | Warehouse |       |
|----------------------------------------------------------|--------------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------|-----------|-------|
| <b>PROTOTYPE ASSUMPTIONS</b>                             |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Total Residential Units                                  | 1                        | 10              | 233            | 300            | 285             | 0              | 0               | 0               | 0         | 0         |       |
| Average Unit Size (Net SF)                               | 2,800                    |                 | 975            | 708            | 810             | 0              | 0               | 0               | 0         | 0         |       |
| Low Scenario                                             |                          | 1,500           |                |                |                 |                |                 |                 |           |           |       |
| Middle Scenario                                          |                          | 2,000           |                |                |                 |                |                 |                 |           |           |       |
| High Scenario                                            |                          | 2,300           |                |                |                 |                |                 |                 |           |           |       |
| Residential Net SF                                       | 2,800                    | 20,000          | 227,250        | 212,250        | 230,800         | 0              | 0               | 0               | 0         | 0         |       |
| Hotel Rooms                                              | 0                        | 0               | 0              | 0              | 0               | 0              | 0               | 143             | 0         | 0         |       |
| Average Hotel Room Size (Net SF)                         | 0                        | 0               | 0              | 0              | 0               | 0              | 0               | 350             | 0         | 0         |       |
| Total Net SF (Rentable/Saleable SF)                      | 2,800                    | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000          | 25,000    | 250,000   |       |
| Total Gross SF Building Area (Excluding Parking)         | 2,800                    | 20,010          | 304,063        | 246,167        | 299,750         | 80,000         | 160,000         | 66,700          | 25,000    | 250,000   |       |
| Total Gross SF Building Area (Including Str/Und Parking) | 2,800                    | 20,000          | 420,863        | 381,167        | 389,700         | 84,900         | 221,250         | 66,700          | 25,000    | 250,000   |       |
| Underground Parking Spaces                               | 0                        | 0               | 126            | 0              | 110             | 149            | 149             | 0               | 0         | 0         |       |
| Structured Parking Spaces                                | 0                        | 0               | 166            | 450            | 147             | 14             | 26              | 0               | 0         | 0         |       |
| Surface Parking Spaces                                   | 2                        | 10              | 0              | 0              | 0               | 0              | 0               | 150             | 83        | 83        |       |
| Total Parking Spaces                                     | 2                        | 10              | 292            | 450            | 257             | 163            | 175             | 105             | 83        | 83        |       |
| Total Parking SF                                         | 400                      | 1,800           | 116,800        | 135,000        | 89,775          | 57,050         | 61,250          | 42,000          | 29,050    | 33,200    |       |
| Site Area (SF)                                           | 6,250                    | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734          | 121,968   | 696,960   |       |
| Approximate Building Stories                             | 2 Stories                | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories       | 1 Stories | 1 Stories |       |
| <b>DEVELOPMENT COST ASSUMPTIONS</b>                      |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Land Price                                               |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Low Scenario                                             | Per Hsg. Unit/Hotel Room | \$200,000       | \$70,000       | \$20,000       | \$35,000        | \$18,000       | \$27 Per SF FAR | \$27 Per SF FAR | \$12,000  |           |       |
|                                                          | Per Site SF              | \$32            | \$70           | \$107          | \$80            | \$196          | \$54            | \$108           | \$19      | \$10      | \$7   |
| Middle Scenario                                          | Per Hsg. Unit/Hotel Room | \$275,000       | \$90,000       | \$30,000       | \$40,000        | \$28,000       | \$30 Per SF FAR | \$30 Per SF FAR | \$15,000  |           |       |
|                                                          | Per Site SF              | \$44            | \$90           | \$160          | \$92            | \$305          | \$60            | \$120           | \$24      | \$15      | \$10  |
| High Scenario                                            | Per Hsg. Unit/Hotel Room | \$350,000       | \$200,000      | \$40,000       | \$60,000        | \$38,000       | \$40 Per SF FAR | \$40 Per SF FAR | \$20,000  |           |       |
|                                                          | Per Site SF              | \$56            | \$200          | \$214          | \$138           | \$414          | \$80            | \$160           | \$32      | \$20      | \$15  |
| Hard Cost/NSF                                            |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Low Scenario                                             |                          | \$140           | \$140          | \$195          | \$175           | \$250          | \$145           | \$170           | \$250     | \$135     | \$80  |
| Middle Scenario                                          |                          | \$150           | \$175          | \$200          | \$175           | \$250          | \$150           | \$170           | \$260     | \$135     | \$80  |
| High Scenario                                            |                          | \$160           | \$175          | \$220          | \$200           | \$250          | \$150           | \$170           | \$270     | \$135     | \$85  |
| Tenant Improvements (Per Net SF)                         |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Low Scenario                                             |                          |                 |                |                |                 |                | \$50            | \$50            |           | \$10      |       |
| Middle Scenario                                          |                          |                 |                |                |                 |                | \$60            | \$60            |           | \$25      |       |
| High Scenario                                            |                          |                 |                |                |                 |                | \$70            | \$70            |           | \$45      |       |
| Is Parking Cost Included in Hard Cost? (1)               | Yes                      | Yes             | No             | No             | No              | No             | No              | No              | Yes       | Yes       | Yes   |
| Underground Parking - Cost Per Space                     |                          |                 | \$37,000       | \$37,000       | \$37,000        | \$37,000       | \$37,000        | \$37,000        |           |           |       |
| Above-Grade Structured Parking - Cost Per Space          |                          |                 | \$23,000       | \$23,000       | \$23,000        | \$23,000       | \$23,000        | \$23,000        |           |           |       |
| On-Grade Surface Parking - Cost Per Space                |                          |                 | \$7,500        | \$7,500        | \$7,500         | \$7,500        | \$7,500         | \$7,500         |           |           |       |
| Soft Costs (2)                                           | % of Hard Costs          | 20.0%           | 20.0%          | 20.0%          | 20.0%           | 20.0%          | 20.0%           | 20.0%           | 20.0%     | 20.0%     | 20.0% |
| Marketing/Closing/Sales Costs (% of Sales Price)         |                          | 7%              | 9%             | 9%             | N/A             | N/A            | N/A             | N/A             | N/A       | N/A       | N/A   |
| Debt as a % of TDC                                       |                          | 70%             | 70%            | 70%            | 70%             | 70%            | 60%             | 60%             | 50%       | 50%       | 50%   |
| Equity as a % of TDC                                     |                          | 30%             | 30%            | 30%            | 30%             | 30%            | 40%             | 40%             | 50%       | 50%       | 50%   |
| <b>Minimum Return Assumptions</b>                        |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Cap Rate (High Cap Rate Scenario)                        |                          |                 |                |                |                 |                |                 |                 |           |           |       |
| Minimum Unleveraged Return on Cost (3)                   | N/A                      | N/A             | N/A            | 5.00%          | 5.00%           | 5.50%          | 5.50%           | 7.50%           | 5.50%     | 5.50%     | 6.00% |
| Minimum Return on Equity (ROE)                           | 15.0%                    | 15.0%           | 15.0%          | 6.50%          | 6.50%           | 7.00%          | 7.00%           | 9.00%           | 7.00%     | 7.50%     | 7.50% |
| Construction and Sales/Stabilization Period (Months)     | 10.0%                    | 10.0%           | 10.0%          | 10.0%          | 10.0%           | 10.0%          | 10.0%           | 10.0%           | 10.0%     | 10.0%     | 10.0% |
|                                                          | 15 Months                | 24 Months       | 48 Months      | 30 Months      | 48 Months       | 18 Months      | 21 Months       | 15 Months       | 9 Months  | 9 Months  |       |

**Table 38**  
**Development Cost Assumptions and Budgets**  
**Development Prototypes**  
**Baseline Assumptions**  
**Denver Affordable Housing Nexus Study**

|                                                | Single-Family Infill | Owner Townhomes    | 12-Story Owner      | 5-Story Rental      | 20-Story Rental      | 5-Story Office      | 12-Story Office     | 4-Story Hotel       | Retail             | Warehouse           |
|------------------------------------------------|----------------------|--------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|--------------------|---------------------|
| <b>DEVELOPMENT BUDGET</b>                      |                      |                    |                     |                     |                      |                     |                     |                     |                    |                     |
| <b>Low Scenario</b>                            |                      |                    |                     |                     |                      |                     |                     |                     |                    |                     |
| Land Acquisition                               | \$200,000            | \$700,000          | \$4,661,000         | \$10,454,000        | \$5,123,000          | \$1,728,000         | \$3,456,000         | \$1,705,000         | \$1,220,000        | \$4,879,000         |
| Hard Construction Costs                        | \$392,000            | \$2,801,000        | \$59,292,000        | \$43,079,000        | \$74,938,000         | \$11,600,000        | \$27,200,000        | \$16,675,000        | \$3,375,000        | \$20,000,000        |
| Tenant Improvements                            | \$0                  | \$0                | \$0                 | \$0                 | \$0                  | \$3,200,000         | \$6,400,000         | \$0                 | \$250,000          | \$0                 |
| Underground Parking (1)                        | \$0                  | \$0                | \$4,662,000         | \$0                 | \$4,070,000          | \$5,513,000         | \$5,513,000         | \$0                 | \$0                | \$0                 |
| Above Grade Structured Parking (1)             | \$0                  | \$0                | \$3,818,000         | \$10,350,000        | \$3,381,000          | \$322,000           | \$598,000           | \$0                 | \$0                | \$0                 |
| On-Grade Surface Parking (1)                   | \$0                  | \$0                | \$0                 | \$0                 | \$0                  | \$0                 | \$0                 | \$0                 | \$0                | \$0                 |
| Soft Costs (2)                                 | \$78,400             | \$560,200          | \$13,554,400        | \$10,685,800        | \$16,477,800         | \$4,127,000         | \$7,942,200         | \$3,335,000         | \$725,000          | \$4,000,000         |
| <b>Total Development Costs, Including Land</b> | <b>\$670,400</b>     | <b>\$4,061,200</b> | <b>\$85,987,400</b> | <b>\$74,568,800</b> | <b>\$103,989,800</b> | <b>\$26,490,000</b> | <b>\$51,109,200</b> | <b>\$21,715,000</b> | <b>\$5,570,000</b> | <b>\$28,879,000</b> |
| TDC Per Housing Unit                           | \$670,400            | \$406,120          | \$369,045           | \$248,563           | \$364,876            | N/A                 | N/A                 | N/A                 | N/A                | N/A                 |
| TDC per NSF Rentable/Saleable Area             | \$239                | \$203              | \$353               | \$337               | \$434                | \$414               | \$399               | \$434               | \$223              | \$116               |
| TDC per Gross SF, Excluding Parking            | \$239                | \$203              | \$283               | \$303               | \$347                | \$331               | \$319               | \$326               | \$223              | \$116               |
| TDC per Gross SF, Including Parking            | \$239                | \$203              | \$204               | \$196               | \$267                | \$312               | \$231               | \$326               | \$223              | \$116               |
| <b>Total Development Costs, Excluding Land</b> | <b>\$470,400</b>     | <b>\$3,361,200</b> | <b>\$81,326,400</b> | <b>\$64,114,800</b> | <b>\$98,866,800</b>  | <b>\$24,762,000</b> | <b>\$47,653,200</b> | <b>\$20,010,000</b> | <b>\$4,350,000</b> | <b>\$24,000,000</b> |
| <b>Middle Scenario</b>                         |                      |                    |                     |                     |                      |                     |                     |                     |                    |                     |
| Land Acquisition                               | \$275,000            | \$900,000          | \$6,970,000         | \$12,023,000        | \$7,971,000          | \$1,920,000         | \$3,840,000         | \$2,154,000         | \$1,830,000        | \$6,970,000         |
| Hard Construction Costs                        | \$420,000            | \$3,502,000        | \$60,813,000        | \$43,079,000        | \$74,938,000         | \$12,000,000        | \$27,200,000        | \$17,342,000        | \$3,375,000        | \$20,000,000        |
| Tenant Improvements                            | \$0                  | \$0                | \$0                 | \$0                 | \$0                  | \$3,840,000         | \$7,680,000         | \$0                 | \$625,000          | \$0                 |
| Underground Parking (1)                        | \$0                  | \$0                | \$4,662,000         | \$0                 | \$4,070,000          | \$5,513,000         | \$5,513,000         | \$0                 | \$0                | \$0                 |
| Above Grade Structured Parking (1)             | \$0                  | \$0                | \$3,818,000         | \$10,350,000        | \$3,381,000          | \$322,000           | \$598,000           | \$0                 | \$0                | \$0                 |
| On-Grade Surface Parking (1)                   | \$0                  | \$0                | \$0                 | \$0                 | \$0                  | \$0                 | \$0                 | \$0                 | \$0                | \$0                 |
| Soft Costs (2)                                 | \$84,000             | \$700,400          | \$13,858,600        | \$10,685,800        | \$16,477,800         | \$4,335,000         | \$8,198,200         | \$3,468,400         | \$800,000          | \$4,000,000         |
| <b>Total Development Costs, Including Land</b> | <b>\$779,000</b>     | <b>\$5,102,400</b> | <b>\$90,121,600</b> | <b>\$76,137,800</b> | <b>\$106,837,800</b> | <b>\$27,930,000</b> | <b>\$53,029,200</b> | <b>\$22,964,400</b> | <b>\$6,630,000</b> | <b>\$30,970,000</b> |
| TDC Per Housing Unit                           | \$779,000            | \$510,240          | \$386,788           | \$253,793           | \$374,869            | N/A                 | N/A                 | N/A                 | N/A                | N/A                 |
| TDC per NSF Rentable/Saleable Area             | \$278                | \$255              | \$370               | \$344               | \$446                | \$436               | \$414               | \$459               | \$265              | \$124               |
| TDC per Gross SF, Excluding Parking            | \$278                | \$255              | \$296               | \$309               | \$356                | \$349               | \$331               | \$344               | \$265              | \$124               |
| TDC per Gross SF, Including Parking            | \$278                | \$255              | \$214               | \$200               | \$274                | \$329               | \$240               | \$344               | \$265              | \$124               |
| <b>Total Development Costs, Excluding Land</b> | <b>\$504,000</b>     | <b>\$4,202,400</b> | <b>\$83,151,600</b> | <b>\$64,114,800</b> | <b>\$98,866,800</b>  | <b>\$26,010,000</b> | <b>\$49,189,200</b> | <b>\$20,810,400</b> | <b>\$4,800,000</b> | <b>\$24,000,000</b> |
| <b>High Scenario</b>                           |                      |                    |                     |                     |                      |                     |                     |                     |                    |                     |
| Land Acquisition                               | \$350,000            | \$2,000,000        | \$9,322,000         | \$18,034,000        | \$10,820,000         | \$2,560,000         | \$5,120,000         | \$2,871,000         | \$2,439,000        | \$10,454,000        |
| Hard Construction Costs                        | \$448,000            | \$3,502,000        | \$66,894,000        | \$49,233,000        | \$74,938,000         | \$12,000,000        | \$27,200,000        | \$18,009,000        | \$3,375,000        | \$21,250,000        |
| Tenant Improvements                            | \$0                  | \$0                | \$0                 | \$0                 | \$0                  | \$4,480,000         | \$8,960,000         | \$0                 | \$1,125,000        | \$0                 |
| Underground Parking (1)                        | \$0                  | \$0                | \$4,662,000         | \$0                 | \$4,070,000          | \$5,513,000         | \$5,513,000         | \$0                 | \$0                | \$0                 |
| Above Grade Structured Parking (1)             | \$0                  | \$0                | \$3,818,000         | \$10,350,000        | \$3,381,000          | \$322,000           | \$598,000           | \$0                 | \$0                | \$0                 |
| On-Grade Surface Parking (1)                   | \$0                  | \$0                | \$0                 | \$0                 | \$0                  | \$0                 | \$0                 | \$0                 | \$0                | \$0                 |
| Soft Costs (2)                                 | \$89,600             | \$700,400          | \$15,074,800        | \$11,916,600        | \$16,477,800         | \$4,463,000         | \$8,454,200         | \$3,601,800         | \$900,000          | \$4,250,000         |
| <b>Total Development Costs, Including Land</b> | <b>\$887,600</b>     | <b>\$6,202,400</b> | <b>\$99,770,800</b> | <b>\$89,533,600</b> | <b>\$109,686,800</b> | <b>\$29,338,000</b> | <b>\$55,845,200</b> | <b>\$24,481,800</b> | <b>\$7,839,000</b> | <b>\$35,954,000</b> |
| TDC Per Housing Unit                           | \$887,600            | \$620,240          | \$428,201           | \$298,445           | \$384,866            | N/A                 | N/A                 | N/A                 | N/A                | N/A                 |
| TDC per NSF Rentable/Saleable Area             | \$317                | \$310              | \$410               | \$404               | \$457                | \$458               | \$436               | \$490               | \$314              | \$144               |
| TDC per Gross SF, Excluding Parking            | \$317                | \$310              | \$328               | \$364               | \$366                | \$367               | \$349               | \$367               | \$314              | \$144               |
| TDC per Gross SF, Including Parking            | \$317                | \$310              | \$237               | \$235               | \$281                | \$346               | \$252               | \$367               | \$314              | \$144               |
| <b>Total Development Costs, Excluding Land</b> | <b>\$537,600</b>     | <b>\$4,202,400</b> | <b>\$90,448,800</b> | <b>\$71,499,600</b> | <b>\$98,866,800</b>  | <b>\$26,778,000</b> | <b>\$50,725,200</b> | <b>\$21,610,800</b> | <b>\$5,400,000</b> | <b>\$25,500,000</b> |

(1) If parking cost shown as \$0, parking cost is included in building construction cost.

(2) Soft costs include A&E, consultants, construction financing costs, permits and fees, legal, accounting, insurance and developer overhead.

(3) For owner housing, equals net profit/fee (net sales revenues less total development costs, excluding builder fee/profit). For all others, equals net operating income divided by total development costs.

Sources: Interviews with Denver area residential and commercial developers; DRA.



**Table 39**  
**Development Cost Assumptions and Budgets**  
**Development Prototypes**  
**Final Assumptions**  
**Denver Affordable Housing Nexus Study**

|                                                          | Single-Family Infill     | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel   | Retail     | Warehouse  |            |
|----------------------------------------------------------|--------------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|------------|------------|------------|
| <b>PROTOTYPE ASSUMPTIONS</b>                             |                          |                 |                |                |                 |                |                 |                 |            |            |            |
| Total Residential Units                                  | 1                        | 10              | 232            | 300            | 285             | 0              | 0               | 0               | 0          | 0          |            |
| Average Unit Size (Net SF)                               | 2,800                    |                 | 975            | 708            | 810             | 0              | 0               | 0               | 0          | 0          |            |
| Low Scenario                                             |                          | 1,500           |                |                |                 |                |                 |                 |            |            |            |
| Middle Scenario                                          |                          | 2,000           |                |                |                 |                |                 |                 |            |            |            |
| High Scenario                                            |                          | 2,300           |                |                |                 |                |                 |                 |            |            |            |
| Residential Net SF                                       | 2,800                    | 20,000          | 227,250        | 212,250        | 230,800         | 0              | 0               | 0               | 0          | 0          |            |
| Hotel Rooms                                              | 0                        | 0               | 0              | 0              | 0               | 0              | 0               | 143             | 0          | 0          |            |
| Average Hotel Room Size (Net SF)                         | 0                        | 0               | 0              | 0              | 0               | 0              | 0               | 350             | 0          | 0          |            |
| Total Net SF (Rentable/Saleable SF)                      | 2,800                    | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000          | 25,000     | 250,000    |            |
| Total Gross SF Building Area (Excluding Parking)         | 2,800                    | 20,010          | 304,063        | 246,167        | 299,750         | 80,000         | 160,000         | 66,700          | 25,000     | 250,000    |            |
| Total Gross SF Building Area (Including Str/Und Parking) | 2,800                    | 20,000          | 420,863        | 381,167        | 389,700         | 84,900         | 221,250         | 66,700          | 25,000     | 250,000    |            |
| Underground Parking Spaces                               | 0                        | 0               | 126            | 0              | 110             | 149            | 149             | 0               | 0          | 0          |            |
| Structured Parking Spaces                                | 0                        | 0               | 166            | 450            | 147             | 14             | 26              | 0               | 0          | 0          |            |
| Surface Parking Spaces                                   | 2                        | 10              | 0              | 0              | 0               | 0              | 0               | 150             | 83         | 83         |            |
| Total Parking Spaces                                     | 2                        | 10              | 292            | 450            | 257             | 163            | 175             | 105             | 83         | 83         |            |
| Total Parking SF                                         | 400                      | 1,800           | 116,800        | 135,000        | 89,775          | 57,050         | 61,250          | 42,000          | 29,050     | 33,200     |            |
| Site Area (SF)                                           | 6,250                    | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734          | 121,968    | 696,960    |            |
| Approximate Building Stories                             | 2 Stories                | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories       | 1 Stories  | 1 Stories  |            |
| <b>DEVELOPMENT COST ASSUMPTIONS</b>                      |                          |                 |                |                |                 |                |                 |                 |            |            |            |
| <b>Escalation from Baseline:</b>                         |                          | <b>0%</b>       | <b>0%</b>      | <b>0%</b>      | <b>-25%</b>     | <b>-25%</b>    | <b>-25%</b>     | <b>-25%</b>     | <b>0%</b>  | <b>0%</b>  | <b>0%</b>  |
| Land Price                                               |                          |                 |                |                |                 |                |                 |                 |            |            |            |
| Low Scenario                                             | Per Hsg. Unit/Hotel Room | \$200,000       | \$70,000       | \$20,000       | \$26,250        | \$13,500       | \$20 Per SF FAR | \$20 Per SF FAR | \$12,000   |            |            |
|                                                          | Per Site SF              | \$32            | \$70           | \$107          | \$60            | \$147          | \$41            | \$81            | \$19       | \$10       | \$7        |
| Middle Scenario                                          | Per Hsg. Unit/Hotel Room | \$275,000       | \$90,000       | \$30,000       | \$30,000        | \$21,000       | \$23 Per SF FAR | \$23 Per SF FAR | \$15,000   |            |            |
|                                                          | Per Site SF              | \$44            | \$90           | \$160          | \$69            | \$229          | \$45            | \$90            | \$24       | \$15       | \$10       |
| High Scenario                                            | Per Hsg. Unit/Hotel Room | \$350,000       | \$200,000      | \$40,000       | \$45,000        | \$28,500       | \$30 Per SF FAR | \$30 Per SF FAR | \$20,000   |            |            |
|                                                          | Per Site SF              | \$56            | \$200          | \$213          | \$103           | \$311          | \$60            | \$120           | \$32       | \$20       | \$15       |
| <b>Escalation from Baseline:</b>                         |                          | <b>0%</b>       | <b>0%</b>      | <b>0%</b>      | <b>-20%</b>     | <b>-20%</b>    | <b>-20%</b>     | <b>-20%</b>     | <b>0%</b>  | <b>0%</b>  | <b>0%</b>  |
| Hard Cost/NSF                                            |                          |                 |                |                |                 |                |                 |                 |            |            |            |
| Low Scenario                                             |                          | \$140           | \$140          | \$195          | \$140           | \$200          | \$116           | \$136           | \$250      | \$135      | \$80       |
| Middle Scenario                                          |                          | \$150           | \$175          | \$200          | \$140           | \$200          | \$120           | \$136           | \$260      | \$135      | \$80       |
| High Scenario                                            |                          | \$160           | \$175          | \$220          | \$160           | \$200          | \$120           | \$136           | \$270      | \$135      | \$85       |
| Tenant Improvements (Per Net SF)                         |                          |                 |                |                |                 |                |                 |                 |            |            |            |
| Low Scenario                                             |                          |                 |                |                |                 |                | \$50            | \$50            |            | \$10       |            |
| Middle Scenario                                          |                          |                 |                |                |                 |                | \$60            | \$60            |            | \$25       |            |
| High Scenario                                            |                          |                 |                |                |                 |                | \$70            | \$70            |            | \$45       |            |
| Is Parking Cost Included in Hard Cost? (1)               | Yes                      | Yes             | No             | No             | No              | No             | No              | No              | Yes        | Yes        | Yes        |
| Underground Parking - Cost Per Space                     |                          |                 | \$37,000       | \$37,000       | \$37,000        | \$37,000       | \$37,000        | \$37,000        |            |            |            |
| Above-Grade Structured Parking - Cost Per Space          |                          |                 | \$23,000       | \$23,000       | \$23,000        | \$23,000       | \$23,000        | \$23,000        |            |            |            |
| On-Grade Surface Parking - Cost Per Space                |                          |                 | \$7,500        | \$7,500        | \$7,500         | \$7,500        | \$7,500         | \$7,500         |            |            |            |
| Soft Costs (2)                                           | % of Hard Costs          | 20.0%           | 20.0%          | 20.0%          | 20.0%           | 20.0%          | 20.0%           | 20.0%           | 20.0%      | 20.0%      | 20.0%      |
| Marketing/Closing/Sales Costs (% of Sales Price)         |                          | 7%              | 9%             | 9%             | N/A             | N/A            | N/A             | N/A             | N/A        | N/A        | N/A        |
| <b>Debt as a % of TDC</b>                                |                          | <b>70%</b>      | <b>70%</b>     | <b>70%</b>     | <b>70%</b>      | <b>70%</b>     | <b>60%</b>      | <b>60%</b>      | <b>50%</b> | <b>50%</b> | <b>50%</b> |
| <b>Equity as a % of TDC</b>                              |                          | <b>30%</b>      | <b>30%</b>     | <b>30%</b>     | <b>30%</b>      | <b>30%</b>     | <b>40%</b>      | <b>40%</b>      | <b>50%</b> | <b>50%</b> | <b>50%</b> |
| <b>Minimum Return Assumptions</b>                        |                          |                 |                |                |                 |                |                 |                 |            |            |            |
| Cap Rate (High Cap Rate Scenario)                        | N/A                      | N/A             | N/A            | 5.00%          | 5.00%           | 5.50%          | 5.50%           | 7.50%           | 5.50%      | 6.00%      |            |
| Minimum Unleveraged Return on Cost (3)                   | 15.0%                    | 15.0%           | 15.0%          | 6.50%          | 6.50%           | 7.00%          | 7.00%           | 9.00%           | 7.00%      | 7.50%      |            |
| Minimum Return on Equity (ROE)                           | 10.0%                    | 10.0%           | 10.0%          | 8.0%           | 8.0%            | 8.0%           | 8.0%            | 8.0%            | 8.0%       | 8.0%       |            |
| Construction and Sales/Stabilization Period (Months)     | 15 Months                | 24 Months       | 48 Months      | 30 Months      | 48 Months       | 18 Months      | 21 Months       | 15 Months       | 9 Months   | 9 Months   |            |

**Table 39**  
**Development Cost Assumptions and Budgets**  
**Development Prototypes**  
**Final Assumptions**  
**Denver Affordable Housing Nexus Study**

|                                                | Single-Family Infill | Owner Townhomes    | 12-Story Owner      | 5-Story Rental      | 20-Story Rental     | 5-Story Office      | 12-Story Office     | 4-Story Hotel       | Retail             | Warehouse           |
|------------------------------------------------|----------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|
| <b>DEVELOPMENT BUDGET</b>                      |                      |                    |                     |                     |                     |                     |                     |                     |                    |                     |
| <b>Low Scenario</b>                            |                      |                    |                     |                     |                     |                     |                     |                     |                    |                     |
| Land Acquisition                               | \$200,000            | \$700,000          | \$4,661,000         | \$7,841,000         | \$3,842,000         | \$1,296,000         | \$2,592,000         | \$1,705,000         | \$1,220,000        | \$4,879,000         |
| Hard Construction Costs                        | \$392,000            | \$2,801,000        | \$59,292,000        | \$34,463,000        | \$59,950,000        | \$9,280,000         | \$21,760,000        | \$16,675,000        | \$3,375,000        | \$20,000,000        |
| Tenant Improvements                            | \$0                  | \$0                | \$0                 | \$0                 | \$0                 | \$3,200,000         | \$6,400,000         | \$0                 | \$250,000          | \$0                 |
| Underground Parking (1)                        | \$0                  | \$0                | \$4,662,000         | \$0                 | \$4,070,000         | \$5,513,000         | \$5,513,000         | \$0                 | \$0                | \$0                 |
| Above Grade Structured Parking (1)             | \$0                  | \$0                | \$3,818,000         | \$10,350,000        | \$3,381,000         | \$322,000           | \$598,000           | \$0                 | \$0                | \$0                 |
| On-Grade Surface Parking (1)                   | \$0                  | \$0                | \$0                 | \$0                 | \$0                 | \$0                 | \$0                 | \$0                 | \$0                | \$0                 |
| Soft Costs (2)                                 | \$78,400             | \$560,200          | \$13,554,400        | \$8,962,600         | \$13,480,200        | \$3,663,000         | \$6,854,200         | \$3,335,000         | \$725,000          | \$4,000,000         |
| <b>Total Development Costs, Including Land</b> | <b>\$670,400</b>     | <b>\$4,061,200</b> | <b>\$85,987,400</b> | <b>\$61,616,600</b> | <b>\$84,723,200</b> | <b>\$23,274,000</b> | <b>\$43,717,200</b> | <b>\$21,715,000</b> | <b>\$5,570,000</b> | <b>\$28,879,000</b> |
| TDC Per Housing Unit                           | \$670,400            | \$406,120          | \$370,635           | \$205,389           | \$297,274           | N/A                 | N/A                 | N/A                 | N/A                | N/A                 |
| TDC per NSF Rentable/Saleable Area             | \$239                | \$203              | \$353               | \$278               | \$353               | \$364               | \$342               | \$434               | \$223              | \$116               |
| TDC per Gross SF, Excluding Parking            | \$239                | \$203              | \$283               | \$250               | \$283               | \$291               | \$273               | \$326               | \$223              | \$116               |
| TDC per Gross SF, Including Parking            | \$239                | \$203              | \$204               | \$162               | \$217               | \$274               | \$198               | \$326               | \$223              | \$116               |
| <b>Total Development Costs, Excluding Land</b> | <b>\$470,400</b>     | <b>\$3,361,200</b> | <b>\$81,326,400</b> | <b>\$53,775,600</b> | <b>\$80,881,200</b> | <b>\$21,978,000</b> | <b>\$41,125,200</b> | <b>\$20,010,000</b> | <b>\$4,350,000</b> | <b>\$24,000,000</b> |
| <b>Middle Scenario</b>                         |                      |                    |                     |                     |                     |                     |                     |                     |                    |                     |
| Land Acquisition                               | \$275,000            | \$900,000          | \$6,970,000         | \$9,017,000         | \$5,985,000         | \$1,440,000         | \$2,880,000         | \$2,154,000         | \$1,830,000        | \$6,970,000         |
| Hard Construction Costs                        | \$420,000            | \$3,502,000        | \$60,813,000        | \$34,463,000        | \$59,950,000        | \$9,600,000         | \$21,760,000        | \$17,342,000        | \$3,375,000        | \$20,000,000        |
| Tenant Improvements                            | \$0                  | \$0                | \$0                 | \$0                 | \$0                 | \$3,840,000         | \$7,680,000         | \$0                 | \$625,000          | \$0                 |
| Underground Parking (1)                        | \$0                  | \$0                | \$4,662,000         | \$0                 | \$4,070,000         | \$5,513,000         | \$5,513,000         | \$0                 | \$0                | \$0                 |
| Above Grade Structured Parking (1)             | \$0                  | \$0                | \$3,818,000         | \$10,350,000        | \$3,381,000         | \$322,000           | \$598,000           | \$0                 | \$0                | \$0                 |
| On-Grade Surface Parking (1)                   | \$0                  | \$0                | \$0                 | \$0                 | \$0                 | \$0                 | \$0                 | \$0                 | \$0                | \$0                 |
| Soft Costs (2)                                 | \$84,000             | \$700,400          | \$13,858,600        | \$8,962,600         | \$13,480,200        | \$3,855,000         | \$7,110,200         | \$3,468,400         | \$800,000          | \$4,000,000         |
| <b>Total Development Costs, Including Land</b> | <b>\$779,000</b>     | <b>\$5,102,400</b> | <b>\$90,121,600</b> | <b>\$62,792,600</b> | <b>\$86,866,200</b> | <b>\$24,570,000</b> | <b>\$45,541,200</b> | <b>\$22,964,400</b> | <b>\$6,630,000</b> | <b>\$30,970,000</b> |
| TDC Per Housing Unit                           | \$779,000            | \$510,240          | \$388,455           | \$209,309           | \$304,794           | N/A                 | N/A                 | N/A                 | N/A                | N/A                 |
| TDC per NSF Rentable/Saleable Area             | \$278                | \$255              | \$370               | \$283               | \$362               | \$384               | \$356               | \$459               | \$265              | \$124               |
| TDC per Gross SF, Excluding Parking            | \$278                | \$255              | \$296               | \$255               | \$290               | \$307               | \$285               | \$344               | \$265              | \$124               |
| TDC per Gross SF, Including Parking            | \$278                | \$255              | \$214               | \$165               | \$223               | \$289               | \$206               | \$344               | \$265              | \$124               |
| <b>Total Development Costs, Excluding Land</b> | <b>\$504,000</b>     | <b>\$4,202,400</b> | <b>\$83,151,600</b> | <b>\$53,775,600</b> | <b>\$80,881,200</b> | <b>\$23,130,000</b> | <b>\$42,661,200</b> | <b>\$20,810,400</b> | <b>\$4,800,000</b> | <b>\$24,000,000</b> |
| <b>High Scenario</b>                           |                      |                    |                     |                     |                     |                     |                     |                     |                    |                     |
| Land Acquisition                               | \$350,000            | \$2,000,000        | \$9,278,000         | \$13,460,000        | \$8,128,000         | \$1,920,000         | \$3,840,000         | \$2,871,000         | \$2,439,000        | \$10,454,000        |
| Hard Construction Costs                        | \$448,000            | \$3,502,000        | \$66,894,000        | \$39,387,000        | \$59,950,000        | \$9,600,000         | \$21,760,000        | \$18,009,000        | \$3,375,000        | \$21,250,000        |
| Tenant Improvements                            | \$0                  | \$0                | \$0                 | \$0                 | \$0                 | \$4,480,000         | \$8,960,000         | \$0                 | \$1,125,000        | \$0                 |
| Underground Parking (1)                        | \$0                  | \$0                | \$4,662,000         | \$0                 | \$4,070,000         | \$5,513,000         | \$5,513,000         | \$0                 | \$0                | \$0                 |
| Above Grade Structured Parking (1)             | \$0                  | \$0                | \$3,818,000         | \$10,350,000        | \$3,381,000         | \$322,000           | \$598,000           | \$0                 | \$0                | \$0                 |
| On-Grade Surface Parking (1)                   | \$0                  | \$0                | \$0                 | \$0                 | \$0                 | \$0                 | \$0                 | \$0                 | \$0                | \$0                 |
| Soft Costs (2)                                 | \$89,600             | \$700,400          | \$15,074,800        | \$9,947,400         | \$13,480,200        | \$3,983,000         | \$7,366,200         | \$3,601,800         | \$900,000          | \$4,250,000         |
| <b>Total Development Costs, Including Land</b> | <b>\$887,600</b>     | <b>\$6,202,400</b> | <b>\$99,726,800</b> | <b>\$73,144,400</b> | <b>\$89,009,200</b> | <b>\$25,818,000</b> | <b>\$48,037,200</b> | <b>\$24,481,800</b> | <b>\$7,839,000</b> | <b>\$35,954,000</b> |
| TDC Per Housing Unit                           | \$887,600            | \$620,240          | \$429,857           | \$243,815           | \$312,313           | N/A                 | N/A                 | N/A                 | N/A                | N/A                 |
| TDC per NSF Rentable/Saleable Area             | \$317                | \$310              | \$410               | \$330               | \$371               | \$403               | \$375               | \$490               | \$314              | \$144               |
| TDC per Gross SF, Excluding Parking            | \$317                | \$310              | \$328               | \$297               | \$297               | \$323               | \$300               | \$367               | \$314              | \$144               |
| TDC per Gross SF, Including Parking            | \$317                | \$310              | \$237               | \$192               | \$228               | \$304               | \$217               | \$367               | \$314              | \$144               |
| <b>Total Development Costs, Excluding Land</b> | <b>\$537,600</b>     | <b>\$4,202,400</b> | <b>\$90,448,800</b> | <b>\$59,684,400</b> | <b>\$80,881,200</b> | <b>\$23,898,000</b> | <b>\$44,197,200</b> | <b>\$21,610,800</b> | <b>\$5,400,000</b> | <b>\$25,500,000</b> |

(1) If parking cost shown as \$0, parking cost is included in building construction cost.

(2) Soft costs include A&E, consultants, construction financing costs, permits and fees, legal, accounting, insurance and developer overhead.

(3) For owner housing, equals net profit/fee (net sales revenues less total development costs, excluding builder fee/profit). For all others, equals net operating income divided by total development costs.

Sources: Interviews with Denver area residential and commercial developers; DRA.

**Table 40**  
**Net Operating Income from Market-Rate Apartments**  
**100% Market Rate Units**  
**Denver Affordable Housing Nexus Study**

|                                                         | <b>5-Story Rental</b> | <b>20-Story Rental</b> |
|---------------------------------------------------------|-----------------------|------------------------|
| <b>Tenure</b>                                           | Renter                | Renter                 |
| <b>Net Rentable SF of Apartment Space</b>               | 212,250               | 230,800                |
| <b>Parking Spaces</b>                                   | 450                   | 257                    |
| <b>Net Rentable SF of Retail Space</b>                  | 3,000                 | 3,000                  |
| <b>Approximate Building Stories</b>                     | 5 Stories             | 20 Stories             |
| <b>Number of Apartment Units</b>                        |                       |                        |
| Studio/Loft/Shotgun 1 BR                                | 60                    | 57                     |
| One Bedroom                                             | 195                   | 157                    |
| Two Bedroom                                             | 45                    | 71                     |
| Three Bedroom                                           | 0                     | 0                      |
| <b>Total</b>                                            | <b>300</b>            | <b>285</b>             |
| <b>Unit Size (Square Feet)</b>                          |                       |                        |
| Studio/Loft/Shotgun 1 BR                                | 550                   | 600                    |
| One Bedroom                                             | 700                   | 800                    |
| Two Bedroom                                             | 950                   | 1,000                  |
| Three Bedroom                                           | -                     | -                      |
| Average                                                 | 708                   | 810                    |
| <b>Average Monthly Rent Per Square Foot</b>             |                       |                        |
| Low Scenario                                            | \$2.15                | \$2.50                 |
| Middle Scenario                                         | \$2.25                | \$2.75                 |
| High Scenario                                           | \$2.50                | \$3.00                 |
| <b>Miscellaneous Income (\$/Unit/Year)</b>              | \$120                 | \$120                  |
| <b>Rental Vacancy Rate</b>                              | 7.0%                  | 7.0%                   |
| <b>Rental Operating Cost/Unit (2)</b>                   |                       |                        |
| Low Scenario                                            | \$5,000               | \$7,000                |
| Middle Scenario                                         | \$5,500               | \$7,500                |
| High Scenario                                           | \$6,000               | \$8,000                |
| <b>Retail Income (\$/NSF/Year)</b>                      |                       |                        |
| Low Scenario                                            | \$28.00               | \$28.00                |
| Middle Scenario                                         | \$32.00               | \$32.00                |
| High Scenario                                           | \$36.00               | \$36.00                |
| <b>Retail Vacancy Rate (% Gross Retail Income)</b>      | 10%                   | 10%                    |
| <b>Retail Operating Cost (% of Gross Retail Income)</b> | 40%                   | 40%                    |

**Table 40**  
**Net Operating Income from Market-Rate Apartments**  
**100% Market Rate Units**  
**Denver Affordable Housing Nexus Study**

|                                          | 5-Story Rental     | 20-Story Rental    |
|------------------------------------------|--------------------|--------------------|
| <b>LOW SCENARIO</b>                      |                    |                    |
| <b>Total Monthly Gross Rental Income</b> | <b>\$456,338</b>   | <b>\$577,000</b>   |
| <b>Annual Gross Income</b>               | <b>\$5,476,050</b> | <b>\$6,924,000</b> |
| Less: Vacancy                            | (\$383,324)        | (\$484,680)        |
| Plus: Misc. Income                       | \$36,000           | \$34,200           |
| Plus: Retail Income                      | \$84,000           | \$84,000           |
| <b>Adjusted Annual Gross Income</b>      | <b>\$5,212,727</b> | <b>\$6,557,520</b> |
| <b>Operating Costs</b>                   |                    |                    |
| Apartment Operating Costs                | (\$1,500,000)      | (\$1,995,000)      |
| Retail Operating Costs                   | (\$8,400)          | (\$8,400)          |
| <b>Net Operating Income</b>              | <b>\$3,704,327</b> | <b>\$4,554,120</b> |
| <b>MIDDLE SCENARIO</b>                   |                    |                    |
| <b>Total Monthly Gross Income</b>        | <b>\$477,563</b>   | <b>\$634,700</b>   |
| <b>Annual Gross Income</b>               | <b>\$5,730,750</b> | <b>\$7,616,400</b> |
| Less: Vacancy                            | (\$401,153)        | (\$533,148)        |
| Plus: Misc. Income                       | \$36,000           | \$34,200           |
| Plus: Retail Income                      | \$84,000           | \$84,000           |
| <b>Adjusted Annual Gross Income</b>      | <b>\$5,449,598</b> | <b>\$7,201,452</b> |
| <b>Operating Costs</b>                   |                    |                    |
| Apartment Operating Costs                | (\$1,650,000)      | (\$2,137,500)      |
| Retail Operating Costs                   | (\$8,400)          | (\$8,400)          |
| <b>Net Operating Income</b>              | <b>\$3,791,198</b> | <b>\$5,055,552</b> |
| <b>HIGH SCENARIO</b>                     |                    |                    |
| <b>Total Monthly Gross Income</b>        | <b>\$530,625</b>   | <b>\$692,400</b>   |
| <b>Annual Gross Income</b>               | <b>\$6,367,500</b> | <b>\$8,308,800</b> |
| Less: Vacancy                            | (\$445,725)        | (\$581,616)        |
| Plus: Misc. Income                       | \$36,000           | \$34,200           |
| Plus: Retail Income                      | \$84,000           | \$84,000           |
| <b>Adjusted Annual Gross Income</b>      | <b>\$6,041,775</b> | <b>\$7,845,384</b> |
| <b>Operating Costs</b>                   |                    |                    |
| Apartment Operating Costs                | (\$1,800,000)      | (\$2,280,000)      |
| Retail Operating Costs                   | (\$8,400)          | (\$8,400)          |
| <b>Net Operating Income</b>              | <b>\$4,233,375</b> | <b>\$5,556,984</b> |

Source: DRA

**Table 41**  
**Net Sales Proceeds from Market-Rate Owner Housing**  
**100% Market Rate Units**  
**Denver Affordable Housing Nexus Study**

|                                              | Single-Family Infill | Owner Townhomes    | 12-Story Owner       |
|----------------------------------------------|----------------------|--------------------|----------------------|
| <b>Net Saleable SF of Living Area</b>        | 2,800                |                    | 227,250              |
| Low Scenario                                 |                      | 15,000             |                      |
| Middle Scenario                              |                      | 20,000             |                      |
| High Scenario                                |                      | 23,000             |                      |
| <b>Number of Owner Hsg. Units</b>            |                      |                    |                      |
| Studio/Loft/Shotgun 1 BR                     | 0                    | 0                  | 0                    |
| One Bedroom                                  | 0                    | 0                  | 128                  |
| Two Bedroom                                  | 0                    | 0                  | 93                   |
| Three Bedroom                                | 1                    | 10                 | 12                   |
| <b>Total</b>                                 | <b>1</b>             | <b>10</b>          | <b>233</b>           |
| <b>Average Unit Size (Square Feet)</b>       | 2,800                |                    | 975                  |
| Low Scenario                                 |                      | 1,500              |                      |
| Middle Scenario                              |                      | 2,000              |                      |
| High Scenario                                |                      | 2,300              |                      |
| <b>Average Sales Price Per Square Foot</b>   |                      |                    |                      |
| Low Scenario                                 | \$300.00             | \$333.33           | \$450.00             |
| Middle Scenario                              | \$350.00             | \$330.00           | \$550.00             |
| High Scenario                                | \$400.00             | \$347.83           | \$600.00             |
| <b>Average Sales Price Per Unit</b>          |                      |                    |                      |
| Low Scenario                                 | \$840,000            | \$500,000          | \$438,900            |
| Middle Scenario                              | \$980,000            | \$660,000          | \$536,400            |
| High Scenario                                | \$1,120,000          | \$800,000          | \$585,200            |
| <b>Sales Costs (% of Gross Sales Income)</b> | 7%                   | 9%                 | 9%                   |
| <b>LOW SCENARIO</b>                          |                      |                    |                      |
| <b>Total Gross Sales Proceeds</b>            | <b>\$840,000</b>     | <b>\$5,000,000</b> | <b>\$102,262,500</b> |
| Less: Sales Costs                            | (\$58,800)           | (\$450,000)        | (\$9,203,625)        |
| <b>Net Sales Proceeds</b>                    | <b>\$781,200</b>     | <b>\$4,550,000</b> | <b>\$93,058,875</b>  |
| Net Sales Proceeds Per Net Saleable SF       | <b>\$279</b>         | <b>\$303</b>       | <b>\$410</b>         |
| <b>MIDDLE SCENARIO</b>                       |                      |                    |                      |
| <b>Total Gross Sales Income</b>              | <b>\$980,000</b>     | <b>\$6,600,000</b> | <b>\$124,987,500</b> |
| Less: Sales Costs                            | (\$68,600)           | (\$594,000)        | (\$11,248,875)       |
| <b>Net Sales Income</b>                      | <b>\$911,400</b>     | <b>\$6,006,000</b> | <b>\$113,738,625</b> |
| Net Sales Income Per Net Saleable SF         | <b>\$326</b>         | <b>\$300</b>       | <b>\$501</b>         |
| <b>HIGH SCENARIO</b>                         |                      |                    |                      |
| <b>Total Gross Sales Income</b>              | <b>\$1,120,000</b>   | <b>\$8,000,000</b> | <b>\$136,350,000</b> |
| Less: Sales Costs                            | (\$78,400)           | (\$720,000)        | (\$12,271,500)       |
| <b>Net Sales Income</b>                      | <b>\$1,041,600</b>   | <b>\$7,280,000</b> | <b>\$124,078,500</b> |
| Net Sales Income Per Net Saleable SF         | <b>\$372</b>         | <b>\$317</b>       | <b>\$546</b>         |

Source: DRA

**Table 42**  
**Net Operating Income from Non-Residential Uses**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Nexus Study**

|                                                                             | 5-Story Office | 12-Story Office | 4-Story Hotel | Stand-Alone Retail | Warehouse  |
|-----------------------------------------------------------------------------|----------------|-----------------|---------------|--------------------|------------|
| <i>Net SF Office</i>                                                        | 60,000         | 120,000         | 0             | 0                  | 0          |
| <i>Net SF Hotel</i>                                                         | 0              | 0               | 50,000        | 0                  | 0          |
| <i>Net SF Retail</i>                                                        | 4,000          | 8,000           | 0             | 25,000             | 0          |
| <i>Net SF Warehouse</i>                                                     | 0              | 0               | 0             | 0                  | 250,000    |
| <i>Net SF Manufacturing</i>                                                 | 0              | 0               | 0             | 0                  | 0          |
| <i>Total Net SF Non-Residential</i>                                         | 64,000         | 128,000         | 50,000        | 25,000             | 250,000    |
| <i>Hotel Rooms</i>                                                          | 0              | 0               | 143           | 0                  | 0          |
| <i>Parking Spaces</i>                                                       | 163            | 175             | 105           | 83                 | 83         |
| <i>Approximate Building Stories</i>                                         | 2 Stories      | 3 Stories       | 12 Stories    | 5 Stories          | 20 Stories |
| <b>OPERATING ASSUMPTIONS</b>                                                |                |                 |               |                    |            |
| <b>Office/Warehouse Operating Assumptions</b>                               |                |                 |               |                    |            |
| Annual Rent Per NSF (NNN)                                                   |                |                 |               |                    |            |
| Low Scenario                                                                | \$26.00        | \$36.00         |               |                    | \$11.00    |
| Middle Scenario                                                             | \$31.00        | \$36.00         |               |                    | \$12.00    |
| High Scenario                                                               | \$36.00        | \$36.00         |               |                    | \$14.00    |
| Vacancy Rate                                                                | 10.0%          | 10.0%           |               |                    | 10.0%      |
| Operating Expenses (Annual Cost/NSF)<br>(Excluding BID/Met. District costs) | \$13.00        | \$13.00         |               |                    | \$3.00     |
| <b>Hotel Operating Assumptions</b>                                          |                |                 |               |                    |            |
| Average Daily Room Rate                                                     |                |                 |               |                    |            |
| Low Scenario                                                                |                |                 | \$150.00      |                    |            |
| Middle Scenario                                                             |                |                 | \$175.00      |                    |            |
| High Scenario                                                               |                |                 | \$200.00      |                    |            |
| Vacancy Rate                                                                |                |                 | 28.0%         |                    |            |
| Operating Expenses As % of Gross Income                                     |                |                 | 50.0%         |                    |            |
| <b>Retail Operating Assumptions</b>                                         |                |                 |               |                    |            |
| Annual Rent Per NSF (NNN)                                                   |                |                 |               |                    |            |
| Low Scenario                                                                | \$28.00        | \$28.00         | \$28.00       | \$30.00            |            |
| Middle Scenario                                                             | \$32.00        | \$32.00         | \$32.00       | \$32.00            |            |
| High Scenario                                                               | \$36.00        | \$36.00         | \$36.00       | \$36.00            |            |
| Vacancy Rate                                                                | 10.0%          | 10.0%           | 10.0%         | 10.0%              |            |
| Operating Expenses (Annual Cost/NSF)                                        | \$13           | \$13            | \$13          | \$13               |            |
| <b>Parking Income/Operating Assumptions</b>                                 |                |                 |               |                    |            |
| Parking Income (\$/Space/Month)                                             |                |                 |               |                    |            |
| Low Scenario                                                                | \$100.00       | \$150.00        |               |                    |            |
| Middle Scenario                                                             | \$150.00       | \$175.00        |               |                    |            |
| High Scenario                                                               | \$200.00       | \$200.00        |               |                    |            |
| Parking Vacancy Rate                                                        | 0.0%           | 0.0%            |               |                    |            |

**Table 42**  
**Net Operating Income from Non-Residential Uses**  
**Non-Residential Prototypes**  
**Denver Affordable Housing Nexus Study**

|                                                   | 5-Story Office     | 12-Story Office    | 4-Story Hotel       | Stand-Alone Retail | Warehouse          |
|---------------------------------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|
| <i>Net SF Office</i>                              | 60,000             | 120,000            | 0                   | 0                  | 0                  |
| <i>Net SF Hotel</i>                               | 0                  | 0                  | 50,000              | 0                  | 0                  |
| <i>Net SF Retail</i>                              | 4,000              | 8,000              | 0                   | 25,000             | 0                  |
| <i>Net SF Warehouse</i>                           | 0                  | 0                  | 0                   | 0                  | 250,000            |
| <i>Net SF Manufacturing</i>                       | 0                  | 0                  | 0                   | 0                  | 0                  |
| <i>Total Net SF Non-Residential</i>               | 64,000             | 128,000            | 50,000              | 25,000             | 250,000            |
| <i>Hotel Rooms</i>                                | 0                  | 0                  | 143                 | 0                  | 0                  |
| <i>Parking Spaces</i>                             | 163                | 175                | 105                 | 83                 | 83                 |
| <i>Approximate Building Stories</i>               | 2 Stories          | 3 Stories          | 12 Stories          | 5 Stories          | 20 Stories         |
| <b>STABILIZED NET OPERATING INCOME</b>            |                    |                    |                     |                    |                    |
| <b>LOW SCENARIO</b>                               |                    |                    |                     |                    |                    |
| Annual Gross Office/Warehouse Rental Income       | \$1,560,000        | \$4,320,000        | \$0                 | \$0                | \$2,750,000        |
| Annual Gross Hotel Income                         | \$0                | \$0                | \$7,829,250         | \$0                | \$0                |
| Annual Gross Retail Rental Income                 | \$112,000          | \$224,000          | \$0                 | \$750,000          | \$0                |
| Annual Gross Parking Income                       | \$293,400          | \$367,500          | \$0                 | \$0                | \$0                |
| <b>Annual Gross Non-Residential Rental Income</b> | <b>\$1,965,400</b> | <b>\$4,911,500</b> | <b>\$7,829,250</b>  | <b>\$750,000</b>   | <b>\$2,750,000</b> |
| Less: Office/Warehouse Vacancy                    | (\$156,000)        | (\$432,000)        | \$0                 | \$0                | (\$275,000)        |
| Less: Hotel Vacancy                               | \$0                | \$0                | (\$2,192,190)       | \$0                | \$0                |
| Less: Retail Vacancy                              | (\$11,200)         | (\$22,400)         | \$0                 | (\$75,000)         | \$0                |
| Less: Parking Vacancy                             | \$0                | \$0                | \$0                 | \$0                | \$0                |
| <b>Adjusted Annual Gross Income</b>               | <b>\$1,798,200</b> | <b>\$4,457,100</b> | <b>\$5,637,060</b>  | <b>\$675,000</b>   | <b>\$2,475,000</b> |
| Less: Office/Warehouse Operating Expenses         | (\$780,000)        | (\$1,560,000)      | \$0                 | \$0                | (\$750,000)        |
| Less: Hotel Operating Expenses                    | \$0                | \$0                | (\$3,914,625)       | \$0                | \$0                |
| Less: Retail Operating Expenses                   | (\$52,000)         | (\$104,000)        | \$0                 | (\$325,000)        | \$0                |
| Less: Parking Operating Expenses                  | \$0                | \$0                | \$0                 | \$0                | \$0                |
| <b>Annual Total Net Operating Income</b>          | <b>\$966,200</b>   | <b>\$2,793,100</b> | <b>\$1,722,435</b>  | <b>\$350,000</b>   | <b>\$1,725,000</b> |
| Net Operating Income Per NSF                      | \$15.10            | \$21.82            | \$34.45             | \$14.00            | \$6.90             |
| <b>MIDDLE SCENARIO</b>                            |                    |                    |                     |                    |                    |
| Annual Gross Office/Warehouse Rental Income       | \$1,860,000        | \$4,320,000        | \$0                 | \$0                | \$3,000,000        |
| Annual Gross Hotel Income                         | \$0                | \$0                | \$9,134,125         | \$0                | \$0                |
| Annual Gross Retail Rental Income                 | \$128,000          | \$256,000          | \$0                 | \$800,000          | \$0                |
| Annual Gross Parking Income                       | \$293,400          | \$367,500          | \$0                 | \$0                | \$0                |
| <b>Annual Gross Non-Residential Rental Income</b> | <b>\$2,281,400</b> | <b>\$4,943,500</b> | <b>\$9,134,125</b>  | <b>\$800,000</b>   | <b>\$3,000,000</b> |
| Less: Office Vacancy                              | (\$186,000)        | (\$432,000)        | \$0                 | \$0                | (\$300,000)        |
| Less: Hotel Vacancy                               | \$0                | \$0                | (\$2,557,555)       | \$0                | \$0                |
| Less: Retail Vacancy                              | (\$12,800)         | (\$25,600)         | \$0                 | (\$80,000)         | \$0                |
| Less: Parking Vacancy                             | \$0                | \$0                | \$0                 | \$0                | \$0                |
| <b>Adjusted Annual Gross Income</b>               | <b>\$2,082,600</b> | <b>\$4,485,900</b> | <b>\$6,576,570</b>  | <b>\$720,000</b>   | <b>\$2,700,000</b> |
| Less: Office/Warehouse Operating Expenses         | (\$780,000)        | (\$1,560,000)      | \$0                 | \$0                | (\$750,000)        |
| Less: Hotel Operating Expenses                    | \$0                | \$0                | (\$4,567,063)       | \$0                | \$0                |
| Less: Retail Operating Expenses                   | (\$52,000)         | (\$104,000)        | \$0                 | (\$325,000)        | \$0                |
| Less: Parking Operating Expenses                  | \$0                | \$0                | \$0                 | \$0                | \$0                |
| <b>Annual Total Net Operating Income</b>          | <b>\$1,250,600</b> | <b>\$2,821,900</b> | <b>\$2,009,508</b>  | <b>\$395,000</b>   | <b>\$1,950,000</b> |
| Net Operating Income Per NSF                      | \$19.54            | \$22.05            | \$40.19             | \$15.80            | \$7.80             |
| <b>HIGH SCENARIO</b>                              |                    |                    |                     |                    |                    |
| Annual Gross Office/Warehouse Rental Income       | \$2,160,000        | \$4,320,000        | \$0                 | \$0                | \$3,500,000        |
| Annual Gross Hotel Income                         | \$0                | \$0                | \$10,439,000        | \$0                | \$0                |
| Annual Gross Retail Rental Income                 | \$144,000          | \$288,000          | \$0                 | \$900,000          | \$0                |
| Annual Gross Parking Income                       | \$293,400          | \$367,500          | \$0                 | \$0                | \$0                |
| <b>Annual Gross Non-Residential Rental Income</b> | <b>\$2,597,400</b> | <b>\$4,975,500</b> | <b>\$10,439,000</b> | <b>\$900,000</b>   | <b>\$3,500,000</b> |
| Less: Office Vacancy                              | (\$216,000)        | (\$432,000)        | \$0                 | \$0                | (\$350,000)        |
| Less: Hotel Vacancy                               | \$0                | \$0                | (\$2,922,920)       | \$0                | \$0                |
| Less: Retail Vacancy                              | (\$14,400)         | (\$28,800)         | \$0                 | (\$90,000)         | \$0                |
| Less: Parking Vacancy                             | \$0                | \$0                | \$0                 | \$0                | \$0                |
| <b>Adjusted Annual Gross Income</b>               | <b>\$2,367,000</b> | <b>\$4,514,700</b> | <b>\$7,516,080</b>  | <b>\$810,000</b>   | <b>\$3,150,000</b> |
| Less: Office/Warehouse Operating Expenses         | (\$780,000)        | (\$1,560,000)      | \$0                 | \$0                | (\$750,000)        |
| Less: Hotel Operating Expenses                    | \$0                | \$0                | (\$5,219,500)       | \$0                | \$0                |
| Less: Retail Operating Expenses                   | (\$52,000)         | (\$104,000)        | \$0                 | (\$325,000)        | \$0                |
| Less: Parking Operating Expenses                  | \$0                | \$0                | \$0                 | \$0                | \$0                |
| <b>Annual Total Net Operating Income</b>          | <b>\$1,535,000</b> | <b>\$2,850,700</b> | <b>\$2,296,580</b>  | <b>\$485,000</b>   | <b>\$2,400,000</b> |
| Net Operating Income Per NSF                      | \$23.98            | \$22.27            | \$45.93             | \$19.40            | \$9.60             |

Source: DRA.

**Table 43**  
**Return on Equity Analysis**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                                                          | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail        | Warehouse      |
|------------------------------------------------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|---------------|----------------|
| <i>Tenure</i>                                                                            | <i>Owner</i>         | <i>Owner</i>    | <i>Owner</i>   | <i>Renter</i>  | <i>Renter</i>   | -              | -               | -             | -             | -              |
| <i>Residential Units</i>                                                                 | 1                    | 10              | 232            | 300            | 285             | -              | -               | -             | -             | -              |
| <i>Residential Net SF</i>                                                                | 2,800                | 20,000          | 227,250        | 212,250        | 230,800         | -              | -               | -             | -             | -              |
| <i>Site Area (SF)</i>                                                                    | 6,250                | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734        | 121,968       | 696,960        |
| <i>Total Net SF</i>                                                                      | 2,800                | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000        | 25,000        | 250,000        |
| <b>Total Gross SF (Excluding Parking)</b>                                                | <b>2,800</b>         | <b>20,010</b>   | <b>304,063</b> | <b>246,167</b> | <b>299,750</b>  | <b>80,000</b>  | <b>160,000</b>  | <b>66,700</b> | <b>25,000</b> | <b>250,000</b> |
| <i>Approximate Building Stories</i>                                                      | 2 Stories            | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories     | 1 Stories     | 1 Stories      |
| <b>Total Annual Net Operating Income, Rental Properties</b>                              |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             |                      |                 |                | \$3,704,327    | \$4,554,120     | \$966,200      | \$2,793,100     | \$1,722,435   | \$350,000     | \$1,725,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$16.72        | \$18.99         | \$15.10        | \$21.82         | \$34.45       | \$14.00       | \$6.90         |
| Middle Scenario                                                                          |                      |                 |                | \$3,791,198    | \$5,055,552     | \$1,250,600    | \$2,821,900     | \$2,009,508   | \$395,000     | \$1,950,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$17.11        | \$21.08         | \$19.54        | \$22.05         | \$40.19       | \$15.80       | \$7.80         |
| High Scenario                                                                            |                      |                 |                | \$4,233,375    | \$5,556,984     | \$1,535,000    | \$2,850,700     | \$2,296,580   | \$485,000     | \$2,400,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$19.11        | \$23.17         | \$23.98        | \$22.27         | \$45.93       | \$19.40       | \$9.60         |
| <b>Cap Rate</b>                                                                          |                      |                 |                | <b>4.50%</b>   | <b>4.50%</b>    | <b>5.00%</b>   | <b>5.00%</b>    | <b>7.00%</b>  | <b>5.00%</b>  | <b>5.50%</b>   |
| Minimum Equity Yield on NOI                                                              | 10.00%               | 10.00%          | 10.00%         | 8.00%          | 8.00%           | 8.00%          | 8.00%           | 8.00%         | 8.00%         | 8.00%          |
| <b>Capitalized Value, Rental Properties</b>                                              |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             |                      |                 |                | \$82,318,367   | \$101,202,667   | \$19,324,000   | \$55,862,000    | \$24,606,214  | \$7,000,000   | \$31,363,636   |
| Middle Scenario                                                                          |                      |                 |                | \$84,248,833   | \$112,345,600   | \$25,012,000   | \$56,438,000    | \$28,707,250  | \$7,900,000   | \$35,454,545   |
| High Scenario                                                                            |                      |                 |                | \$94,075,000   | \$123,488,533   | \$30,700,000   | \$57,014,000    | \$32,808,286  | \$9,700,000   | \$43,636,364   |
| <b>Net Home Sales Proceeds</b>                                                           |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$781,200            | \$4,550,000     | \$93,058,875   |                |                 |                |                 |               |               |                |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000     | \$113,738,625  |                |                 |                |                 |               |               |                |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000     | \$124,078,500  |                |                 |                |                 |               |               |                |
| <b>Total Market Value (Capitalized NOI for Rental); Net Sales Proceeds for Ownership</b> |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$781,200            | \$4,550,000     | \$93,058,875   | \$82,318,367   | \$101,202,667   | \$19,324,000   | \$55,862,000    | \$24,606,214  | \$7,000,000   | \$31,363,636   |
| Per NSF                                                                                  | \$279                | \$228           | \$383          | \$372          | \$422           | \$302          | \$436           | \$492         | \$280         | \$125          |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000     | \$113,738,625  | \$84,248,833   | \$112,345,600   | \$25,012,000   | \$56,438,000    | \$28,707,250  | \$7,900,000   | \$35,454,545   |
| Per NSF                                                                                  | \$326                | \$300           | \$468          | \$380          | \$468           | \$391          | \$441           | \$574         | \$316         | \$142          |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000     | \$124,078,500  | \$94,075,000   | \$123,488,533   | \$30,700,000   | \$57,014,000    | \$32,808,286  | \$9,700,000   | \$43,636,364   |
| Per NSF                                                                                  | \$372                | \$364           | \$510          | \$425          | \$515           | \$480          | \$445           | \$656         | \$388         | \$175          |
| <b>Total Nexus Fee at Fee Level of:</b>                                                  |                      |                 |                |                |                 |                |                 |               |               |                |
| Fee of \$1.00 Per GSF                                                                    | \$2,800              | \$20,010        | \$304,063      | \$246,167      | \$299,750       | \$80,000       | \$160,000       | \$66,700      | \$25,000      | \$250,000      |
| Fee of \$2.00 Per GSF                                                                    | \$5,600              | \$40,020        | \$608,125      | \$492,333      | \$599,500       | \$160,000      | \$320,000       | \$133,400     | \$50,000      | \$500,000      |
| Fee of \$3.00 Per GSF                                                                    | \$8,400              | \$60,030        | \$912,188      | \$738,500      | \$899,250       | \$240,000      | \$480,000       | \$200,100     | \$75,000      | \$750,000      |
| Fee of \$5.00 Per GSF                                                                    | \$14,000             | \$100,050       | \$1,520,313    | \$1,230,833    | \$1,498,750     | \$400,000      | \$800,000       | \$333,500     | \$125,000     | \$1,250,000    |
| Fee of \$7.00 Per GSF                                                                    | \$19,600             | \$140,070       | \$2,128,438    | \$1,723,167    | \$2,098,250     | \$560,000      | \$1,120,000     | \$466,900     | \$175,000     | \$1,750,000    |
| <b>Less: Total Development Cost, Including Land</b>                                      |                      |                 |                |                |                 |                |                 |               |               |                |
| No Fee                                                                                   |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$670,400            | \$4,061,200     | \$85,987,400   | \$61,616,600   | \$84,723,200    | \$23,274,000   | \$43,717,200    | \$21,715,000  | \$5,570,000   | \$28,879,000   |
| Per NSF                                                                                  | \$239                | \$203           | \$353          | \$278          | \$353           | \$364          | \$342           | \$434         | \$223         | \$116          |
| Middle Scenario                                                                          | \$779,000            | \$5,102,400     | \$90,121,600   | \$62,792,600   | \$86,866,200    | \$24,570,000   | \$45,541,200    | \$22,964,400  | \$6,630,000   | \$30,970,000   |
| Per NSF                                                                                  | \$278                | \$255           | \$370          | \$283          | \$362           | \$384          | \$356           | \$459         | \$265         | \$124          |
| High Scenario                                                                            | \$887,600            | \$6,202,400     | \$99,726,800   | \$73,144,400   | \$89,009,200    | \$25,818,000   | \$48,037,200    | \$24,481,800  | \$7,839,000   | \$35,954,000   |
| Per NSF                                                                                  | \$317                | \$310           | \$410          | \$330          | \$371           | \$403          | \$375           | \$490         | \$314         | \$144          |
| Fee of \$1.00 Per GSF                                                                    |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$673,200            | \$4,081,210     | \$86,291,463   | \$61,862,767   | \$85,022,950    | \$23,354,000   | \$43,877,200    | \$21,781,700  | \$5,595,000   | \$29,129,000   |
| Per NSF                                                                                  | \$240                | \$204           | \$355          | \$279          | \$355           | \$365          | \$343           | \$436         | \$224         | \$117          |
| Middle Scenario                                                                          | \$781,800            | \$5,122,410     | \$90,425,663   | \$63,038,767   | \$87,165,950    | \$24,650,000   | \$45,701,200    | \$23,031,100  | \$6,655,000   | \$31,220,000   |
| Per NSF                                                                                  | \$279                | \$256           | \$372          | \$285          | \$363           | \$385          | \$357           | \$461         | \$266         | \$125          |
| High Scenario                                                                            | \$890,400            | \$6,222,410     | \$100,030,863  | \$73,390,567   | \$89,308,950    | \$25,898,000   | \$48,197,200    | \$24,548,500  | \$7,864,000   | \$36,204,000   |
| Per NSF                                                                                  | \$318                | \$311           | \$411          | \$331          | \$372           | \$405          | \$377           | \$491         | \$315         | \$145          |
| Fee of \$2.00 Per GSF                                                                    |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$676,000            | \$4,101,220     | \$86,595,525   | \$62,108,933   | \$85,322,700    | \$23,434,000   | \$44,037,200    | \$21,848,400  | \$5,620,000   | \$29,379,000   |
| Per NSF                                                                                  | \$241                | \$205           | \$356          | \$280          | \$356           | \$366          | \$344           | \$437         | \$225         | \$118          |



**Table 43**  
**Return on Equity Analysis**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                       | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|-----------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| Middle Scenario       | \$784,600            | \$5,142,420     | \$90,729,725   | \$63,284,933   | \$87,465,700    | \$24,730,000   | \$45,861,200    | \$23,097,800  | \$6,680,000 | \$31,470,000 |
| Per NSF               | \$280                | \$257           | \$373          | \$286          | \$365           | \$386          | \$358           | \$462         | \$267       | \$126        |
| High Scenario         | \$893,200            | \$6,242,420     | \$100,334,925  | \$73,636,733   | \$89,608,700    | \$25,978,000   | \$48,357,200    | \$24,615,200  | \$7,889,000 | \$36,454,000 |
| Per NSF               | \$319                | \$312           | \$412          | \$332          | \$374           | \$406          | \$378           | \$492         | \$316       | \$146        |
| Fee of \$3.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$678,800            | \$4,121,230     | \$86,899,588   | \$62,355,100   | \$85,622,450    | \$23,514,000   | \$44,197,200    | \$21,915,100  | \$5,645,000 | \$29,629,000 |
| Per NSF               | \$242                | \$206           | \$357          | \$281          | \$357           | \$367          | \$345           | \$438         | \$226       | \$119        |
| Middle Scenario       | \$787,400            | \$5,162,430     | \$91,033,788   | \$63,531,100   | \$87,765,450    | \$24,810,000   | \$46,021,200    | \$23,164,500  | \$6,705,000 | \$31,720,000 |
| Per NSF               | \$281                | \$258           | \$374          | \$287          | \$366           | \$388          | \$360           | \$463         | \$268       | \$127        |
| High Scenario         | \$896,000            | \$6,262,430     | \$100,638,988  | \$73,882,900   | \$89,908,450    | \$26,058,000   | \$48,517,200    | \$24,681,900  | \$7,914,000 | \$36,704,000 |
| Per NSF               | \$320                | \$313           | \$414          | \$333          | \$375           | \$407          | \$379           | \$494         | \$317       | \$147        |
| Fee of \$5.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$684,400            | \$4,161,250     | \$87,507,713   | \$62,847,433   | \$86,221,950    | \$23,674,000   | \$44,517,200    | \$22,048,500  | \$5,695,000 | \$30,129,000 |
| Per NSF               | \$244                | \$208           | \$360          | \$284          | \$360           | \$370          | \$348           | \$441         | \$228       | \$121        |
| Middle Scenario       | \$793,000            | \$5,202,450     | \$91,641,913   | \$64,023,433   | \$88,364,950    | \$24,970,000   | \$46,341,200    | \$23,297,900  | \$6,755,000 | \$32,220,000 |
| Per NSF               | \$283                | \$260           | \$377          | \$289          | \$368           | \$390          | \$362           | \$466         | \$270       | \$129        |
| High Scenario         | \$901,600            | \$6,302,450     | \$101,247,113  | \$74,375,233   | \$90,507,950    | \$26,218,000   | \$48,837,200    | \$24,815,300  | \$7,964,000 | \$37,204,000 |
| Per NSF               | \$322                | \$315           | \$416          | \$336          | \$377           | \$410          | \$382           | \$496         | \$319       | \$149        |
| Fee of \$7.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$690,000            | \$4,201,270     | \$88,115,838   | \$63,339,767   | \$86,821,450    | \$23,834,000   | \$44,837,200    | \$22,181,900  | \$5,745,000 | \$30,629,000 |
| Per NSF               | \$246                | \$210           | \$362          | \$286          | \$362           | \$372          | \$350           | \$444         | \$230       | \$123        |
| Middle Scenario       | \$798,600            | \$5,242,470     | \$92,250,038   | \$64,515,767   | \$88,964,450    | \$25,130,000   | \$46,661,200    | \$23,431,300  | \$6,805,000 | \$32,720,000 |
| Per NSF               | \$285                | \$262           | \$379          | \$291          | \$371           | \$393          | \$365           | \$469         | \$272       | \$131        |
| High Scenario         | \$907,200            | \$6,342,470     | \$101,855,238  | \$74,867,567   | \$91,107,450    | \$26,378,000   | \$49,157,200    | \$24,948,700  | \$8,014,000 | \$37,704,000 |
| Per NSF               | \$324                | \$317           | \$419          | \$338          | \$380           | \$412          | \$384           | \$499         | \$321       | \$151        |
| <b>Net Profit</b>     |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$110,800            | \$488,800       | \$7,071,475    | \$20,701,767   | \$16,479,467    | (\$3,950,000)  | \$12,144,800    | \$2,891,214   | \$1,430,000 | \$2,484,636  |
| Return on Equity (1)  | 44%                  | 20%             | 7%             | 45%            | 16%             | -28%           | 40%             | 21%           | 68%         | 23%          |
| Middle Scenario       | \$132,400            | \$903,600       | \$23,617,025   | \$21,456,233   | \$25,479,400    | \$442,000      | \$10,896,800    | \$5,742,850   | \$1,270,000 | \$4,484,545  |
| Return on Equity (1)  | 45%                  | 30%             | 22%            | 46%            | 24%             | 3%             | 34%             | 51%           | 39%         | 39%          |
| High Scenario         | \$154,000            | \$1,077,600     | \$24,351,700   | \$20,930,600   | \$34,479,333    | \$4,882,000    | \$8,976,800     | \$8,326,486   | \$1,861,000 | \$7,682,364  |
| Return on Equity (1)  | 46%                  | 29%             | 20%            | 38%            | 32%             | 32%            | 27%             | 54%           | 63%         | 57%          |
| Fee of \$1.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$108,000            | \$468,790       | \$6,767,413    | \$20,455,600   | \$16,179,717    | (\$4,030,000)  | \$11,984,800    | \$2,824,514   | \$1,405,000 | \$2,234,636  |
| Return on Equity (1)  | 43%                  | 19%             | 7%             | 44%            | 16%             | -29%           | 39%             | 21%           | 67%         | 20%          |
| Middle Scenario       | \$129,600            | \$883,590       | \$23,312,963   | \$21,210,067   | \$25,179,650    | \$362,000      | \$10,736,800    | \$5,676,150   | \$1,245,000 | \$4,234,545  |
| Return on Equity (1)  | 44%                  | 29%             | 21%            | 45%            | 24%             | 2%             | 34%             | 39%           | 50%         | 36%          |
| High Scenario         | \$151,200            | \$1,057,590     | \$24,047,638   | \$20,684,433   | \$34,179,583    | \$4,802,000    | \$8,816,800     | \$8,259,786   | \$1,836,000 | \$7,432,364  |
| Return on Equity (1)  | 45%                  | 28%             | 20%            | 38%            | 32%             | 31%            | 26%             | 54%           | 62%         | 55%          |
| Fee of \$2.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$105,200            | \$448,780       | \$6,463,350    | \$20,209,433   | \$15,879,967    | (\$4,110,000)  | \$11,824,800    | \$2,757,814   | \$1,380,000 | \$1,984,636  |
| Return on Equity (1)  | 41%                  | 18%             | 6%             | 43%            | 16%             | -29%           | 38%             | 20%           | 65%         | 18%          |
| Middle Scenario       | \$126,800            | \$863,580       | \$23,008,900   | \$20,963,900   | \$24,879,900    | \$282,000      | \$10,576,800    | \$5,609,450   | \$1,220,000 | \$3,984,545  |
| Return on Equity (1)  | 43%                  | 28%             | 21%            | 44%            | 24%             | 2%             | 33%             | 39%           | 49%         | 34%          |
| High Scenario         | \$148,400            | \$1,037,580     | \$23,743,575   | \$20,438,267   | \$33,879,833    | \$4,722,000    | \$8,656,800     | \$8,193,086   | \$1,811,000 | \$7,182,364  |
| Return on Equity (1)  | 44%                  | 28%             | 20%            | 37%            | 32%             | 30%            | 26%             | 53%           | 61%         | 53%          |
| Fee of \$3.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$102,400            | \$428,770       | \$6,159,288    | \$19,963,267   | \$15,580,217    | (\$4,190,000)  | \$11,664,800    | \$2,691,114   | \$1,355,000 | \$1,734,636  |
| Return on Equity (1)  | 40%                  | 17%             | 6%             | 43%            | 15%             | -30%           | 38%             | 20%           | 64%         | 16%          |
| Middle Scenario       | \$124,000            | \$843,570       | \$22,704,838   | \$20,717,733   | \$24,580,150    | \$202,000      | \$10,416,800    | \$5,542,750   | \$1,195,000 | \$3,734,545  |
| Return on Equity (1)  | 42%                  | 27%             | 21%            | 43%            | 23%             | 1%             | 32%             | 38%           | 48%         | 31%          |
| High Scenario         | \$145,600            | \$1,017,570     | \$23,439,513   | \$20,192,100   | \$33,580,083    | \$4,642,000    | \$8,496,800     | \$8,126,386   | \$1,786,000 | \$6,932,364  |
| Return on Equity (1)  | 43%                  | 27%             | 19%            | 36%            | 31%             | 30%            | 25%             | 53%           | 60%         | 50%          |
| Fee of \$5.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario          | \$96,800             | \$388,750       | \$5,551,163    | \$19,470,933   | \$14,980,717    | (\$4,350,000)  | \$11,344,800    | \$2,557,714   | \$1,305,000 | \$1,234,636  |
| Return on Equity (1)  | 38%                  | 16%             | 5%             | 41%            | 14%             | -31%           | 36%             | 19%           | 61%         | 11%          |
| Middle Scenario       | \$118,400            | \$803,550       | \$22,096,713   | \$20,225,400   | \$23,980,650    | \$42,000       | \$10,096,800    | \$5,409,350   | \$1,145,000 | \$3,234,545  |
| Return on Equity (1)  | 40%                  | 26%             | 20%            | 42%            | 23%             | 0%             | 31%             | 37%           | 45%         | 27%          |
| High Scenario         | \$140,000            | \$977,550       | \$22,831,388   | \$19,699,767   | \$32,980,583    | \$4,482,000    | \$8,176,800     | \$7,992,986   | \$1,736,000 | \$6,432,364  |
| Return on Equity (1)  | 41%                  | 26%             | 19%            | 35%            | 30%             | 28%            | 24%             | 52%           | 58%         | 46%          |

**Table 43**  
**Return on Equity Analysis**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                      | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|--------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| Fee of \$7.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$91,200             | \$348,730       | \$4,943,038    | \$18,978,600   | \$14,381,217    | (\$4,510,000)  | \$11,024,800    | \$2,424,314   | \$1,255,000 | \$734,636    |
| Return on Equity (1)                 | 35%                  | 14%             | 5%             | 40%            | 14%             | -32%           | 35%             | 17%           | 58%         | 6%           |
| Middle Scenario                      | \$112,800            | \$763,530       | \$21,488,588   | \$19,733,067   | \$23,381,150    | (\$118,000)    | \$9,776,800     | \$5,275,950   | \$1,095,000 | \$2,734,545  |
| Return on Equity (1)                 | 38%                  | 24%             | 19%            | 41%            | 22%             | -1%            | 30%             | 36%           | 43%         | 22%          |
| High Scenario                        | \$134,400            | \$937,530       | \$22,223,263   | \$19,207,433   | \$32,381,083    | \$4,322,000    | \$7,856,800     | \$7,859,586   | \$1,686,000 | \$5,932,364  |
| Return on Equity (1)                 | 40%                  | 25%             | 18%            | 34%            | 30%             | 27%            | 23%             | 50%           | 56%         | 42%          |
| <b>Assumed Equity Investment</b>     |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                               |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$201,120            | \$1,218,360     | \$25,796,220   | \$18,484,980   | \$25,416,960    | \$9,309,600    | \$17,486,880    | \$10,857,500  | \$2,785,000 | \$14,439,500 |
| Middle Scenario                      | \$233,700            | \$1,530,720     | \$27,036,480   | \$18,837,780   | \$26,059,860    | \$9,828,000    | \$18,216,480    | \$11,482,200  | \$3,315,000 | \$15,485,000 |
| High Scenario                        | \$266,280            | \$1,860,720     | \$29,918,040   | \$21,943,320   | \$26,702,760    | \$10,327,200   | \$19,214,880    | \$12,240,900  | \$3,919,500 | \$17,977,000 |
| Fee of \$1.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$201,960            | \$1,224,363     | \$25,887,439   | \$18,558,830   | \$25,506,885    | \$9,341,600    | \$17,550,880    | \$10,890,850  | \$2,797,500 | \$14,564,500 |
| Middle Scenario                      | \$234,540            | \$1,536,723     | \$27,127,699   | \$18,911,630   | \$26,149,785    | \$9,860,000    | \$18,280,480    | \$11,515,550  | \$3,327,500 | \$15,610,000 |
| High Scenario                        | \$267,120            | \$1,866,723     | \$30,009,259   | \$22,017,170   | \$26,792,685    | \$10,359,200   | \$19,278,880    | \$12,274,250  | \$3,932,000 | \$18,102,000 |
| Fee of \$2.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$202,800            | \$1,230,366     | \$25,978,658   | \$18,632,680   | \$25,596,810    | \$9,373,600    | \$17,614,880    | \$10,924,200  | \$2,810,000 | \$14,689,500 |
| Middle Scenario                      | \$235,380            | \$1,542,726     | \$27,218,918   | \$18,985,480   | \$26,239,710    | \$9,892,000    | \$18,344,480    | \$11,548,900  | \$3,340,000 | \$15,735,000 |
| High Scenario                        | \$267,960            | \$1,872,726     | \$30,100,478   | \$22,091,020   | \$26,882,610    | \$10,391,200   | \$19,342,880    | \$12,307,600  | \$3,944,500 | \$18,227,000 |
| Fee of \$3.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$203,640            | \$1,236,369     | \$26,069,876   | \$18,706,530   | \$25,686,735    | \$9,405,600    | \$17,678,880    | \$10,957,550  | \$2,822,500 | \$14,814,500 |
| Middle Scenario                      | \$236,220            | \$1,548,729     | \$27,310,136   | \$19,059,330   | \$26,329,635    | \$9,924,000    | \$18,408,480    | \$11,582,250  | \$3,352,500 | \$15,860,000 |
| High Scenario                        | \$268,800            | \$1,878,729     | \$30,191,696   | \$22,164,870   | \$26,972,535    | \$10,423,200   | \$19,406,880    | \$12,340,950  | \$3,957,000 | \$18,352,000 |
| Fee of \$5.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$205,320            | \$1,248,375     | \$26,252,314   | \$18,854,230   | \$25,866,585    | \$9,469,600    | \$17,806,880    | \$11,024,250  | \$2,847,500 | \$15,064,500 |
| Middle Scenario                      | \$237,900            | \$1,560,735     | \$27,492,574   | \$19,207,030   | \$26,509,485    | \$9,988,000    | \$18,536,480    | \$11,648,950  | \$3,377,500 | \$16,110,000 |
| High Scenario                        | \$270,480            | \$1,890,735     | \$30,374,134   | \$22,312,570   | \$27,152,385    | \$10,487,200   | \$19,534,880    | \$12,407,650  | \$3,982,000 | \$18,602,000 |
| Fee of \$7.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$207,000            | \$1,260,381     | \$26,434,751   | \$19,001,930   | \$26,046,435    | \$9,533,600    | \$17,934,880    | \$11,090,950  | \$2,872,500 | \$15,314,500 |
| Middle Scenario                      | \$239,580            | \$1,572,741     | \$27,675,011   | \$19,354,730   | \$26,689,335    | \$10,052,000   | \$18,664,480    | \$11,715,650  | \$3,402,500 | \$16,360,000 |
| High Scenario                        | \$272,160            | \$1,902,741     | \$30,556,571   | \$22,460,270   | \$27,332,235    | \$10,551,200   | \$19,662,880    | \$12,474,350  | \$4,007,000 | \$18,852,000 |
| <b>Equity Investment Assumptions</b> |                      |                 |                |                |                 |                |                 |               |             |              |
| Equity as a % of TDC                 | 30%                  | 30%             | 30%            | 30%            | 30%             | 40%            | 40%             | 50%           | 50%         | 50%          |
| Assumed Investment Period (Months)   | 15                   | 24              | 48             | 30             | 48              | 18             | 21              | 15            | 9           | 9            |

(1) Return on equity measured as net project value divided by the number of years equity investment divided by total equity investment.

Source: DRA.

**Table 44**  
**Return on Equity Analysis**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                                                          | Single-Family Infill | Owner Townhomes  | 12-Story Owner    | 5-Story Rental   | 20-Story Rental   | 5-Story Office   | 12-Story Office   | 4-Story Hotel    | Retail           | Warehouse        |
|------------------------------------------------------------------------------------------|----------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|------------------|------------------|
| <i>Tenure</i>                                                                            | <i>Owner</i>         | <i>Owner</i>     | <i>Owner</i>      | <i>Renter</i>    | <i>Renter</i>     | -                | -                 | -                | -                | -                |
| <i>Residential Units</i>                                                                 | <i>1</i>             | <i>10</i>        | <i>232</i>        | <i>300</i>       | <i>285</i>        | -                | -                 | -                | -                | -                |
| <i>Residential Net SF</i>                                                                | <i>2,800</i>         | <i>20,000</i>    | <i>227,250</i>    | <i>212,250</i>   | <i>230,800</i>    | -                | -                 | -                | -                | -                |
| <i>Site Area (SF)</i>                                                                    | <i>6,250</i>         | <i>10,000</i>    | <i>43,560</i>     | <i>130,680</i>   | <i>26,136</i>     | <i>32,000</i>    | <i>32,000</i>     | <i>89,734</i>    | <i>121,968</i>   | <i>696,960</i>   |
| <i>Total Net SF</i>                                                                      | <i>2,800</i>         | <i>20,000</i>    | <i>243,250</i>    | <i>221,550</i>   | <i>239,800</i>    | <i>64,000</i>    | <i>128,000</i>    | <i>50,000</i>    | <i>25,000</i>    | <i>250,000</i>   |
| <b>Total Gross SF (Excluding Parking)</b>                                                | <b>2,800</b>         | <b>20,010</b>    | <b>304,063</b>    | <b>246,167</b>   | <b>299,750</b>    | <b>80,000</b>    | <b>160,000</b>    | <b>66,700</b>    | <b>25,000</b>    | <b>250,000</b>   |
| <i>Approximate Building Stories</i>                                                      | <i>2 Stories</i>     | <i>3 Stories</i> | <i>12 Stories</i> | <i>5 Stories</i> | <i>20 Stories</i> | <i>5 Stories</i> | <i>12 Stories</i> | <i>4 Stories</i> | <i>1 Stories</i> | <i>1 Stories</i> |
| <b>Total Annual Net Operating Income, Rental Properties</b>                              |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             |                      |                  |                   | \$3,704,327      | \$4,554,120       | \$966,200        | \$2,793,100       | \$1,722,435      | \$350,000        | \$1,725,000      |
| NOI Per NSF                                                                              |                      |                  |                   | \$16.72          | \$18.99           | \$15.10          | \$21.82           | \$34.45          | \$14.00          | \$6.90           |
| Middle Scenario                                                                          |                      |                  |                   | \$3,791,198      | \$5,055,552       | \$1,250,600      | \$2,821,900       | \$2,009,508      | \$395,000        | \$1,950,000      |
| NOI Per NSF                                                                              |                      |                  |                   | \$17.11          | \$21.08           | \$19.54          | \$22.05           | \$40.19          | \$15.80          | \$7.80           |
| High Scenario                                                                            |                      |                  |                   | \$4,233,375      | \$5,556,984       | \$1,535,000      | \$2,850,700       | \$2,296,580      | \$485,000        | \$2,400,000      |
| NOI Per NSF                                                                              |                      |                  |                   | \$19.11          | \$23.17           | \$23.98          | \$22.27           | \$45.93          | \$19.40          | \$9.60           |
| <b>Cap Rate</b>                                                                          |                      |                  |                   | <b>5.00%</b>     | <b>5.00%</b>      | <b>5.50%</b>     | <b>5.50%</b>      | <b>7.50%</b>     | <b>5.50%</b>     | <b>6.00%</b>     |
| Minimum Equity Yield on NOI                                                              | 10.00%               | 10.00%           | 10.00%            | 8.00%            | 8.00%             | 8.00%            | 8.00%             | 8.00%            | 8.00%            | 8.00%            |
| <b>Capitalized Value, Rental Properties</b>                                              |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             |                      |                  |                   | \$74,086,530     | \$91,082,400      | \$17,567,273     | \$50,783,636      | \$22,965,800     | \$6,363,636      | \$28,750,000     |
| Middle Scenario                                                                          |                      |                  |                   | \$75,823,950     | \$101,111,040     | \$22,738,182     | \$51,307,273      | \$26,793,433     | \$7,181,818      | \$32,500,000     |
| High Scenario                                                                            |                      |                  |                   | \$84,667,500     | \$111,139,680     | \$27,909,091     | \$51,830,909      | \$30,621,067     | \$8,818,182      | \$40,000,000     |
| <b>Net Home Sales Proceeds</b>                                                           |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$781,200            | \$4,550,000      | \$93,058,875      |                  |                   |                  |                   |                  |                  |                  |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000      | \$113,738,625     |                  |                   |                  |                   |                  |                  |                  |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000      | \$124,078,500     |                  |                   |                  |                   |                  |                  |                  |
| <b>Total Market Value (Capitalized NOI for Rental; Net Sales Proceeds for Ownership)</b> |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$781,200            | \$4,550,000      | \$93,058,875      | \$74,086,530     | \$91,082,400      | \$17,567,273     | \$50,783,636      | \$22,965,800     | \$6,363,636      | \$28,750,000     |
| Per NSF                                                                                  | \$279                | \$228            | \$383             | \$334            | \$380             | \$274            | \$397             | \$459            | \$255            | \$115            |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000      | \$113,738,625     | \$75,823,950     | \$101,111,040     | \$22,738,182     | \$51,307,273      | \$26,793,433     | \$7,181,818      | \$32,500,000     |
| Per NSF                                                                                  | \$326                | \$300            | \$468             | \$342            | \$422             | \$355            | \$401             | \$536            | \$287            | \$130            |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000      | \$124,078,500     | \$84,667,500     | \$111,139,680     | \$27,909,091     | \$51,830,909      | \$30,621,067     | \$8,818,182      | \$40,000,000     |
| Per NSF                                                                                  | \$372                | \$364            | \$510             | \$382            | \$463             | \$436            | \$405             | \$612            | \$353            | \$160            |
| <b>Total Nexus Fee at Fee Level of:</b>                                                  |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Fee of \$1.00 Per GSF                                                                    | \$2,800              | \$20,010         | \$304,063         | \$246,167        | \$299,750         | \$80,000         | \$160,000         | \$66,700         | \$25,000         | \$250,000        |
| Fee of \$2.00 Per GSF                                                                    | \$5,600              | \$40,020         | \$608,125         | \$492,333        | \$599,500         | \$160,000        | \$320,000         | \$133,400        | \$50,000         | \$500,000        |
| Fee of \$3.00 Per GSF                                                                    | \$8,400              | \$60,030         | \$912,188         | \$738,500        | \$899,250         | \$240,000        | \$480,000         | \$200,100        | \$75,000         | \$750,000        |
| Fee of \$5.00 Per GSF                                                                    | \$14,000             | \$100,050        | \$1,520,313       | \$1,230,833      | \$1,498,750       | \$400,000        | \$800,000         | \$333,500        | \$125,000        | \$1,250,000      |
| Fee of \$7.00 Per GSF                                                                    | \$19,600             | \$140,070        | \$2,128,438       | \$1,723,167      | \$2,098,250       | \$560,000        | \$1,120,000       | \$466,900        | \$175,000        | \$1,750,000      |
| <b>Less: Total Development Cost, Including Land</b>                                      |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| No Fee                                                                                   |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$670,400            | \$4,061,200      | \$85,987,400      | \$61,616,600     | \$84,723,200      | \$23,274,000     | \$43,717,200      | \$21,715,000     | \$5,570,000      | \$28,879,000     |
| Per NSF                                                                                  | \$239                | \$203            | \$353             | \$278            | \$353             | \$364            | \$342             | \$434            | \$223            | \$116            |
| Middle Scenario                                                                          | \$779,000            | \$5,102,400      | \$90,121,600      | \$62,792,600     | \$86,866,200      | \$24,570,000     | \$45,541,200      | \$22,964,400     | \$6,630,000      | \$30,970,000     |
| Per NSF                                                                                  | \$278                | \$255            | \$370             | \$283            | \$362             | \$384            | \$356             | \$459            | \$265            | \$124            |
| High Scenario                                                                            | \$887,600            | \$6,202,400      | \$99,726,800      | \$73,144,400     | \$89,009,200      | \$25,818,000     | \$48,037,200      | \$24,481,800     | \$7,839,000      | \$35,954,000     |
| Per NSF                                                                                  | \$317                | \$310            | \$410             | \$330            | \$371             | \$403            | \$375             | \$490            | \$314            | \$144            |
| Fee of \$1.00 Per GSF                                                                    |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$673,200            | \$4,081,210      | \$86,291,463      | \$61,862,767     | \$85,022,950      | \$23,354,000     | \$43,877,200      | \$21,781,700     | \$5,595,000      | \$29,129,000     |
| Per NSF                                                                                  | \$240                | \$204            | \$355             | \$279            | \$355             | \$365            | \$343             | \$436            | \$224            | \$117            |
| Middle Scenario                                                                          | \$781,800            | \$5,122,410      | \$90,425,663      | \$63,038,767     | \$87,165,950      | \$24,650,000     | \$45,701,200      | \$23,031,100     | \$6,655,000      | \$31,220,000     |
| Per NSF                                                                                  | \$279                | \$256            | \$372             | \$285            | \$363             | \$385            | \$357             | \$461            | \$266            | \$125            |
| High Scenario                                                                            | \$890,400            | \$6,222,410      | \$100,030,863     | \$73,390,567     | \$89,308,950      | \$25,898,000     | \$48,197,200      | \$24,548,500     | \$7,864,000      | \$36,204,000     |
| Per NSF                                                                                  | \$318                | \$311            | \$411             | \$331            | \$372             | \$405            | \$377             | \$491            | \$315            | \$145            |
| Fee of \$2.00 Per GSF                                                                    |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$676,000            | \$4,101,220      | \$86,595,525      | \$62,108,933     | \$85,322,700      | \$23,434,000     | \$44,037,200      | \$21,848,400     | \$5,620,000      | \$29,379,000     |

**Table 44**  
**Return on Equity Analysis**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                       | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse     |
|-----------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|---------------|
| Per NSF               | \$241                | \$205           | \$356          | \$280          | \$356           | \$366          | \$344           | \$437         | \$225       | \$118         |
| Middle Scenario       | \$784,600            | \$5,142,420     | \$90,729,725   | \$63,284,933   | \$87,465,700    | \$24,730,000   | \$45,861,200    | \$23,097,800  | \$6,680,000 | \$31,470,000  |
| Per NSF               | \$280                | \$257           | \$373          | \$286          | \$365           | \$386          | \$358           | \$462         | \$267       | \$126         |
| High Scenario         | \$893,200            | \$6,242,420     | \$100,334,925  | \$73,636,733   | \$89,608,700    | \$25,978,000   | \$48,357,200    | \$24,615,200  | \$7,889,000 | \$36,454,000  |
| Per NSF               | \$319                | \$312           | \$412          | \$332          | \$374           | \$406          | \$378           | \$492         | \$316       | \$146         |
| Fee of \$3.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$678,800            | \$4,121,230     | \$86,899,588   | \$62,355,100   | \$85,622,450    | \$23,514,000   | \$44,197,200    | \$21,915,100  | \$5,645,000 | \$29,629,000  |
| Per NSF               | \$242                | \$206           | \$357          | \$281          | \$357           | \$367          | \$345           | \$438         | \$226       | \$119         |
| Middle Scenario       | \$787,400            | \$5,162,430     | \$91,033,788   | \$63,531,100   | \$87,765,450    | \$24,810,000   | \$46,021,200    | \$23,164,500  | \$6,705,000 | \$31,720,000  |
| Per NSF               | \$281                | \$258           | \$374          | \$287          | \$366           | \$388          | \$360           | \$463         | \$268       | \$127         |
| High Scenario         | \$896,000            | \$6,262,430     | \$100,638,988  | \$73,882,900   | \$89,908,450    | \$26,058,000   | \$48,517,200    | \$24,681,900  | \$7,914,000 | \$36,704,000  |
| Per NSF               | \$320                | \$313           | \$414          | \$333          | \$375           | \$407          | \$379           | \$494         | \$317       | \$147         |
| Fee of \$5.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$684,400            | \$4,161,250     | \$87,507,713   | \$62,847,433   | \$86,221,950    | \$23,674,000   | \$44,517,200    | \$22,048,500  | \$5,695,000 | \$30,129,000  |
| Per NSF               | \$244                | \$208           | \$360          | \$284          | \$360           | \$370          | \$348           | \$441         | \$228       | \$121         |
| Middle Scenario       | \$793,000            | \$5,202,450     | \$91,641,913   | \$64,023,433   | \$88,364,950    | \$24,970,000   | \$46,341,200    | \$23,297,900  | \$6,755,000 | \$32,220,000  |
| Per NSF               | \$283                | \$260           | \$377          | \$289          | \$368           | \$390          | \$362           | \$466         | \$270       | \$129         |
| High Scenario         | \$901,600            | \$6,302,450     | \$101,247,113  | \$74,375,233   | \$90,507,950    | \$26,218,000   | \$48,837,200    | \$24,815,300  | \$7,964,000 | \$37,204,000  |
| Per NSF               | \$322                | \$315           | \$416          | \$336          | \$377           | \$410          | \$382           | \$496         | \$319       | \$149         |
| Fee of \$7.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$690,000            | \$4,201,270     | \$88,115,838   | \$63,339,767   | \$86,821,450    | \$23,834,000   | \$44,837,200    | \$22,181,900  | \$5,745,000 | \$30,629,000  |
| Per NSF               | \$246                | \$210           | \$362          | \$286          | \$362           | \$372          | \$350           | \$444         | \$230       | \$123         |
| Middle Scenario       | \$798,600            | \$5,242,470     | \$92,250,038   | \$64,515,767   | \$88,964,450    | \$25,130,000   | \$46,661,200    | \$23,431,300  | \$6,805,000 | \$32,720,000  |
| Per NSF               | \$285                | \$262           | \$379          | \$291          | \$371           | \$393          | \$365           | \$469         | \$272       | \$131         |
| High Scenario         | \$907,200            | \$6,342,470     | \$101,855,238  | \$74,867,567   | \$91,107,450    | \$26,378,000   | \$49,157,200    | \$24,948,700  | \$8,014,000 | \$37,704,000  |
| Per NSF               | \$324                | \$317           | \$419          | \$338          | \$380           | \$412          | \$384           | \$499         | \$321       | \$151         |
| <b>Net Profit</b>     |                      |                 |                |                |                 |                |                 |               |             |               |
| No Fee                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$110,800            | \$488,800       | \$7,071,475    | \$12,469,930   | \$6,359,200     | (\$5,706,727)  | \$7,066,436     | \$1,250,800   | \$793,636   | (\$129,000)   |
| Return on Equity (1)  | 44%                  | 20%             | 7%             | 27%            | 6%              | -41%           | 23%             | 9%            | 38%         | -1%           |
| Middle Scenario       | \$132,400            | \$903,600       | \$23,617,025   | \$13,031,350   | \$14,244,840    | (\$1,831,818)  | \$5,766,073     | \$3,829,033   | \$551,818   | \$1,530,000   |
| Return on Equity (1)  | 45%                  | 30%             | 22%            | 28%            | 14%             | -12%           | 18%             | 27%           | 22%         | 13%           |
| High Scenario         | \$154,000            | \$1,077,600     | \$24,351,700   | \$11,523,100   | \$22,130,480    | \$2,091,091    | \$3,793,709     | \$6,139,267   | \$979,182   | \$4,046,000   |
| Return on Equity (1)  | 46%                  | 29%             | 20%            | 21%            | 21%             | 13%            | 11%             | 40%           | 33%         | 30%           |
| Fee of \$1.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$108,000            | \$468,790       | \$6,767,413    | \$12,223,763   | \$6,059,450     | (\$5,786,727)  | \$6,906,436     | \$1,184,100   | \$768,636   | (\$379,000)   |
| Return on Equity (1)  | 43%                  | 19%             | 7%             | 26%            | 6%              | -41%           | 22%             | 9%            | 37%         | -3%           |
| Middle Scenario       | \$129,600            | \$883,590       | \$23,312,963   | \$12,785,183   | \$13,945,090    | (\$1,911,818)  | \$5,606,073     | \$3,762,333   | \$526,818   | \$1,280,000   |
| Return on Equity (1)  | 44%                  | 29%             | 21%            | 27%            | 13%             | -13%           | 18%             | 26%           | 21%         | 11%           |
| High Scenario         | \$151,200            | \$1,057,590     | \$24,047,638   | \$11,276,933   | \$21,830,730    | \$2,011,091    | \$3,633,709     | \$6,072,567   | \$954,182   | \$3,796,000   |
| Return on Equity (1)  | 45%                  | 28%             | 20%            | 20%            | 20%             | 13%            | 11%             | 40%           | 32%         | 28%           |
| Fee of \$2.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$105,200            | \$448,780       | \$6,463,350    | \$11,977,597   | \$5,759,700     | (\$5,866,727)  | \$6,746,436     | \$1,117,400   | \$743,636   | (\$629,000)   |
| Return on Equity (1)  | 41%                  | 18%             | 6%             | 26%            | 6%              | -42%           | 22%             | 8%            | 35%         | -6%           |
| Middle Scenario       | \$126,800            | \$863,580       | \$23,008,900   | \$12,539,017   | \$13,645,340    | (\$1,991,818)  | \$5,446,073     | \$3,695,633   | \$501,818   | \$1,030,000   |
| Return on Equity (1)  | 43%                  | 28%             | 21%            | 26%            | 13%             | -13%           | 17%             | 26%           | 20%         | 9%            |
| High Scenario         | \$148,400            | \$1,037,580     | \$23,743,575   | \$11,030,767   | \$21,530,980    | \$1,931,091    | \$3,473,709     | \$6,005,867   | \$929,182   | \$3,546,000   |
| Return on Equity (1)  | 44%                  | 28%             | 20%            | 20%            | 20%             | 12%            | 10%             | 39%           | 31%         | 26%           |
| Fee of \$3.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$102,400            | \$428,770       | \$6,159,288    | \$11,731,430   | \$5,459,950     | (\$5,946,727)  | \$6,586,436     | \$1,050,700   | \$718,636   | (\$879,000)   |
| Return on Equity (1)  | 40%                  | 17%             | 6%             | 25%            | 5%              | -42%           | 21%             | 8%            | 34%         | -8%           |
| Middle Scenario       | \$124,000            | \$843,570       | \$22,704,838   | \$12,292,850   | \$13,345,590    | (\$2,071,818)  | \$5,286,073     | \$3,628,933   | \$476,818   | \$780,000     |
| Return on Equity (1)  | 42%                  | 27%             | 21%            | 26%            | 13%             | -14%           | 16%             | 25%           | 19%         | 7%            |
| High Scenario         | \$145,600            | \$1,017,570     | \$23,439,513   | \$10,784,600   | \$21,231,230    | \$1,851,091    | \$3,313,709     | \$5,939,167   | \$904,182   | \$3,296,000   |
| Return on Equity (1)  | 43%                  | 27%             | 19%            | 19%            | 20%             | 12%            | 10%             | 39%           | 30%         | 24%           |
| Fee of \$5.00 Per GSF |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario          | \$96,800             | \$388,750       | \$5,551,163    | \$11,239,097   | \$4,860,450     | (\$6,106,727)  | \$6,266,436     | \$917,300     | \$668,636   | (\$1,379,000) |
| Return on Equity (1)  | 38%                  | 16%             | 5%             | 24%            | 5%              | -43%           | 20%             | 7%            | 31%         | -12%          |
| Middle Scenario       | \$118,400            | \$803,550       | \$22,096,713   | \$11,800,517   | \$12,746,090    | (\$2,231,818)  | \$4,966,073     | \$3,495,533   | \$426,818   | \$280,000     |
| Return on Equity (1)  | 40%                  | 26%             | 20%            | 25%            | 12%             | -15%           | 15%             | 24%           | 17%         | 2%            |

**Table 44**  
**Return on Equity Analysis**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                      | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse     |
|--------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|---------------|
| High Scenario                        | \$140,000            | \$977,550       | \$22,831,388   | \$10,292,267   | \$20,631,730    | \$1,691,091    | \$2,993,709     | \$5,805,767   | \$854,182   | \$2,796,000   |
| Return on Equity (1)                 | 41%                  | 26%             | 19%            | 18%            | 19%             | 11%            | 9%              | 37%           | 29%         | 20%           |
| Fee of \$7.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$91,200             | \$348,730       | \$4,943,038    | \$10,746,763   | \$4,260,950     | (\$6,266,727)  | \$5,946,436     | \$783,900     | \$618,636   | (\$1,879,000) |
| Return on Equity (1)                 | 35%                  | 14%             | 5%             | 23%            | 4%              | -44%           | 19%             | 6%            | 29%         | -16%          |
| Middle Scenario                      | \$112,800            | \$763,530       | \$21,488,588   | \$11,308,183   | \$12,146,590    | (\$2,391,818)  | \$4,646,073     | \$3,362,133   | \$376,818   | (\$220,000)   |
| Return on Equity (1)                 | 38%                  | 24%             | 19%            | 23%            | 11%             | -16%           | 14%             | 23%           | 15%         | -2%           |
| High Scenario                        | \$134,400            | \$937,530       | \$22,223,263   | \$9,799,933    | \$20,032,230    | \$1,531,091    | \$2,673,709     | \$5,672,367   | \$804,182   | \$2,296,000   |
| Return on Equity (1)                 | 40%                  | 25%             | 18%            | 17%            | 18%             | 10%            | 8%              | 36%           | 27%         | 16%           |
| <b>Assumed Equity Investment</b>     |                      |                 |                |                |                 |                |                 |               |             |               |
| No Fee                               |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$201,120            | \$1,218,360     | \$25,796,220   | \$18,484,980   | \$25,416,960    | \$9,309,600    | \$17,486,880    | \$10,857,500  | \$2,785,000 | \$14,439,500  |
| Middle Scenario                      | \$233,700            | \$1,530,720     | \$27,036,480   | \$18,837,780   | \$26,059,860    | \$9,828,000    | \$18,216,480    | \$11,482,200  | \$3,315,000 | \$15,485,000  |
| High Scenario                        | \$266,280            | \$1,860,720     | \$29,918,040   | \$21,943,320   | \$26,702,760    | \$10,327,200   | \$19,214,880    | \$12,240,900  | \$3,919,500 | \$17,977,000  |
| Fee of \$1.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$201,960            | \$1,224,363     | \$25,887,439   | \$18,558,830   | \$25,506,885    | \$9,341,600    | \$17,550,880    | \$10,890,850  | \$2,797,500 | \$14,564,500  |
| Middle Scenario                      | \$234,540            | \$1,536,723     | \$27,127,699   | \$18,911,630   | \$26,149,785    | \$9,860,000    | \$18,280,480    | \$11,515,550  | \$3,327,500 | \$15,610,000  |
| High Scenario                        | \$267,120            | \$1,866,723     | \$30,009,259   | \$22,017,170   | \$26,792,685    | \$10,359,200   | \$19,278,880    | \$12,274,250  | \$3,932,000 | \$18,102,000  |
| Fee of \$2.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$202,800            | \$1,230,366     | \$25,978,658   | \$18,632,680   | \$25,596,810    | \$9,373,600    | \$17,614,880    | \$10,924,200  | \$2,810,000 | \$14,689,500  |
| Middle Scenario                      | \$235,380            | \$1,542,726     | \$27,218,918   | \$18,985,480   | \$26,239,710    | \$9,892,000    | \$18,344,480    | \$11,548,900  | \$3,340,000 | \$15,735,000  |
| High Scenario                        | \$267,960            | \$1,872,726     | \$30,100,478   | \$22,091,020   | \$26,882,610    | \$10,391,200   | \$19,342,880    | \$12,307,600  | \$3,944,500 | \$18,227,000  |
| Fee of \$3.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$203,640            | \$1,236,369     | \$26,069,876   | \$18,706,530   | \$25,686,735    | \$9,405,600    | \$17,678,880    | \$10,957,550  | \$2,822,500 | \$14,814,500  |
| Middle Scenario                      | \$236,220            | \$1,548,729     | \$27,310,136   | \$19,059,330   | \$26,329,635    | \$9,924,000    | \$18,408,480    | \$11,582,250  | \$3,352,500 | \$15,860,000  |
| High Scenario                        | \$268,800            | \$1,878,729     | \$30,191,696   | \$22,164,870   | \$26,972,535    | \$10,423,200   | \$19,406,880    | \$12,340,950  | \$3,957,000 | \$18,352,000  |
| Fee of \$5.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$205,320            | \$1,248,375     | \$26,252,314   | \$18,854,230   | \$25,866,585    | \$9,469,600    | \$17,806,880    | \$11,024,250  | \$2,847,500 | \$15,064,500  |
| Middle Scenario                      | \$237,900            | \$1,560,735     | \$27,492,574   | \$19,207,030   | \$26,509,485    | \$9,988,000    | \$18,536,480    | \$11,648,950  | \$3,377,500 | \$16,110,000  |
| High Scenario                        | \$270,480            | \$1,890,735     | \$30,374,134   | \$22,312,570   | \$27,152,385    | \$10,487,200   | \$19,534,880    | \$12,407,650  | \$3,982,000 | \$18,602,000  |
| Fee of \$7.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |               |
| Low Scenario                         | \$207,000            | \$1,260,381     | \$26,434,751   | \$19,001,930   | \$26,046,435    | \$9,533,600    | \$17,934,880    | \$11,090,950  | \$2,872,500 | \$15,314,500  |
| Middle Scenario                      | \$239,580            | \$1,572,741     | \$27,675,011   | \$19,354,730   | \$26,689,335    | \$10,052,000   | \$18,664,480    | \$11,715,650  | \$3,402,500 | \$16,360,000  |
| High Scenario                        | \$272,160            | \$1,902,741     | \$30,556,571   | \$22,460,270   | \$27,332,235    | \$10,551,200   | \$19,662,880    | \$12,474,350  | \$4,007,000 | \$18,852,000  |
| <b>Equity Investment Assumptions</b> |                      |                 |                |                |                 |                |                 |               |             |               |
| Equity as a % of TDC                 | 30%                  | 30%             | 30%            | 30%            | 30%             | 40%            | 40%             | 50%           | 50%         | 50%           |
| Assumed Investment Period (Months)   | 15                   | 24              | 48             | 30             | 48              | 18             | 21              | 15            | 9           | 9             |

(1) Return on equity measured as net project value divided by the number of years equity investment divided by total equity investment.

Source: DRA.

**Table 45**  
**Land Residual Analysis**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                                                          | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail        | Warehouse      |
|------------------------------------------------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|---------------|----------------|
| <i>Tenure</i>                                                                            | <i>Owner</i>         | <i>Owner</i>    | <i>Owner</i>   | <i>Renter</i>  | <i>Renter</i>   | -              | -               | -             | -             | -              |
| <i>Residential Units</i>                                                                 | 1                    | 10              | 232            | 300            | 285             | -              | -               | -             | -             | -              |
| <i>Residential Net SF</i>                                                                | 2,800                | 20,000          | 227,250        | 212,250        | 230,800         | -              | -               | -             | -             | -              |
| <i>Site Area (SF)</i>                                                                    | 6,250                | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734        | 121,968       | 696,960        |
| <i>Total Net SF</i>                                                                      | 2,800                | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000        | 25,000        | 250,000        |
| <b>Total Gross SF (Excluding Parking)</b>                                                | <b>2,800</b>         | <b>20,010</b>   | <b>304,063</b> | <b>246,167</b> | <b>299,750</b>  | <b>80,000</b>  | <b>160,000</b>  | <b>66,700</b> | <b>25,000</b> | <b>250,000</b> |
| <i>Approximate Building Stories</i>                                                      | 2 Stories            | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories     | 1 Stories     | 1 Stories      |
| <b>Assumed Land Value/SF Site Area</b>                                                   |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$32                 | \$70            | \$107          | \$60           | \$147           | \$41           | \$81            | \$19          | \$10          | \$7            |
| Middle Scenario                                                                          | \$44                 | \$90            | \$160          | \$69           | \$229           | \$45           | \$90            | \$24          | \$15          | \$10           |
| High Scenario                                                                            | \$56                 | \$200           | \$213          | \$103          | \$311           | \$60           | \$120           | \$32          | \$20          | \$15           |
| <b>Total Annual Net Operating Income, Rental</b>                                         |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             |                      |                 |                | \$3,704,327    | \$4,554,120     | \$966,200      | \$2,793,100     | \$1,722,435   | \$350,000     | \$1,725,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$16.72        | \$18.99         | \$15.10        | \$21.82         | \$34.45       | \$14.00       | \$6.90         |
| Middle Scenario                                                                          |                      |                 |                | \$5,449,598    | \$7,201,452     | \$1,250,600    | \$2,821,900     | \$2,009,508   | \$395,000     | \$1,950,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$24.60        | \$30.03         | \$19.54        | \$22.05         | \$40.19       | \$15.80       | \$7.80         |
| High Scenario                                                                            |                      |                 |                | \$4,233,375    | \$5,556,984     | \$1,535,000    | \$2,850,700     | \$2,296,580   | \$485,000     | \$2,400,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$19.11        | \$23.17         | \$23.98        | \$22.27         | \$45.93       | \$19.40       | \$9.60         |
| <b>Cap Rate</b>                                                                          |                      |                 |                | <b>4.50%</b>   | <b>4.50%</b>    | <b>5.00%</b>   | <b>5.00%</b>    | <b>7.00%</b>  | <b>5.00%</b>  | <b>5.50%</b>   |
| Minum Return on Equity                                                                   | 10.00%               | 8.00%           | 8.00%          | 8.00%          | 8.00%           | 8.00%          | 8.00%           | 8.00%         | 8.00%         | 8.00%          |
| <b>Capitalized Value, Rental Properties</b>                                              |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             |                      |                 |                | \$82,318,367   | \$101,202,667   | \$19,324,000   | \$55,862,000    | \$24,606,214  | \$7,000,000   | \$31,363,636   |
| Middle Scenario                                                                          |                      |                 |                | \$121,102,167  | \$160,032,267   | \$25,012,000   | \$56,438,000    | \$28,707,250  | \$7,900,000   | \$35,454,545   |
| High Scenario                                                                            |                      |                 |                | \$94,075,000   | \$123,488,533   | \$30,700,000   | \$57,014,000    | \$32,808,286  | \$9,700,000   | \$43,636,364   |
| <b>Net Home Sales Proceeds</b>                                                           |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$781,200            | \$4,550,000     | \$93,058,875   |                |                 |                |                 |               |               |                |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000     | \$113,738,625  |                |                 |                |                 |               |               |                |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000     | \$124,078,500  |                |                 |                |                 |               |               |                |
| <b>Total Market Value (Capitalized NOI for Rental; Net Sales Proceeds for Ownership)</b> |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$781,200            | \$4,550,000     | \$93,058,875   | \$82,318,367   | \$101,202,667   | \$19,324,000   | \$55,862,000    | \$24,606,214  | \$7,000,000   | \$31,363,636   |
| Per NSF                                                                                  | \$279                | \$228           | \$383          | \$372          | \$422           | \$302          | \$436           | \$492         | \$280         | \$125          |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000     | \$113,738,625  | \$121,102,167  | \$160,032,267   | \$25,012,000   | \$56,438,000    | \$28,707,250  | \$7,900,000   | \$35,454,545   |
| Per NSF                                                                                  | \$326                | \$300           | \$468          | \$547          | \$667           | \$391          | \$441           | \$574         | \$316         | \$142          |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000     | \$124,078,500  | \$94,075,000   | \$123,488,533   | \$30,700,000   | \$57,014,000    | \$32,808,286  | \$9,700,000   | \$43,636,364   |
| Per NSF                                                                                  | \$372                | \$364           | \$510          | \$425          | \$515           | \$480          | \$445           | \$656         | \$388         | \$175          |
| <b>Total Nexus Fee at Fee Level of:</b>                                                  |                      |                 |                |                |                 |                |                 |               |               |                |
| Fee of \$1.00 Per GSF                                                                    | \$2,800              | \$20,010        | \$304,063      | \$246,167      | \$299,750       | \$80,000       | \$160,000       | \$66,700      | \$25,000      | \$250,000      |
| Fee of \$2.00 Per GSF                                                                    | \$5,600              | \$40,020        | \$608,125      | \$492,333      | \$599,500       | \$160,000      | \$320,000       | \$133,400     | \$50,000      | \$500,000      |
| Fee of \$3.00 Per GSF                                                                    | \$8,400              | \$60,030        | \$912,188      | \$738,500      | \$899,250       | \$240,000      | \$480,000       | \$200,100     | \$75,000      | \$750,000      |
| Fee of \$5.00 Per GSF                                                                    | \$14,000             | \$100,050       | \$1,520,313    | \$1,230,833    | \$1,498,750     | \$400,000      | \$800,000       | \$333,500     | \$125,000     | \$1,250,000    |
| Fee of \$7.00 Per GSF                                                                    | \$19,600             | \$140,070       | \$2,128,438    | \$1,723,167    | \$2,098,250     | \$560,000      | \$1,120,000     | \$466,900     | \$175,000     | \$1,750,000    |
| <b>Less: Total Development Cost, Excluding Land</b>                                      |                      |                 |                |                |                 |                |                 |               |               |                |
| No Fee                                                                                   |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$470,400            | \$3,361,200     | \$81,326,400   | \$53,775,600   | \$80,881,200    | \$21,978,000   | \$41,125,200    | \$20,010,000  | \$4,350,000   | \$24,000,000   |
| Per NSF                                                                                  | \$168                | \$168           | \$334          | \$243          | \$337           | \$343          | \$321           | \$400         | \$174         | \$96           |
| Middle Scenario                                                                          | \$504,000            | \$4,202,400     | \$83,151,600   | \$53,775,600   | \$80,881,200    | \$23,130,000   | \$42,661,200    | \$20,810,400  | \$4,800,000   | \$24,000,000   |
| Per NSF                                                                                  | \$180                | \$210           | \$342          | \$243          | \$337           | \$361          | \$333           | \$416         | \$192         | \$96           |
| High Scenario                                                                            | \$537,600            | \$4,202,400     | \$90,448,800   | \$59,684,400   | \$80,881,200    | \$23,898,000   | \$44,197,200    | \$21,610,800  | \$5,400,000   | \$25,500,000   |
| Per NSF                                                                                  | \$192                | \$210           | \$372          | \$269          | \$337           | \$373          | \$345           | \$432         | \$216         | \$102          |
| Fee of \$1.00 Per GSF                                                                    |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$473,200            | \$3,381,210     | \$81,630,463   | \$54,021,767   | \$81,180,950    | \$22,058,000   | \$41,285,200    | \$20,076,700  | \$4,375,000   | \$24,250,000   |
| Per NSF                                                                                  | \$169                | \$169           | \$336          | \$244          | \$339           | \$345          | \$323           | \$402         | \$175         | \$97           |
| Middle Scenario                                                                          | \$506,800            | \$4,222,410     | \$83,455,663   | \$54,021,767   | \$81,180,950    | \$23,210,000   | \$42,821,200    | \$20,877,100  | \$4,825,000   | \$24,250,000   |
| Per NSF                                                                                  | \$181                | \$211           | \$343          | \$244          | \$339           | \$363          | \$335           | \$418         | \$193         | \$97           |

**Table 45**  
**Land Residual Analysis**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                   | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|---------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| High Scenario                                     | \$540,400            | \$4,222,410     | \$90,752,863   | \$59,930,567   | \$81,180,950    | \$23,978,000   | \$44,357,200    | \$21,677,500  | \$5,425,000 | \$25,750,000 |
| Per NSF                                           | \$193                | \$211           | \$373          | \$271          | \$339           | \$375          | \$347           | \$434         | \$217       | \$103        |
| Fee of \$2.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$476,000            | \$3,401,220     | \$81,934,525   | \$54,267,933   | \$81,480,700    | \$22,138,000   | \$41,445,200    | \$20,143,400  | \$4,400,000 | \$24,500,000 |
| Per NSF                                           | \$170                | \$170           | \$337          | \$245          | \$340           | \$346          | \$324           | \$403         | \$176       | \$98         |
| Middle Scenario                                   | \$509,600            | \$4,242,420     | \$83,759,725   | \$54,267,933   | \$81,480,700    | \$23,290,000   | \$42,981,200    | \$20,943,800  | \$4,850,000 | \$24,500,000 |
| Per NSF                                           | \$182                | \$212           | \$344          | \$245          | \$340           | \$364          | \$336           | \$419         | \$194       | \$98         |
| High Scenario                                     | \$543,200            | \$4,242,420     | \$91,056,925   | \$60,176,733   | \$81,480,700    | \$24,058,000   | \$44,517,200    | \$21,744,200  | \$5,450,000 | \$26,000,000 |
| Per NSF                                           | \$194                | \$212           | \$374          | \$272          | \$340           | \$376          | \$348           | \$435         | \$218       | \$104        |
| Fee of \$3.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$478,800            | \$3,421,230     | \$82,238,588   | \$54,514,100   | \$81,780,450    | \$22,218,000   | \$41,605,200    | \$20,210,100  | \$4,425,000 | \$24,750,000 |
| Per NSF                                           | \$171                | \$171           | \$338          | \$246          | \$341           | \$347          | \$325           | \$404         | \$177       | \$99         |
| Middle Scenario                                   | \$512,400            | \$4,262,430     | \$84,063,788   | \$54,514,100   | \$81,780,450    | \$23,370,000   | \$43,141,200    | \$21,010,500  | \$4,875,000 | \$24,750,000 |
| Per NSF                                           | \$183                | \$213           | \$346          | \$246          | \$341           | \$365          | \$337           | \$420         | \$195       | \$99         |
| High Scenario                                     | \$546,000            | \$4,262,430     | \$91,360,988   | \$60,422,900   | \$81,780,450    | \$24,138,000   | \$44,677,200    | \$21,810,900  | \$5,475,000 | \$26,250,000 |
| Per NSF                                           | \$195                | \$213           | \$376          | \$273          | \$341           | \$377          | \$349           | \$436         | \$219       | \$105        |
| Fee of \$5.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$484,400            | \$3,461,250     | \$82,846,713   | \$55,006,433   | \$82,379,950    | \$22,378,000   | \$41,925,200    | \$20,343,500  | \$4,475,000 | \$25,250,000 |
| Per NSF                                           | \$173                | \$173           | \$341          | \$248          | \$344           | \$350          | \$328           | \$407         | \$179       | \$101        |
| Middle Scenario                                   | \$518,000            | \$4,302,450     | \$84,671,913   | \$55,006,433   | \$82,379,950    | \$23,530,000   | \$43,461,200    | \$21,143,900  | \$4,925,000 | \$25,250,000 |
| Per NSF                                           | \$185                | \$215           | \$348          | \$248          | \$344           | \$368          | \$340           | \$423         | \$197       | \$101        |
| High Scenario                                     | \$551,600            | \$4,302,450     | \$91,969,113   | \$60,915,233   | \$82,379,950    | \$24,298,000   | \$44,997,200    | \$21,944,300  | \$5,525,000 | \$26,750,000 |
| Per NSF                                           | \$197                | \$215           | \$378          | \$275          | \$344           | \$380          | \$352           | \$439         | \$221       | \$107        |
| Fee of \$7.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$490,000            | \$3,501,270     | \$83,454,838   | \$55,498,767   | \$82,979,450    | \$22,538,000   | \$42,245,200    | \$20,476,900  | \$4,525,000 | \$25,750,000 |
| Per NSF                                           | \$175                | \$175           | \$343          | \$251          | \$346           | \$352          | \$330           | \$410         | \$181       | \$103        |
| Middle Scenario                                   | \$523,600            | \$4,342,470     | \$85,280,038   | \$55,498,767   | \$82,979,450    | \$23,690,000   | \$43,781,200    | \$21,277,300  | \$4,975,000 | \$25,750,000 |
| Per NSF                                           | \$187                | \$217           | \$351          | \$251          | \$346           | \$370          | \$342           | \$426         | \$199       | \$103        |
| High Scenario                                     | \$557,200            | \$4,342,470     | \$92,577,238   | \$61,407,567   | \$82,979,450    | \$24,458,000   | \$45,317,200    | \$22,077,700  | \$5,575,000 | \$27,250,000 |
| Per NSF                                           | \$199                | \$217           | \$381          | \$277          | \$346           | \$382          | \$354           | \$442         | \$223       | \$109        |
| <b>Less: Assumed Return on Equity (See Below)</b> |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                                            |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,112             | \$161,338       | \$7,807,334    | \$3,226,536    | \$7,764,595     | \$1,054,944    | \$2,303,011     | \$1,000,500   | \$130,500   | \$720,000    |
| Middle Scenario                                   | \$15,120             | \$201,715       | \$7,982,554    | \$3,226,536    | \$7,764,595     | \$1,110,240    | \$2,389,027     | \$1,040,520   | \$144,000   | \$720,000    |
| High Scenario                                     | \$16,128             | \$201,715       | \$8,683,085    | \$3,581,064    | \$7,764,595     | \$1,147,104    | \$2,475,043     | \$1,080,540   | \$162,000   | \$765,000    |
| Fee of \$1.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,196             | \$162,298       | \$7,836,524    | \$3,241,306    | \$7,793,371     | \$1,058,784    | \$2,311,971     | \$1,003,835   | \$131,250   | \$727,500    |
| Middle Scenario                                   | \$15,204             | \$202,676       | \$8,011,744    | \$3,241,306    | \$7,793,371     | \$1,114,080    | \$2,397,987     | \$1,043,855   | \$144,750   | \$727,500    |
| High Scenario                                     | \$16,212             | \$202,676       | \$8,712,275    | \$3,595,834    | \$7,793,371     | \$1,150,944    | \$2,484,003     | \$1,083,875   | \$162,750   | \$772,500    |
| Fee of \$2.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,280             | \$163,259       | \$7,865,714    | \$3,256,076    | \$7,822,147     | \$1,062,624    | \$2,320,931     | \$1,007,170   | \$132,000   | \$735,000    |
| Middle Scenario                                   | \$15,288             | \$203,636       | \$8,040,934    | \$3,256,076    | \$7,822,147     | \$1,117,920    | \$2,406,947     | \$1,047,190   | \$145,500   | \$735,000    |
| High Scenario                                     | \$16,296             | \$203,636       | \$8,741,465    | \$3,610,604    | \$7,822,147     | \$1,154,784    | \$2,492,963     | \$1,087,210   | \$163,500   | \$780,000    |
| Fee of \$3.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,364             | \$164,219       | \$7,894,904    | \$3,270,846    | \$7,850,923     | \$1,066,464    | \$2,329,891     | \$1,010,505   | \$132,750   | \$742,500    |
| Middle Scenario                                   | \$15,372             | \$204,597       | \$8,070,124    | \$3,270,846    | \$7,850,923     | \$1,121,760    | \$2,415,907     | \$1,050,525   | \$146,250   | \$742,500    |
| High Scenario                                     | \$16,380             | \$204,597       | \$8,770,655    | \$3,625,374    | \$7,850,923     | \$1,158,624    | \$2,501,923     | \$1,090,545   | \$164,250   | \$787,500    |
| Fee of \$5.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,532             | \$166,140       | \$7,953,284    | \$3,300,386    | \$7,908,475     | \$1,074,144    | \$2,347,811     | \$1,017,175   | \$134,250   | \$757,500    |
| Middle Scenario                                   | \$15,540             | \$206,518       | \$8,128,504    | \$3,300,386    | \$7,908,475     | \$1,129,440    | \$2,433,827     | \$1,057,195   | \$147,750   | \$757,500    |
| High Scenario                                     | \$16,548             | \$206,518       | \$8,829,035    | \$3,654,914    | \$7,908,475     | \$1,166,304    | \$2,519,843     | \$1,097,215   | \$165,750   | \$802,500    |
| Fee of \$7.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,700             | \$168,061       | \$8,011,664    | \$3,329,926    | \$7,966,027     | \$1,081,824    | \$2,365,731     | \$1,023,845   | \$135,750   | \$772,500    |
| Middle Scenario                                   | \$15,708             | \$208,439       | \$8,186,884    | \$3,329,926    | \$7,966,027     | \$1,137,120    | \$2,451,747     | \$1,063,865   | \$149,250   | \$772,500    |
| High Scenario                                     | \$16,716             | \$208,439       | \$8,887,415    | \$3,684,454    | \$7,966,027     | \$1,173,984    | \$2,537,763     | \$1,103,885   | \$167,250   | \$817,500    |

**Table 45**  
**Land Residual Analysis**  
**Low Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                      | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|--------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| <b>Residual Land Value</b>           |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                               |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$296,688            | \$1,027,462     | \$3,925,141    | \$25,316,231   | \$12,556,871    | (\$3,708,944)  | \$12,433,789    | \$3,595,714   | \$2,519,500 | \$6,643,636  |
| Per NSF                              | \$47.47              | \$102.75        | \$90.11        | \$193.73       | \$480.44        | (\$115.90)     | \$388.56        | \$40.07       | \$20.66     | \$9.53       |
| Middle Scenario                      | \$392,280            | \$1,601,885     | \$22,604,471   | \$64,100,031   | \$71,386,471    | \$771,760      | \$11,387,773    | \$6,856,330   | \$2,956,000 | \$10,734,545 |
| Per NSF                              | \$62.76              | \$160.19        | \$518.93       | \$490.51       | \$2,731.35      | \$24.12        | \$355.87        | \$76.41       | \$24.24     | \$15.40      |
| High Scenario                        | \$487,872            | \$2,875,885     | \$24,946,615   | \$30,809,536   | \$34,842,738    | \$5,654,896    | \$10,341,757    | \$10,116,946  | \$4,138,000 | \$17,371,364 |
| Per NSF                              | \$78.06              | \$287.59        | \$572.70       | \$235.76       | \$1,333.13      | \$176.72       | \$323.18        | \$112.74      | \$33.93     | \$24.92      |
| Fee of \$1.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$293,888            | \$1,007,452     | \$3,621,078    | \$25,070,064   | \$12,257,121    | (\$3,788,944)  | \$12,273,789    | \$3,529,014   | \$2,494,500 | \$6,393,636  |
| Per NSF                              | \$47.02              | \$100.75        | \$83.13        | \$191.84       | \$468.97        | (\$118.40)     | \$383.56        | \$39.33       | \$20.45     | \$9.17       |
| Middle Scenario                      | \$390,404            | \$1,621,292     | \$22,446,438   | \$63,839,094   | \$71,057,945    | \$743,216      | \$11,304,829    | \$6,826,315   | \$2,943,750 | \$10,477,045 |
| Per NSF                              | \$62.46              | \$162.13        | \$515.30       | \$488.51       | \$2,718.78      | \$23.23        | \$353.28        | \$76.07       | \$24.14     | \$15.03      |
| High Scenario                        | \$484,988            | \$2,854,914     | \$24,613,363   | \$30,548,599   | \$34,514,212    | \$5,571,056    | \$10,172,797    | \$10,046,911  | \$4,112,250 | \$17,113,864 |
| Per NSF                              | \$77.60              | \$285.49        | \$565.05       | \$233.77       | \$1,320.56      | \$174.10       | \$317.90        | \$111.96      | \$33.72     | \$24.56      |
| Fee of \$2.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$291,088            | \$987,442       | \$3,317,016    | \$24,823,897   | \$11,957,371    | (\$3,868,944)  | \$12,113,789    | \$3,462,314   | \$2,469,500 | \$6,143,636  |
| Per NSF                              | \$46.57              | \$98.74         | \$76.15        | \$189.96       | \$457.51        | (\$120.90)     | \$378.56        | \$38.58       | \$20.25     | \$8.81       |
| Middle Scenario                      | \$387,520            | \$1,600,321     | \$22,113,186   | \$63,578,157   | \$70,729,419    | \$659,376      | \$11,135,869    | \$6,756,280   | \$2,918,000 | \$10,219,545 |
| Per NSF                              | \$62.00              | \$160.03        | \$507.65       | \$486.52       | \$2,706.21      | \$20.61        | \$348.00        | \$75.29       | \$23.92     | \$14.66      |
| High Scenario                        | \$482,104            | \$2,833,944     | \$24,280,110   | \$30,287,663   | \$34,185,686    | \$5,487,216    | \$10,003,837    | \$9,976,876   | \$4,086,500 | \$16,856,364 |
| Per NSF                              | \$77.14              | \$283.39        | \$557.39       | \$231.77       | \$1,307.99      | \$171.48       | \$312.62        | \$111.18      | \$33.50     | \$24.19      |
| Fee of \$3.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$288,288            | \$967,432       | \$3,012,953    | \$24,577,731   | \$11,657,621    | (\$3,948,944)  | \$11,953,789    | \$3,395,614   | \$2,444,500 | \$5,893,636  |
| Per NSF                              | \$46.13              | \$96.74         | \$69.17        | \$188.08       | \$446.04        | (\$123.40)     | \$373.56        | \$37.84       | \$20.04     | \$8.46       |
| Middle Scenario                      | \$383,628            | \$1,538,973     | \$21,604,714   | \$63,317,221   | \$70,400,893    | \$520,240      | \$10,880,893    | \$6,646,225   | \$2,878,750 | \$9,962,045  |
| Per NSF                              | \$61.38              | \$153.90        | \$495.98       | \$484.52       | \$2,693.64      | \$16.26        | \$340.03        | \$74.07       | \$23.60     | \$14.29      |
| High Scenario                        | \$479,220            | \$2,812,973     | \$23,946,858   | \$30,026,726   | \$33,857,160    | \$5,403,376    | \$9,834,877     | \$9,906,841   | \$4,060,750 | \$16,598,864 |
| Per NSF                              | \$76.68              | \$281.30        | \$549.74       | \$229.77       | \$1,295.42      | \$168.86       | \$307.34        | \$110.40      | \$33.29     | \$23.82      |
| Fee of \$5.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$282,688            | \$927,412       | \$2,404,828    | \$24,085,397   | \$11,058,121    | (\$4,108,944)  | \$11,633,789    | \$3,262,214   | \$2,394,500 | \$5,393,636  |
| Per NSF                              | \$45.23              | \$92.74         | \$55.21        | \$184.31       | \$423.10        | (\$128.40)     | \$363.56        | \$36.35       | \$19.63     | \$7.74       |
| Middle Scenario                      | \$377,860            | \$1,497,032     | \$20,938,209   | \$62,795,347   | \$69,743,841    | \$352,560      | \$10,542,973    | \$6,506,155   | \$2,827,250 | \$9,447,045  |
| Per NSF                              | \$60.46              | \$149.70        | \$480.68       | \$480.53       | \$2,668.50      | \$11.02        | \$329.47        | \$72.51       | \$23.18     | \$13.55      |
| High Scenario                        | \$473,452            | \$2,771,032     | \$23,280,353   | \$29,504,853   | \$33,200,108    | \$5,235,696    | \$9,496,957     | \$9,766,771   | \$4,009,250 | \$16,083,864 |
| Per NSF                              | \$75.75              | \$277.10        | \$534.44       | \$225.78       | \$1,270.28      | \$163.62       | \$296.78        | \$108.84      | \$32.87     | \$23.08      |
| Fee of \$7.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$276,500            | \$880,669       | \$1,592,373    | \$23,489,674   | \$10,257,189    | (\$4,295,824)  | \$11,251,069    | \$3,105,469   | \$2,339,250 | \$4,841,136  |
| Per NSF                              | \$44.24              | \$88.07         | \$36.56        | \$179.75       | \$392.45        | (\$134.24)     | \$351.60        | \$34.61       | \$19.18     | \$6.95       |
| Middle Scenario                      | \$372,092            | \$1,455,091     | \$20,271,704   | \$62,273,474   | \$69,086,789    | \$184,880      | \$10,205,053    | \$6,366,085   | \$2,775,750 | \$8,932,045  |
| Per NSF                              | \$59.53              | \$145.51        | \$465.37       | \$476.53       | \$2,643.36      | \$5.78         | \$318.91        | \$70.94       | \$22.76     | \$12.82      |
| High Scenario                        | \$467,684            | \$2,729,091     | \$22,613,848   | \$28,982,979   | \$32,543,056    | \$5,068,016    | \$9,159,037     | \$9,626,701   | \$3,957,750 | \$15,568,864 |
| Per NSF                              | \$74.83              | \$272.91        | \$519.14       | \$221.79       | \$1,245.14      | \$158.38       | \$286.22        | \$107.28      | \$32.45     | \$22.34      |
| <b>Equity Investment Assumptions</b> |                      |                 |                |                |                 |                |                 |               |             |              |
| Equity as a % of TDC                 | 30%                  | 30%             | 30%            | 30%            | 30%             | 40%            | 40%             | 50%           | 50%         | 50%          |
| Assumed Return on Equity             | 8%                   | 8%              | 8%             | 8%             | 8%              | 8%             | 8%              | 8%            | 8%          | 8%           |
| Assumed Investment Period (Months)   | 15                   | 24              | 48             | 30             | 48              | 18             | 21              | 15            | 9           | 9            |

Source: DRA.



**Table 46**  
**Land Residual Analysis**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                                                          | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail        | Warehouse      |
|------------------------------------------------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|---------------|----------------|
| <i>Tenure</i>                                                                            | <i>Owner</i>         | <i>Owner</i>    | <i>Owner</i>   | <i>Renter</i>  | <i>Renter</i>   | -              | -               | -             | -             | -              |
| <i>Residential Units</i>                                                                 | 1                    | 10              | 232            | 300            | 285             | -              | -               | -             | -             | -              |
| <i>Residential Net SF</i>                                                                | 2,800                | 20,000          | 227,250        | 212,250        | 230,800         | -              | -               | -             | -             | -              |
| <i>Site Area (SF)</i>                                                                    | 6,250                | 10,000          | 43,560         | 130,680        | 26,136          | 32,000         | 32,000          | 89,734        | 121,968       | 696,960        |
| <i>Total Net SF</i>                                                                      | 2,800                | 20,000          | 243,250        | 221,550        | 239,800         | 64,000         | 128,000         | 50,000        | 25,000        | 250,000        |
| <b>Total Gross SF (Excluding Parking)</b>                                                | <b>2,800</b>         | <b>20,010</b>   | <b>304,063</b> | <b>246,167</b> | <b>299,750</b>  | <b>80,000</b>  | <b>160,000</b>  | <b>66,700</b> | <b>25,000</b> | <b>250,000</b> |
| <i>Approximate Building Stories</i>                                                      | 2 Stories            | 3 Stories       | 12 Stories     | 5 Stories      | 20 Stories      | 5 Stories      | 12 Stories      | 4 Stories     | 1 Stories     | 1 Stories      |
| <b>Assumed Land Value/SF Site Area</b>                                                   |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$32                 | \$70            | \$107          | \$60           | \$147           | \$41           | \$81            | \$19          | \$10          | \$7            |
| Middle Scenario                                                                          | \$44                 | \$90            | \$160          | \$69           | \$229           | \$45           | \$90            | \$24          | \$15          | \$10           |
| High Scenario                                                                            | \$56                 | \$200           | \$213          | \$103          | \$311           | \$60           | \$120           | \$32          | \$20          | \$15           |
| <b>Total Annual Net Operating Income, Rental</b>                                         |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             |                      |                 |                | \$3,704,327    | \$4,554,120     | \$966,200      | \$2,793,100     | \$1,722,435   | \$350,000     | \$1,725,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$16.72        | \$18.99         | \$15.10        | \$21.82         | \$34.45       | \$14.00       | \$6.90         |
| Middle Scenario                                                                          |                      |                 |                | \$5,449,598    | \$7,201,452     | \$1,250,600    | \$2,821,900     | \$2,009,508   | \$395,000     | \$1,950,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$24.60        | \$30.03         | \$19.54        | \$22.05         | \$40.19       | \$15.80       | \$7.80         |
| High Scenario                                                                            |                      |                 |                | \$4,233,375    | \$5,556,984     | \$1,535,000    | \$2,850,700     | \$2,296,580   | \$485,000     | \$2,400,000    |
| NOI Per NSF                                                                              |                      |                 |                | \$19.11        | \$23.17         | \$23.98        | \$22.27         | \$45.93       | \$19.40       | \$9.60         |
| <b>Cap Rate</b>                                                                          |                      |                 |                | <b>5.00%</b>   | <b>5.00%</b>    | <b>5.50%</b>   | <b>5.50%</b>    | <b>7.50%</b>  | <b>5.50%</b>  | <b>6.00%</b>   |
| Minum Return on Equity                                                                   | 10.00%               | 8.00%           | 8.00%          | 8.00%          | 8.00%           | 8.00%          | 8.00%           | 8.00%         | 8.00%         | 8.00%          |
| <b>Capitalized Value, Rental Properties</b>                                              |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             |                      |                 |                | \$74,086,530   | \$91,082,400    | \$17,567,273   | \$50,783,636    | \$22,965,800  | \$6,363,636   | \$28,750,000   |
| Middle Scenario                                                                          |                      |                 |                | \$108,991,950  | \$144,029,040   | \$22,738,182   | \$51,307,273    | \$26,793,433  | \$7,181,818   | \$32,500,000   |
| High Scenario                                                                            |                      |                 |                | \$84,667,500   | \$111,139,680   | \$27,909,091   | \$51,830,909    | \$30,621,067  | \$8,818,182   | \$40,000,000   |
| <b>Net Home Sales Proceeds</b>                                                           |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$781,200            | \$4,550,000     | \$93,058,875   |                |                 |                |                 |               |               |                |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000     | \$113,738,625  |                |                 |                |                 |               |               |                |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000     | \$124,078,500  |                |                 |                |                 |               |               |                |
| <b>Total Market Value (Capitalized NOI for Rental; Net Sales Proceeds for Ownership)</b> |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$781,200            | \$4,550,000     | \$93,058,875   | \$74,086,530   | \$91,082,400    | \$17,567,273   | \$50,783,636    | \$22,965,800  | \$6,363,636   | \$28,750,000   |
| Per NSF                                                                                  | \$279                | \$228           | \$383          | \$334          | \$380           | \$274          | \$397           | \$459         | \$255         | \$115          |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000     | \$113,738,625  | \$108,991,950  | \$144,029,040   | \$22,738,182   | \$51,307,273    | \$26,793,433  | \$7,181,818   | \$32,500,000   |
| Per NSF                                                                                  | \$326                | \$300           | \$468          | \$492          | \$601           | \$355          | \$401           | \$536         | \$287         | \$130          |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000     | \$124,078,500  | \$84,667,500   | \$111,139,680   | \$27,909,091   | \$51,830,909    | \$30,621,067  | \$8,818,182   | \$40,000,000   |
| Per NSF                                                                                  | \$372                | \$364           | \$510          | \$382          | \$463           | \$436          | \$405           | \$612         | \$353         | \$160          |
| <b>Total Nexus Fee at Fee Level of:</b>                                                  |                      |                 |                |                |                 |                |                 |               |               |                |
| Fee of \$1.00 Per GSF                                                                    | \$2,800              | \$20,010        | \$304,063      | \$246,167      | \$299,750       | \$80,000       | \$160,000       | \$66,700      | \$25,000      | \$250,000      |
| Fee of \$2.00 Per GSF                                                                    | \$5,600              | \$40,020        | \$608,125      | \$492,333      | \$599,500       | \$160,000      | \$320,000       | \$133,400     | \$50,000      | \$500,000      |
| Fee of \$3.00 Per GSF                                                                    | \$8,400              | \$60,030        | \$912,188      | \$738,500      | \$899,250       | \$240,000      | \$480,000       | \$200,100     | \$75,000      | \$750,000      |
| Fee of \$5.00 Per GSF                                                                    | \$14,000             | \$100,050       | \$1,520,313    | \$1,230,833    | \$1,498,750     | \$400,000      | \$800,000       | \$333,500     | \$125,000     | \$1,250,000    |
| Fee of \$7.00 Per GSF                                                                    | \$19,600             | \$140,070       | \$2,128,438    | \$1,723,167    | \$2,098,250     | \$560,000      | \$1,120,000     | \$466,900     | \$175,000     | \$1,750,000    |
| <b>Less: Total Development Cost, Excluding Land</b>                                      |                      |                 |                |                |                 |                |                 |               |               |                |
| No Fee                                                                                   |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$470,400            | \$3,361,200     | \$81,326,400   | \$53,775,600   | \$80,881,200    | \$21,978,000   | \$41,125,200    | \$20,010,000  | \$4,350,000   | \$24,000,000   |
| Per NSF                                                                                  | \$168                | \$168           | \$334          | \$243          | \$337           | \$343          | \$321           | \$400         | \$174         | \$96           |
| Middle Scenario                                                                          | \$504,000            | \$4,202,400     | \$83,151,600   | \$53,775,600   | \$80,881,200    | \$23,130,000   | \$42,661,200    | \$20,810,400  | \$4,800,000   | \$24,000,000   |
| Per NSF                                                                                  | \$180                | \$210           | \$342          | \$243          | \$337           | \$361          | \$333           | \$416         | \$192         | \$96           |
| High Scenario                                                                            | \$537,600            | \$4,202,400     | \$90,448,800   | \$59,684,400   | \$80,881,200    | \$23,898,000   | \$44,197,200    | \$21,610,800  | \$5,400,000   | \$25,500,000   |
| Per NSF                                                                                  | \$192                | \$210           | \$372          | \$269          | \$337           | \$373          | \$345           | \$432         | \$216         | \$102          |
| Fee of \$1.00 Per GSF                                                                    |                      |                 |                |                |                 |                |                 |               |               |                |
| Low Scenario                                                                             | \$473,200            | \$3,381,210     | \$81,630,463   | \$54,021,767   | \$81,180,950    | \$22,058,000   | \$41,285,200    | \$20,076,700  | \$4,375,000   | \$24,250,000   |
| Per NSF                                                                                  | \$169                | \$169           | \$336          | \$244          | \$339           | \$345          | \$323           | \$402         | \$175         | \$97           |
| Middle Scenario                                                                          | \$506,800            | \$4,222,410     | \$83,455,663   | \$54,021,767   | \$81,180,950    | \$23,210,000   | \$42,821,200    | \$20,877,100  | \$4,825,000   | \$24,250,000   |
| Per NSF                                                                                  | \$181                | \$211           | \$343          | \$244          | \$339           | \$363          | \$335           | \$418         | \$193         | \$97           |

**Table 46**  
**Land Residual Analysis**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                                   | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|---------------------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| High Scenario                                     | \$540,400            | \$4,222,410     | \$90,752,863   | \$59,930,567   | \$81,180,950    | \$23,978,000   | \$44,357,200    | \$21,677,500  | \$5,425,000 | \$25,750,000 |
| Per NSF                                           | \$193                | \$211           | \$373          | \$271          | \$339           | \$375          | \$347           | \$434         | \$217       | \$103        |
| Fee of \$2.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$476,000            | \$3,401,220     | \$81,934,525   | \$54,267,933   | \$81,480,700    | \$22,138,000   | \$41,445,200    | \$20,143,400  | \$4,400,000 | \$24,500,000 |
| Per NSF                                           | \$170                | \$170           | \$337          | \$245          | \$340           | \$346          | \$324           | \$403         | \$176       | \$98         |
| Middle Scenario                                   | \$509,600            | \$4,242,420     | \$83,759,725   | \$54,267,933   | \$81,480,700    | \$23,290,000   | \$42,981,200    | \$20,943,800  | \$4,850,000 | \$24,500,000 |
| Per NSF                                           | \$182                | \$212           | \$344          | \$245          | \$340           | \$364          | \$336           | \$419         | \$194       | \$98         |
| High Scenario                                     | \$543,200            | \$4,242,420     | \$91,056,925   | \$60,176,733   | \$81,480,700    | \$24,058,000   | \$44,517,200    | \$21,744,200  | \$5,450,000 | \$26,000,000 |
| Per NSF                                           | \$194                | \$212           | \$374          | \$272          | \$340           | \$376          | \$348           | \$435         | \$218       | \$104        |
| Fee of \$3.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$478,800            | \$3,421,230     | \$82,238,588   | \$54,514,100   | \$81,780,450    | \$22,218,000   | \$41,605,200    | \$20,210,100  | \$4,425,000 | \$24,750,000 |
| Per NSF                                           | \$171                | \$171           | \$338          | \$246          | \$341           | \$347          | \$325           | \$404         | \$177       | \$99         |
| Middle Scenario                                   | \$512,400            | \$4,262,430     | \$84,063,788   | \$54,514,100   | \$81,780,450    | \$23,370,000   | \$43,141,200    | \$21,010,500  | \$4,875,000 | \$24,750,000 |
| Per NSF                                           | \$183                | \$213           | \$346          | \$246          | \$341           | \$365          | \$337           | \$420         | \$195       | \$99         |
| High Scenario                                     | \$546,000            | \$4,262,430     | \$91,360,988   | \$60,422,900   | \$81,780,450    | \$24,138,000   | \$44,677,200    | \$21,810,900  | \$5,475,000 | \$26,250,000 |
| Per NSF                                           | \$195                | \$213           | \$376          | \$273          | \$341           | \$377          | \$349           | \$436         | \$219       | \$105        |
| Fee of \$5.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$484,400            | \$3,461,250     | \$82,846,713   | \$55,006,433   | \$82,379,950    | \$22,378,000   | \$41,925,200    | \$20,343,500  | \$4,475,000 | \$25,250,000 |
| Per NSF                                           | \$173                | \$173           | \$341          | \$248          | \$344           | \$350          | \$328           | \$407         | \$179       | \$101        |
| Middle Scenario                                   | \$518,000            | \$4,302,450     | \$84,671,913   | \$55,006,433   | \$82,379,950    | \$23,530,000   | \$43,461,200    | \$21,143,900  | \$4,925,000 | \$25,250,000 |
| Per NSF                                           | \$185                | \$215           | \$348          | \$248          | \$344           | \$368          | \$340           | \$423         | \$197       | \$101        |
| High Scenario                                     | \$551,600            | \$4,302,450     | \$91,969,113   | \$60,915,233   | \$82,379,950    | \$24,298,000   | \$44,997,200    | \$21,944,300  | \$5,525,000 | \$26,750,000 |
| Per NSF                                           | \$197                | \$215           | \$378          | \$275          | \$344           | \$380          | \$352           | \$439         | \$221       | \$107        |
| Fee of \$7.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$490,000            | \$3,501,270     | \$83,454,838   | \$55,498,767   | \$82,979,450    | \$22,538,000   | \$42,245,200    | \$20,476,900  | \$4,525,000 | \$25,750,000 |
| Per NSF                                           | \$175                | \$175           | \$343          | \$251          | \$346           | \$352          | \$330           | \$410         | \$181       | \$103        |
| Middle Scenario                                   | \$523,600            | \$4,342,470     | \$85,280,038   | \$55,498,767   | \$82,979,450    | \$23,690,000   | \$43,781,200    | \$21,277,300  | \$4,975,000 | \$25,750,000 |
| Per NSF                                           | \$187                | \$217           | \$351          | \$251          | \$346           | \$370          | \$342           | \$426         | \$199       | \$103        |
| High Scenario                                     | \$557,200            | \$4,342,470     | \$92,577,238   | \$61,407,567   | \$82,979,450    | \$24,458,000   | \$45,317,200    | \$22,077,700  | \$5,575,000 | \$27,250,000 |
| Per NSF                                           | \$199                | \$217           | \$381          | \$277          | \$346           | \$382          | \$354           | \$442         | \$223       | \$109        |
| <b>Less: Assumed Return on Equity (See Below)</b> |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                                            |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,112             | \$161,338       | \$7,807,334    | \$3,226,536    | \$7,764,595     | \$1,054,944    | \$2,303,011     | \$1,000,500   | \$130,500   | \$720,000    |
| Middle Scenario                                   | \$15,120             | \$201,715       | \$7,982,554    | \$3,226,536    | \$7,764,595     | \$1,110,240    | \$2,389,027     | \$1,040,520   | \$144,000   | \$720,000    |
| High Scenario                                     | \$16,128             | \$201,715       | \$8,683,085    | \$3,581,064    | \$7,764,595     | \$1,147,104    | \$2,475,043     | \$1,080,540   | \$162,000   | \$765,000    |
| Fee of \$1.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,196             | \$162,298       | \$7,836,524    | \$3,241,306    | \$7,793,371     | \$1,058,784    | \$2,311,971     | \$1,003,835   | \$131,250   | \$727,500    |
| Middle Scenario                                   | \$15,204             | \$202,676       | \$8,011,744    | \$3,241,306    | \$7,793,371     | \$1,114,080    | \$2,397,987     | \$1,043,855   | \$144,750   | \$727,500    |
| High Scenario                                     | \$16,212             | \$202,676       | \$8,712,275    | \$3,595,834    | \$7,793,371     | \$1,150,944    | \$2,484,003     | \$1,083,875   | \$162,750   | \$772,500    |
| Fee of \$2.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,280             | \$163,259       | \$7,865,714    | \$3,256,076    | \$7,822,147     | \$1,062,624    | \$2,320,931     | \$1,007,170   | \$132,000   | \$735,000    |
| Middle Scenario                                   | \$15,288             | \$203,636       | \$8,040,934    | \$3,256,076    | \$7,822,147     | \$1,117,920    | \$2,406,947     | \$1,047,190   | \$145,500   | \$735,000    |
| High Scenario                                     | \$16,296             | \$203,636       | \$8,741,465    | \$3,610,604    | \$7,822,147     | \$1,154,784    | \$2,492,963     | \$1,087,210   | \$163,500   | \$780,000    |
| Fee of \$3.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,364             | \$164,219       | \$7,894,904    | \$3,270,846    | \$7,850,923     | \$1,066,464    | \$2,329,891     | \$1,010,505   | \$132,750   | \$742,500    |
| Middle Scenario                                   | \$15,372             | \$204,597       | \$8,070,124    | \$3,270,846    | \$7,850,923     | \$1,121,760    | \$2,415,907     | \$1,050,525   | \$146,250   | \$742,500    |
| High Scenario                                     | \$16,380             | \$204,597       | \$8,770,655    | \$3,625,374    | \$7,850,923     | \$1,158,624    | \$2,501,923     | \$1,090,545   | \$164,250   | \$787,500    |
| Fee of \$5.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,532             | \$166,140       | \$7,953,284    | \$3,300,386    | \$7,908,475     | \$1,074,144    | \$2,347,811     | \$1,017,175   | \$134,250   | \$757,500    |
| Middle Scenario                                   | \$15,540             | \$206,518       | \$8,128,504    | \$3,300,386    | \$7,908,475     | \$1,129,440    | \$2,433,827     | \$1,057,195   | \$147,750   | \$757,500    |
| High Scenario                                     | \$16,548             | \$206,518       | \$8,829,035    | \$3,654,914    | \$7,908,475     | \$1,166,304    | \$2,519,843     | \$1,097,215   | \$165,750   | \$802,500    |
| Fee of \$7.00 Per GSF                             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                                      | \$14,700             | \$168,061       | \$8,011,664    | \$3,329,926    | \$7,966,027     | \$1,081,824    | \$2,365,731     | \$1,023,845   | \$135,750   | \$772,500    |
| Middle Scenario                                   | \$15,708             | \$208,439       | \$8,186,884    | \$3,329,926    | \$7,966,027     | \$1,137,120    | \$2,451,747     | \$1,063,865   | \$149,250   | \$772,500    |
| High Scenario                                     | \$16,716             | \$208,439       | \$8,887,415    | \$3,684,454    | \$7,966,027     | \$1,173,984    | \$2,537,763     | \$1,103,885   | \$167,250   | \$817,500    |

**Table 46**  
**Land Residual Analysis**  
**High Cap Rate Assumption**  
**Denver Affordable Housing Nexus Study**

|                                      | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|--------------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| <b>Residual Land Value</b>           |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                               |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$296,688            | \$1,027,462     | \$3,925,141    | \$17,084,394   | \$2,436,605     | (\$5,465,671)  | \$7,355,425     | \$1,955,300   | \$1,883,136 | \$4,030,000  |
| Per NSF                              | \$47.47              | \$102.75        | \$90.11        | \$130.73       | \$93.23         | (\$170.80)     | \$229.86        | \$21.79       | \$15.44     | \$5.78       |
| Middle Scenario                      | \$392,280            | \$1,601,885     | \$22,604,471   | \$51,989,814   | \$55,383,245    | (\$1,502,058)  | \$6,257,046     | \$4,942,513   | \$2,237,818 | \$7,780,000  |
| Per NSF                              | \$62.76              | \$160.19        | \$518.93       | \$397.84       | \$2,119.04      | (\$46.94)      | \$195.53        | \$55.08       | \$18.35     | \$11.16      |
| High Scenario                        | \$487,872            | \$2,875,885     | \$24,946,615   | \$21,402,036   | \$22,493,885    | \$2,863,987    | \$5,158,666     | \$7,929,727   | \$3,256,182 | \$13,735,000 |
| Per NSF                              | \$78.06              | \$287.59        | \$572.70       | \$163.77       | \$860.65        | \$89.50        | \$161.21        | \$88.37       | \$26.70     | \$19.71      |
| Fee of \$1.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$293,888            | \$1,007,452     | \$3,621,078    | \$16,838,227   | \$2,136,855     | (\$5,545,671)  | \$7,195,425     | \$1,888,600   | \$1,858,136 | \$3,780,000  |
| Per NSF                              | \$47.02              | \$100.75        | \$83.13        | \$128.85       | \$81.76         | (\$173.30)     | \$224.86        | \$21.05       | \$15.23     | \$5.42       |
| Middle Scenario                      | \$390,404            | \$1,621,292     | \$22,446,438   | \$51,728,877   | \$55,054,719    | (\$1,530,602)  | \$6,174,102     | \$4,912,498   | \$2,225,568 | \$7,522,500  |
| Per NSF                              | \$62.46              | \$162.13        | \$515.30       | \$395.84       | \$2,106.47      | (\$47.83)      | \$192.94        | \$54.75       | \$18.25     | \$10.79      |
| High Scenario                        | \$484,988            | \$2,854,914     | \$24,613,363   | \$21,141,099   | \$22,165,359    | \$2,780,147    | \$4,989,706     | \$7,859,692   | \$3,230,432 | \$13,477,500 |
| Per NSF                              | \$77.60              | \$285.49        | \$565.05       | \$161.78       | \$848.08        | \$86.88        | \$155.93        | \$87.59       | \$26.49     | \$19.34      |
| Fee of \$2.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$291,088            | \$987,442       | \$3,317,016    | \$16,592,061   | \$1,837,105     | (\$5,625,671)  | \$7,035,425     | \$1,821,900   | \$1,833,136 | \$3,530,000  |
| Per NSF                              | \$46.57              | \$98.74         | \$76.15        | \$126.97       | \$70.29         | (\$175.80)     | \$219.86        | \$20.30       | \$15.03     | \$5.06       |
| Middle Scenario                      | \$387,520            | \$1,600,321     | \$22,113,186   | \$51,467,941   | \$54,726,193    | (\$1,614,442)  | \$6,005,142     | \$4,842,463   | \$2,199,818 | \$7,265,000  |
| Per NSF                              | \$62.00              | \$160.03        | \$507.65       | \$393.85       | \$2,093.90      | (\$50.45)      | \$187.66        | \$53.96       | \$18.04     | \$10.42      |
| High Scenario                        | \$482,104            | \$2,833,944     | \$24,280,110   | \$20,880,163   | \$21,836,833    | \$2,696,307    | \$4,820,746     | \$7,789,657   | \$3,204,682 | \$13,220,000 |
| Per NSF                              | \$77.14              | \$283.39        | \$557.39       | \$159.78       | \$835.51        | \$84.26        | \$150.65        | \$86.81       | \$26.27     | \$18.97      |
| Fee of \$3.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$288,288            | \$967,432       | \$3,012,953    | \$16,345,894   | \$1,537,355     | (\$5,705,671)  | \$6,875,425     | \$1,755,200   | \$1,808,136 | \$3,280,000  |
| Per NSF                              | \$46.13              | \$96.74         | \$69.17        | \$125.08       | \$58.82         | (\$178.30)     | \$214.86        | \$19.56       | \$14.82     | \$4.71       |
| Middle Scenario                      | \$383,628            | \$1,538,973     | \$21,604,714   | \$51,207,004   | \$54,397,667    | (\$1,753,578)  | \$5,750,166     | \$4,732,408   | \$2,160,568 | \$7,007,500  |
| Per NSF                              | \$61.38              | \$153.90        | \$495.98       | \$391.85       | \$2,081.33      | (\$54.80)      | \$179.69        | \$52.74       | \$17.71     | \$10.05      |
| High Scenario                        | \$479,220            | \$2,812,973     | \$23,946,858   | \$20,619,226   | \$21,508,307    | \$2,612,467    | \$4,651,786     | \$7,719,622   | \$3,178,932 | \$12,962,500 |
| Per NSF                              | \$76.68              | \$281.30        | \$549.74       | \$157.78       | \$822.94        | \$81.64        | \$145.37        | \$86.03       | \$26.06     | \$18.60      |
| Fee of \$5.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$282,688            | \$927,412       | \$2,404,828    | \$15,853,561   | \$937,855       | (\$5,865,671)  | \$6,555,425     | \$1,621,800   | \$1,758,136 | \$2,780,000  |
| Per NSF                              | \$45.23              | \$92.74         | \$55.21        | \$121.32       | \$35.88         | (\$183.30)     | \$204.86        | \$18.07       | \$14.41     | \$3.99       |
| Middle Scenario                      | \$377,860            | \$1,497,032     | \$20,938,209   | \$50,685,131   | \$53,740,615    | (\$1,921,258)  | \$5,412,246     | \$4,592,338   | \$2,109,068 | \$6,492,500  |
| Per NSF                              | \$60.46              | \$149.70        | \$480.68       | \$387.86       | \$2,056.19      | (\$60.04)      | \$169.13        | \$51.18       | \$17.29     | \$9.32       |
| High Scenario                        | \$473,452            | \$2,771,032     | \$23,280,353   | \$20,097,353   | \$20,851,255    | \$2,444,787    | \$4,313,866     | \$7,579,552   | \$3,127,432 | \$12,447,500 |
| Per NSF                              | \$75.75              | \$277.10        | \$534.44       | \$153.79       | \$797.80        | \$76.40        | \$134.81        | \$84.47       | \$25.64     | \$17.86      |
| Fee of \$7.00 Per GSF                |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                         | \$276,500            | \$880,669       | \$1,592,373    | \$15,257,837   | \$136,923       | (\$6,052,551)  | \$6,172,705     | \$1,465,055   | \$1,702,886 | \$2,227,500  |
| Per NSF                              | \$44.24              | \$88.07         | \$36.56        | \$116.76       | \$5.24          | (\$189.14)     | \$192.90        | \$16.33       | \$13.96     | \$3.20       |
| Middle Scenario                      | \$372,092            | \$1,455,091     | \$20,271,704   | \$50,163,257   | \$53,083,563    | (\$2,088,938)  | \$5,074,326     | \$4,452,268   | \$2,057,568 | \$5,977,500  |
| Per NSF                              | \$59.53              | \$145.51        | \$465.37       | \$383.86       | \$2,031.05      | (\$65.28)      | \$158.57        | \$49.62       | \$16.87     | \$8.58       |
| High Scenario                        | \$467,684            | \$2,729,091     | \$22,613,848   | \$19,575,479   | \$20,194,203    | \$2,277,107    | \$3,975,946     | \$7,439,482   | \$3,075,932 | \$11,932,500 |
| Per NSF                              | \$74.83              | \$272.91        | \$519.14       | \$149.80       | \$772.66        | \$71.16        | \$124.25        | \$82.91       | \$25.22     | \$17.12      |
| <b>Equity Investment Assumptions</b> |                      |                 |                |                |                 |                |                 |               |             |              |
| Equity as a % of TDC                 | 30%                  | 30%             | 30%            | 30%            | 30%             | 40%            | 40%             | 50%           | 50%         | 50%          |
| Assumed Return on Equity             | 8%                   | 8%              | 8%             | 8%             | 8%              | 8%             | 8%              | 8%            | 8%          | 8%           |
| Assumed Investment Period (Months)   | 15                   | 24              | 48             | 30             | 48              | 18             | 21              | 15            | 9           | 9            |

Source: DRA.

**Table 47**  
**Unleveraged Return on Cost Analysis**  
**Sensitivity Analyses A and B**  
**Denver Affordable Housing Nexus Study**

|                                                                                          | Single-Family Infill | Owner Townhomes  | 12-Story Owner    | 5-Story Rental   | 20-Story Rental   | 5-Story Office   | 12-Story Office   | 4-Story Hotel    | Retail           | Warehouse        |
|------------------------------------------------------------------------------------------|----------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|------------------|------------------|
| <i>Tenure</i>                                                                            | <i>Owner</i>         | <i>Owner</i>     | <i>Owner</i>      | <i>Renter</i>    | <i>Renter</i>     | -                | -                 | -                | -                | -                |
| <i>Residential Units</i>                                                                 | <i>1</i>             | <i>10</i>        | <i>232</i>        | <i>300</i>       | <i>285</i>        | -                | -                 | -                | -                | -                |
| <i>Residential Net SF</i>                                                                | <i>2,800</i>         | <i>20,000</i>    | <i>227,250</i>    | <i>212,250</i>   | <i>230,800</i>    | -                | -                 | -                | -                | -                |
| <i>Site Area (SF)</i>                                                                    | <i>6,250</i>         | <i>10,000</i>    | <i>43,560</i>     | <i>130,680</i>   | <i>26,136</i>     | <i>32,000</i>    | <i>32,000</i>     | <i>89,734</i>    | <i>121,968</i>   | <i>696,960</i>   |
| <i>Total Net SF</i>                                                                      | <i>2,800</i>         | <i>20,000</i>    | <i>243,250</i>    | <i>221,550</i>   | <i>239,800</i>    | <i>64,000</i>    | <i>128,000</i>    | <i>50,000</i>    | <i>25,000</i>    | <i>250,000</i>   |
| <b>Total Gross SF (Excluding Parking)</b>                                                | <b>2,800</b>         | <b>20,010</b>    | <b>304,063</b>    | <b>246,167</b>   | <b>299,750</b>    | <b>80,000</b>    | <b>160,000</b>    | <b>66,700</b>    | <b>25,000</b>    | <b>250,000</b>   |
| <i>Approximate Building Stories</i>                                                      | <i>2 Stories</i>     | <i>3 Stories</i> | <i>12 Stories</i> | <i>5 Stories</i> | <i>20 Stories</i> | <i>5 Stories</i> | <i>12 Stories</i> | <i>4 Stories</i> | <i>1 Stories</i> | <i>1 Stories</i> |
| <b>Total Annual Net Operating Income, Rental Properties</b>                              |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             |                      |                  |                   | \$3,704,327      | \$4,554,120       | \$966,200        | \$2,793,100       | \$1,722,435      | \$350,000        | \$1,725,000      |
| NOI Per NSF                                                                              |                      |                  |                   | \$16.72          | \$18.99           | \$15.10          | \$21.82           | \$34.45          | \$14.00          | \$6.90           |
| Middle Scenario                                                                          |                      |                  |                   | \$3,791,198      | \$5,055,552       | \$1,250,600      | \$2,821,900       | \$2,009,508      | \$395,000        | \$1,950,000      |
| NOI Per NSF                                                                              |                      |                  |                   | \$17.11          | \$21.08           | \$19.54          | \$22.05           | \$40.19          | \$15.80          | \$7.80           |
| High Scenario                                                                            |                      |                  |                   | \$4,233,375      | \$5,556,984       | \$1,535,000      | \$2,850,700       | \$2,296,580      | \$485,000        | \$2,400,000      |
| NOI Per NSF                                                                              |                      |                  |                   | \$19.11          | \$23.17           | \$23.98          | \$22.27           | \$45.93          | \$19.40          | \$9.60           |
| <b>Total Market Value (Capitalized NOI for Rental; Net Sales Proceeds for Ownership)</b> |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$781,200            | \$4,550,000      | \$93,058,875      | \$74,086,530     | \$91,082,400      | \$17,567,273     | \$50,783,636      | \$22,965,800     | \$6,363,636      | \$28,750,000     |
| Per NSF                                                                                  | \$279                | \$228            | \$383             | \$334            | \$380             | \$274            | \$397             | \$459            | \$255            | \$115            |
| Middle Scenario                                                                          | \$911,400            | \$6,006,000      | \$113,738,625     | \$75,823,950     | \$101,111,040     | \$22,738,182     | \$51,307,273      | \$26,793,433     | \$7,181,818      | \$32,500,000     |
| Per NSF                                                                                  | \$326                | \$300            | \$468             | \$342            | \$422             | \$355            | \$401             | \$536            | \$287            | \$130            |
| High Scenario                                                                            | \$1,041,600          | \$7,280,000      | \$124,078,500     | \$84,667,500     | \$111,139,680     | \$27,909,091     | \$51,830,909      | \$30,621,067     | \$8,818,182      | \$40,000,000     |
| Per NSF                                                                                  | \$372                | \$364            | \$510             | \$382            | \$463             | \$436            | \$405             | \$612            | \$353            | \$160            |
| <b>Total Development Cost, Including Land</b>                                            |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| No Fee                                                                                   |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$670,400            | \$4,061,200      | \$85,987,400      | \$61,616,600     | \$84,723,200      | \$23,274,000     | \$43,717,200      | \$21,715,000     | \$5,570,000      | \$28,879,000     |
| Per NSF                                                                                  | \$239                | \$203            | \$353             | \$278            | \$353             | \$364            | \$342             | \$434            | \$223            | \$116            |
| Middle Scenario                                                                          | \$779,000            | \$5,102,400      | \$90,121,600      | \$62,792,600     | \$86,866,200      | \$24,570,000     | \$45,541,200      | \$22,964,400     | \$6,630,000      | \$30,970,000     |
| Per NSF                                                                                  | \$278                | \$255            | \$370             | \$283            | \$362             | \$384            | \$356             | \$459            | \$265            | \$124            |
| High Scenario                                                                            | \$887,600            | \$6,202,400      | \$99,726,800      | \$73,144,400     | \$89,009,200      | \$25,818,000     | \$48,037,200      | \$24,481,800     | \$7,839,000      | \$35,954,000     |
| Per NSF                                                                                  | \$317                | \$310            | \$410             | \$330            | \$371             | \$403            | \$375             | \$490            | \$314            | \$144            |
| Fee of \$1.00 Per GSF                                                                    |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$673,200            | \$4,081,210      | \$86,291,463      | \$61,862,767     | \$85,022,950      | \$23,354,000     | \$43,877,200      | \$21,781,700     | \$5,595,000      | \$29,129,000     |
| Per NSF                                                                                  | \$240                | \$204            | \$355             | \$279            | \$355             | \$365            | \$343             | \$436            | \$224            | \$117            |
| Middle Scenario                                                                          | \$781,800            | \$5,122,410      | \$90,425,663      | \$63,038,767     | \$87,165,950      | \$24,650,000     | \$45,701,200      | \$23,031,100     | \$6,655,000      | \$31,220,000     |
| Per NSF                                                                                  | \$279                | \$256            | \$372             | \$285            | \$363             | \$385            | \$357             | \$461            | \$266            | \$125            |
| High Scenario                                                                            | \$890,400            | \$6,222,410      | \$100,030,863     | \$73,390,567     | \$89,308,950      | \$25,898,000     | \$48,197,200      | \$24,548,500     | \$7,864,000      | \$36,204,000     |
| Per NSF                                                                                  | \$318                | \$311            | \$411             | \$331            | \$372             | \$405            | \$377             | \$491            | \$315            | \$145            |
| Fee of \$2.00 Per GSF                                                                    |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$676,000            | \$4,101,220      | \$86,595,525      | \$62,108,933     | \$85,322,700      | \$23,434,000     | \$44,037,200      | \$21,848,400     | \$5,620,000      | \$29,379,000     |
| Per NSF                                                                                  | \$241                | \$205            | \$356             | \$280            | \$356             | \$366            | \$344             | \$437            | \$225            | \$118            |
| Middle Scenario                                                                          | \$784,600            | \$5,142,420      | \$90,729,725      | \$63,284,933     | \$87,465,700      | \$24,730,000     | \$45,861,200      | \$23,097,800     | \$6,680,000      | \$31,470,000     |
| Per NSF                                                                                  | \$280                | \$257            | \$373             | \$286            | \$365             | \$386            | \$358             | \$462            | \$267            | \$126            |
| High Scenario                                                                            | \$893,200            | \$6,242,420      | \$100,334,925     | \$73,636,733     | \$89,608,700      | \$25,978,000     | \$48,357,200      | \$24,615,200     | \$7,889,000      | \$36,454,000     |
| Per NSF                                                                                  | \$319                | \$312            | \$412             | \$332            | \$374             | \$406            | \$378             | \$492            | \$316            | \$146            |
| Fee of \$3.00 Per GSF                                                                    |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$678,800            | \$4,121,230      | \$86,899,588      | \$62,355,100     | \$85,622,450      | \$23,514,000     | \$44,197,200      | \$21,915,100     | \$5,645,000      | \$29,629,000     |
| Per NSF                                                                                  | \$242                | \$206            | \$357             | \$281            | \$357             | \$367            | \$345             | \$438            | \$226            | \$119            |
| Middle Scenario                                                                          | \$787,400            | \$5,162,430      | \$91,033,788      | \$63,531,100     | \$87,765,450      | \$24,810,000     | \$46,021,200      | \$23,164,500     | \$6,705,000      | \$31,720,000     |
| Per NSF                                                                                  | \$281                | \$258            | \$374             | \$287            | \$366             | \$388            | \$360             | \$463            | \$268            | \$127            |
| High Scenario                                                                            | \$896,000            | \$6,262,430      | \$100,638,988     | \$73,882,900     | \$89,908,450      | \$26,058,000     | \$48,517,200      | \$24,681,900     | \$7,914,000      | \$36,704,000     |
| Per NSF                                                                                  | \$320                | \$313            | \$414             | \$333            | \$375             | \$407            | \$379             | \$494            | \$317            | \$147            |
| Fee of \$5.00 Per GSF                                                                    |                      |                  |                   |                  |                   |                  |                   |                  |                  |                  |
| Low Scenario                                                                             | \$684,400            | \$4,161,250      | \$87,507,713      | \$62,847,433     | \$86,221,950      | \$23,674,000     | \$44,517,200      | \$22,048,500     | \$5,695,000      | \$30,129,000     |
| Per NSF                                                                                  | \$244                | \$208            | \$360             | \$284            | \$360             | \$370            | \$348             | \$441            | \$228            | \$121            |
| Middle Scenario                                                                          | \$793,000            | \$5,202,450      | \$91,641,913      | \$64,023,433     | \$88,364,950      | \$24,970,000     | \$46,341,200      | \$23,297,900     | \$6,755,000      | \$32,220,000     |
| Per NSF                                                                                  | \$283                | \$260            | \$377             | \$289            | \$368             | \$390            | \$362             | \$466            | \$270            | \$129            |
| High Scenario                                                                            | \$901,600            | \$6,302,450      | \$101,247,113     | \$74,375,233     | \$90,507,950      | \$26,218,000     | \$48,837,200      | \$24,815,300     | \$7,964,000      | \$37,204,000     |
| Per NSF                                                                                  | \$322                | \$315            | \$416             | \$336            | \$377             | \$410            | \$382             | \$496            | \$319            | \$149            |

**Table 47**  
**Unleveraged Return on Cost Analysis**  
**Sensitivity Analyses A and B**  
**Denver Affordable Housing Nexus Study**

|                                   | Single-Family Infill | Owner Townhomes | 12-Story Owner | 5-Story Rental | 20-Story Rental | 5-Story Office | 12-Story Office | 4-Story Hotel | Retail      | Warehouse    |
|-----------------------------------|----------------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|---------------|-------------|--------------|
| Fee of \$7.00 Per GSF             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | \$690,000            | \$4,201,270     | \$88,115,838   | \$63,339,767   | \$86,821,450    | \$23,834,000   | \$44,837,200    | \$22,181,900  | \$5,745,000 | \$30,629,000 |
| Per NSF                           | \$246                | \$210           | \$362          | \$286          | \$362           | \$372          | \$350           | \$444         | \$230       | \$123        |
| Middle Scenario                   | \$798,600            | \$5,242,470     | \$92,250,038   | \$64,515,767   | \$88,964,450    | \$25,130,000   | \$46,661,200    | \$23,431,300  | \$6,805,000 | \$32,720,000 |
| Per NSF                           | \$285                | \$262           | \$379          | \$291          | \$371           | \$393          | \$365           | \$469         | \$272       | \$131        |
| High Scenario                     | \$907,200            | \$6,342,470     | \$101,855,238  | \$74,867,567   | \$91,107,450    | \$26,378,000   | \$49,157,200    | \$24,948,700  | \$8,014,000 | \$37,704,000 |
| Per NSF                           | \$324                | \$317           | \$419          | \$338          | \$380           | \$412          | \$384           | \$499         | \$321       | \$151        |
| <b>Unleveraged Return on Cost</b> |                      |                 |                |                |                 |                |                 |               |             |              |
| No Fee                            |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | 16.5%                | 12.0%           | 8.2%           | 6.0%           | 5.4%            | 4.2%           | 6.4%            | 7.9%          | 6.3%        | 6.0%         |
| Middle Scenario                   | 17.0%                | 17.7%           | 26.2%          | 6.0%           | 5.8%            | 5.1%           | 6.2%            | 8.8%          | 6.0%        | 6.3%         |
| High Scenario                     | 17.4%                | 17.4%           | 24.4%          | 5.8%           | 6.2%            | 5.9%           | 5.9%            | 9.4%          | 6.2%        | 6.7%         |
| Fee of \$1.00 Per GSF             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | 16.0%                | 11.5%           | 7.8%           | 6.0%           | 5.4%            | 4.1%           | 6.4%            | 7.9%          | 6.3%        | 5.9%         |
| Middle Scenario                   | 16.6%                | 17.2%           | 25.8%          | 6.0%           | 5.8%            | 5.1%           | 6.2%            | 8.7%          | 5.9%        | 6.2%         |
| High Scenario                     | 17.0%                | 17.0%           | 24.0%          | 5.8%           | 6.2%            | 5.9%           | 5.9%            | 9.4%          | 6.2%        | 6.6%         |
| Fee of \$2.00 Per GSF             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | 15.6%                | 10.9%           | 7.5%           | 6.0%           | 5.3%            | 4.1%           | 6.3%            | 7.9%          | 6.2%        | 5.9%         |
| Middle Scenario                   | 16.2%                | 16.8%           | 25.4%          | 6.0%           | 5.8%            | 5.1%           | 6.2%            | 8.7%          | 5.9%        | 6.2%         |
| High Scenario                     | 16.6%                | 16.6%           | 23.7%          | 5.7%           | 6.2%            | 5.9%           | 5.9%            | 9.3%          | 6.1%        | 6.6%         |
| Fee of \$3.00 Per GSF             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | 15.1%                | 10.4%           | 7.1%           | 5.9%           | 5.3%            | 4.1%           | 6.3%            | 7.9%          | 6.2%        | 5.8%         |
| Middle Scenario                   | 15.7%                | 16.3%           | 24.9%          | 6.0%           | 5.8%            | 5.0%           | 6.1%            | 8.7%          | 5.9%        | 6.1%         |
| High Scenario                     | 16.3%                | 16.2%           | 23.3%          | 5.7%           | 6.2%            | 5.9%           | 5.9%            | 9.3%          | 6.1%        | 6.5%         |
| Fee of \$5.00 Per GSF             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | 14.1%                | 9.3%            | 6.3%           | 5.9%           | 5.3%            | 4.1%           | 6.3%            | 7.8%          | 6.1%        | 5.7%         |
| Middle Scenario                   | 14.9%                | 15.4%           | 24.1%          | 5.9%           | 5.7%            | 5.0%           | 6.1%            | 8.6%          | 5.8%        | 6.1%         |
| High Scenario                     | 15.5%                | 15.5%           | 22.6%          | 5.7%           | 6.1%            | 5.9%           | 5.8%            | 9.3%          | 6.1%        | 6.5%         |
| Fee of \$7.00 Per GSF             |                      |                 |                |                |                 |                |                 |               |             |              |
| Low Scenario                      | 13.2%                | 8.3%            | 5.6%           | 5.8%           | 5.2%            | 4.1%           | 6.2%            | 7.8%          | 6.1%        | 5.6%         |
| Middle Scenario                   | 14.1%                | 14.6%           | 23.3%          | 5.9%           | 5.7%            | 5.0%           | 6.0%            | 8.6%          | 5.8%        | 6.0%         |
| High Scenario                     | 14.8%                | 14.8%           | 21.8%          | 5.7%           | 6.1%            | 5.8%           | 5.8%            | 9.2%          | 6.1%        | 6.4%         |

Source: DRA.