Appendix D

Market Analysis

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1.0 Market Analysis

1.1 Introduction

The Federal Center site could be positioned to capture a sizable share of the region's projected residential and business growth based on future area improvements, coordinated planning efforts, and certain catalyst events. Forecasts indicate that over the next 20 years the trade area surrounding the Federal Center site could generate new demand for approximately 4.3 million square feet of office space, 2.5 million square feet of industrial space, 3.8 million square feet of retail space, and over 40,000 residential units.

1.1.1 Characteristics

Economic and demographic characteristics are indicators of overall trends and economic health that may affect public- and private-sector development. Because the Federal Center site represents a competitive sub-market within the region, the analysis begins with a comparative overview of characteristics in two geographies: the trade area and Denver Metropolitan Statistical Area (MSA). The analyses of these two areas are followed by a discussion of supply and demand conditions (by land use) within the broader influence area.

1.1.1.1 Trade Area Definition

A trade area is that area from which project(s) within a property or area will draw the majority of its employees (office and industrial), patrons (retail), residents (housing), and guests (lodging). It should be noted that the "trade area" referred to in this appendix differs from the "study area" considered in the socioeconomic discussions within the main Environmental Impact Statement. The key distinction is that while the trade area delineates the primary geographic extent of demographic and market factors affecting the redevelopment, the "study area" is intended to delineate that area most likely to be impacted by the redevelopment. The boundaries of the trade area are influenced by the following conditions:

- Physical Barriers—The presence of certain physical barriers, including highways, arterials, and significant structures influencing driving and shopping patterns

- Location of Possible Competition—A significant inventory of potentially competitive projects diminishing the market share available to new projects

- Proximity to Population and/or Employment Concentrations—Population and/or employment concentrations in an area resulting in more population and households to support new projects (density and "rooftops")

- Zoning—A restrictive or favorable regulatory environment influencing a developer's interest in delivering projects in one location versus another

- Market Factors—Conditions that will set sale and lease prices or impact a project's revenue potential (value) and influence a developer's interest
- Drive Times, Spending, and Commuting Patterns—Established habits/patterns affecting a project's ability to capture market share (or requiring re-education)
- Other Station Programs—Land use and development programs at other light rail transit stations along the same line that will provide both competition and market support
- Federal Center "Realities"—Tools available to and limitations resulting from location within a federal government installation, such as the need to reserve land for federal uses

The trade area identified for the Federal Center, presented in Exhibit D-1, is approximately West 32nd Avenue on the north, Sheridan Boulevard on the east, U.S. Highway 285 on the south, and Interstate 70 on the west. The trade area generally approximates the boundaries of the city of Lakewood. Its shape is intended to encompass the primary sources of demand for retail services as well as the primary sources of competitive supply for residential and commercial land uses. While each specific prospective land use may have its own unique trade area shape, this generalized trade area was selected to more simply describe socioeconomic conditions likely to influence a range of redevelopment scenarios.

Following is a detailed overview of economic and demographic conditions in the trade area and Denver MSA.`

1.1.1.2 Population and Household Growth

The Denver MSA grew at a compound average annual growth rate of 2.3 percent between 2000 and 2005. During this time, the trade area grew at a compound average annual rate of 0.4 percent. The Denver MSA is expected to grow by 2.0 percent annually until 2010, while the trade area is expected to grow by 0.4 percent during the same period. The trade area percentage is largely reflective of the limited number of new development sites available in the market.

As presented in Exhibit D-2 and Table D-1, and based on the Denver Regional Council of Government's (DRCOG) projection data series, the trade area has experienced modest growth and is forecast to continue to grow. Growth is attributed to the benefits of specific developments, including completion of the Regional Transportation District's (RTD's) West Corridor Light Rail Line and other sizable infill projects, such as Belmar.

Age Distribution. The age distribution (presented in Table D-2) among residents in the trade area versus the Denver MSA is fairly comparable. Thirty-two percent of trade area residents are under 25 years old, compared to 35 percent in the Denver MSA. Fourteen percent of trade area residents are 25 to 34 years, compared to 15 percent in the Denver MSA. Among residents in the 35 to 44, 45 to 54, and 55 to 64 age groups, there is only a 1 to 2 percent swing between demographics. The 65 and older age group is the only segment for which the percentage differed significantly between the trade and Denver MSA. The difference indicates a high concentration of older residents in the trade area.

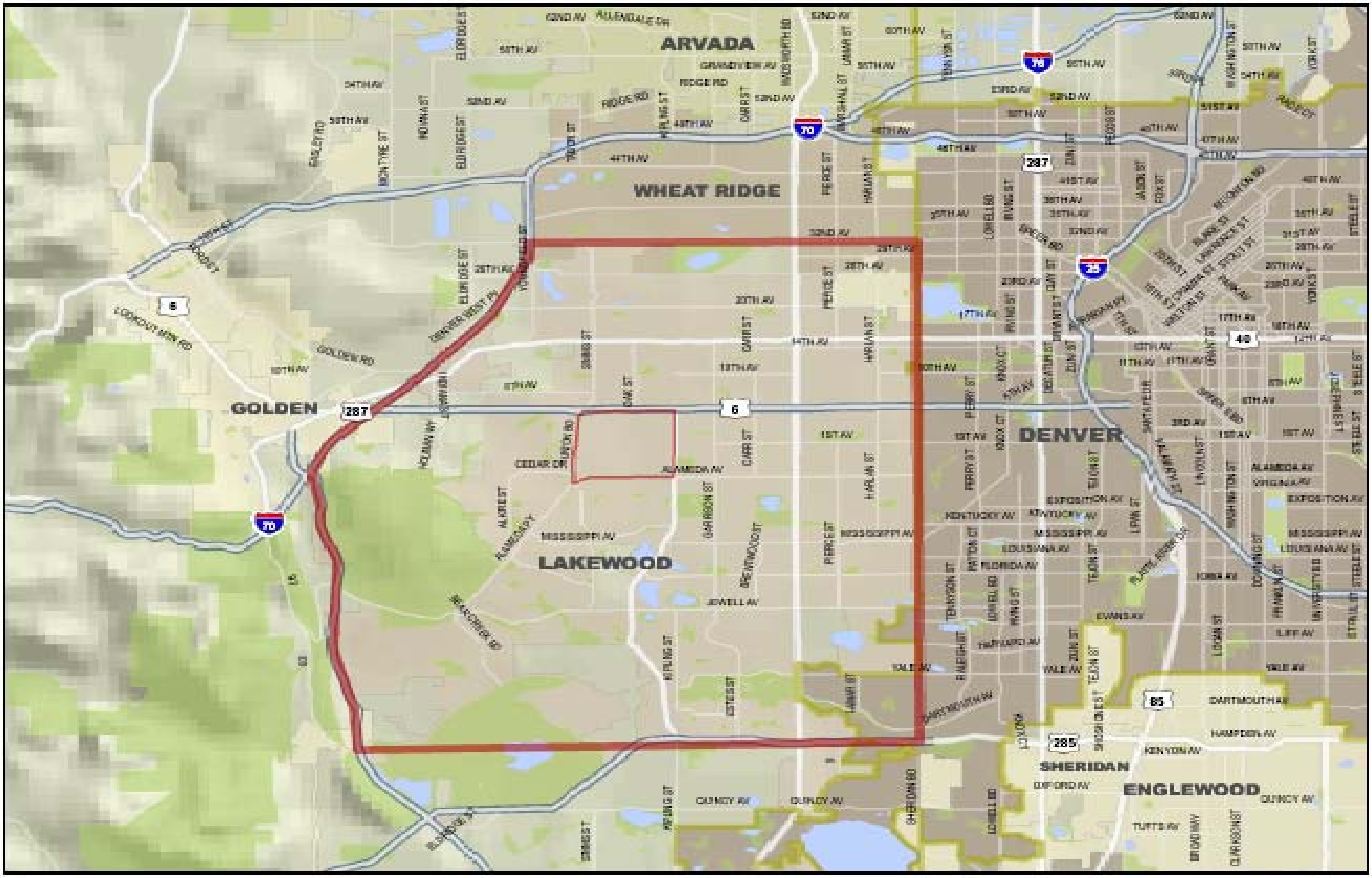

Exhibit D-1: Federal Center Market Study Area

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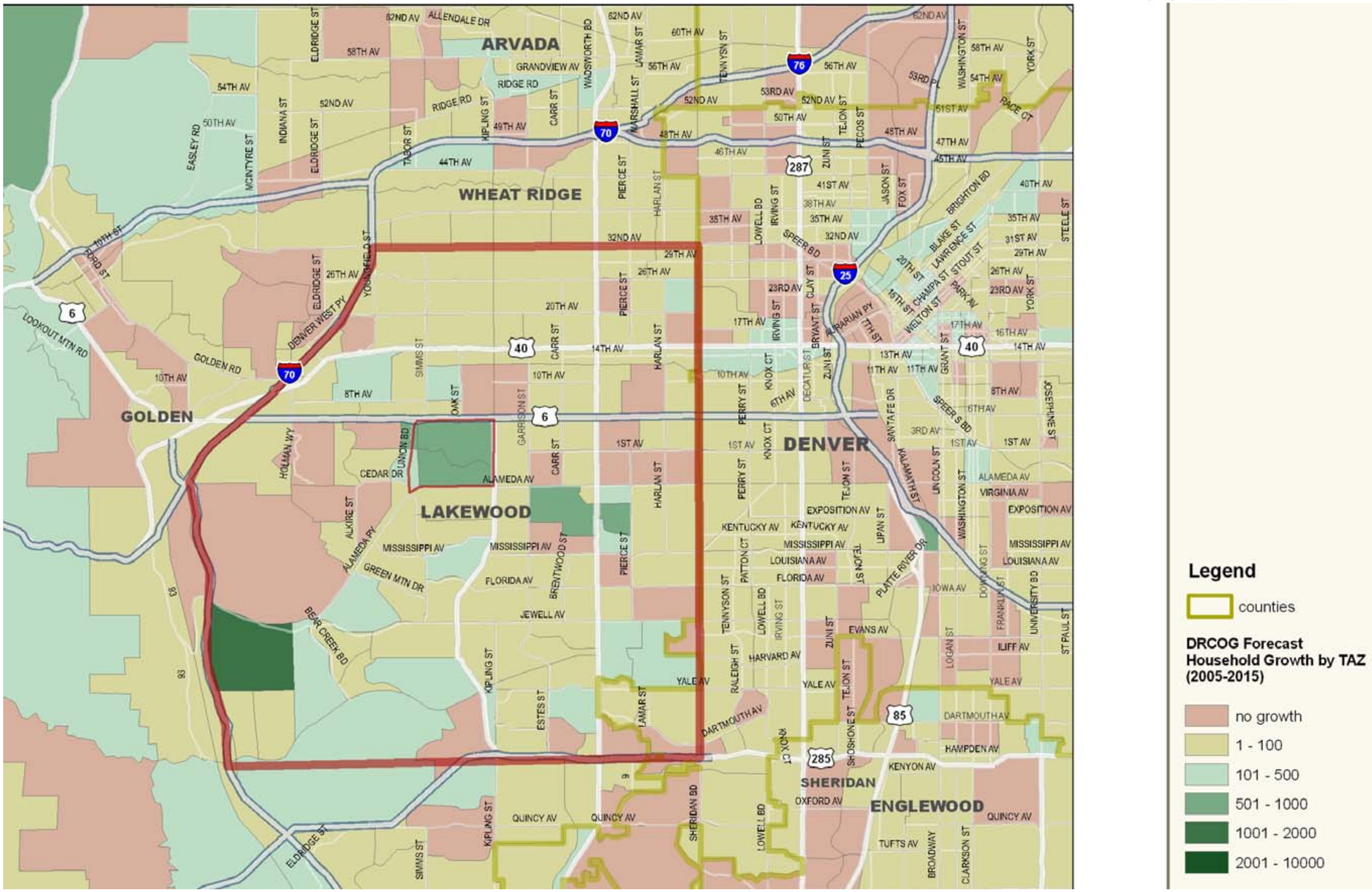

Exhibit D-2: Forecast Household Growth

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TABLE D-1:
Population and Household Indicators

Indicator	Trade Area	Denver MSA
2000 Population	179,842	2,179,388
2005 Population	183,549	2,427,322
2010 Population	187,218	2,677,769
2005–2010 Compound Annual Growth Rate	0.40%	1.98%
2000 Households	75,340	852,205
2005 Households	77,389	943,852
2010 Households	79,279	1,035,254
2005–2010 Compound Annual Growth Rate	0.48%	1.87%

Source: U.S. Census Bureau; ESRI Business Information Solutions; DRCOG; and Leland Consulting Group

TABLE D-2:
Population Age Distribution (2005)

Distribution	Trade Area	Denver MSA
Under 25 years old	32%	35%
25 to 34 years old	14%	15%
35 to 44 years old	15%	17%
45 to 54 years old	15%	15%
55 to 64 years old	11%	10%
65 and older	14%	9%
Median	**37.9**	**35.2**

Source: U.S. Census Bureau; ESRI Business Information Solutions; and LeLand Consulting Group

Household Incomes. The 2005 median household income for the Denver MSA was $61,394, compared to a trade area income estimate of $56,674. Despite the disparity in income levels, growth in these income is expected to be consistent across both geographies, increasing at annual rates of 4.0 and 4.3 percent, respectively. Table D-3 and Exhibit D-3 illustrate concentrations of incomes across different census tracts in the Denver MSA.

TABLE D-3:
Household Income Distribution (2005)

Distribution	Trade Area	Denver MSA
$0–$25K	15%	15%
$25–$35K	11%	10%
$35–$60K	17%	15%
$50 – $75K	23%	21%
$75–$100K	14%	15%
$100–$150K	13%	15%
$150K	7%	10%
Per Capita	$31,126	$31,679
Median Household	$56,674	$61,394

Source: U.S. Census Bureau; ESRI Business Information Solutions; and Leland Consulting Group

Education. Residents in the trade area have comparable levels of higher, post-secondary education than those in the Denver MSA, slightly greater numbers of high school diplomas, and slightly fewer numbers of residents without high school diplomas, as shown in Table D-4.

TABLE D-4:
Population 25+ by Educational Attainment (2000)

Degree	Trade Area	Denver MSA
Graduate Degree	11%	11%
Bachelor’s Degree	21%	23%
Some College	32%	30%
High School Graduate	25%	22%
No High School diploma	11%	13%

Source: U.S. Census Bureau, ESRI Business Information Solutions, and Leland Consulting Group.

Note: Figures do not total 100 percent.

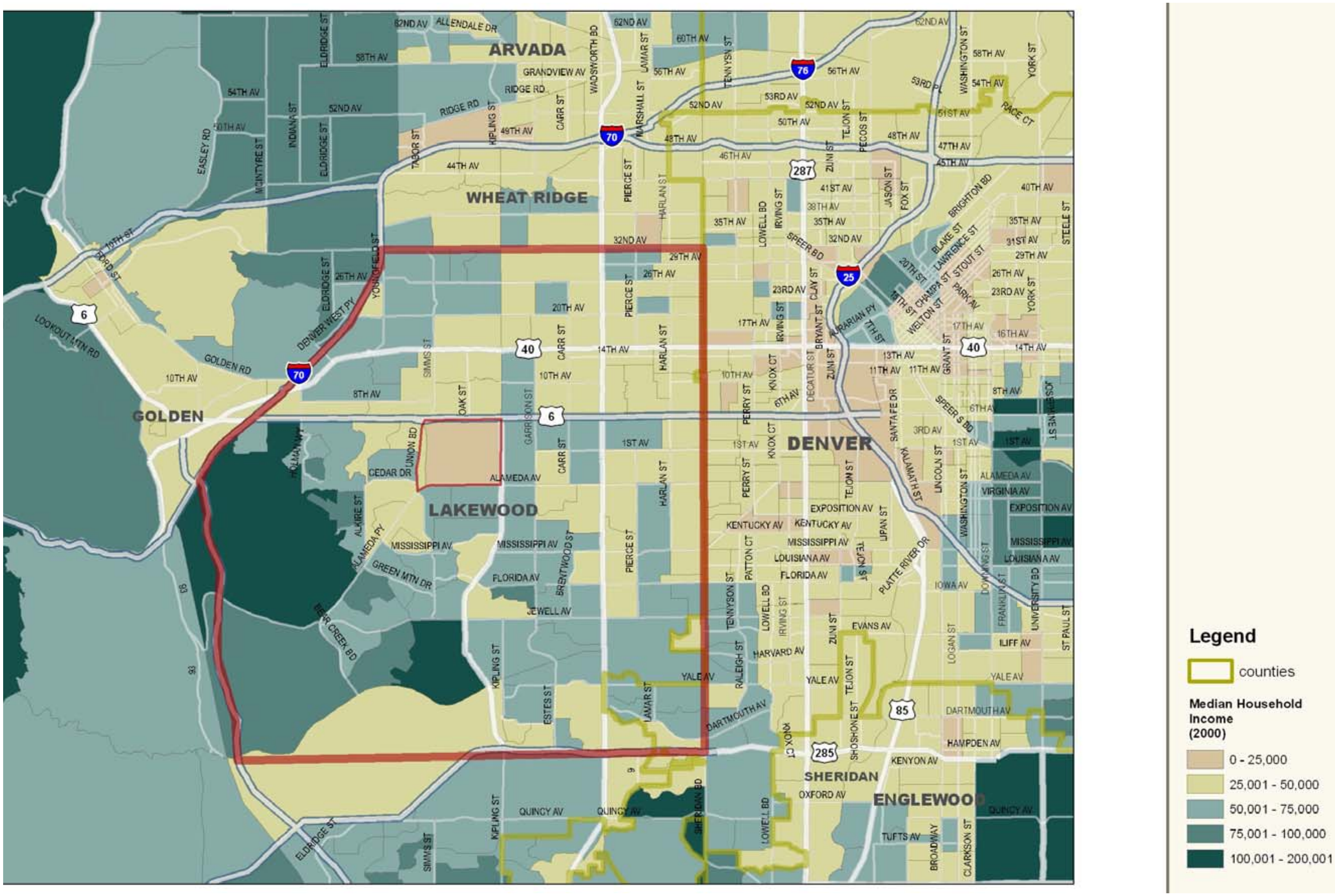

Exhibit D-3: Median Household Income

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1.1.2 Real Estate Markets

Critical to interpreting the study area's competitive position within the trade area and Denver MSA, is an understanding of the supply characteristics among potential land uses. Also critical are demand estimates, which were also prepared to identify market opportunities given the area's competitive position and prevailing market conditions.

1.1.2.1 Supply and Demand Conditions

To interpret the study area's future competitive position for development accurately, there must first be an understanding of the conditions that could affect the character and quantity of select land uses. The following discussion presents an overview of market factors and demand for each land use.

Office. Additional office development could further strengthen the connection between existing employment and future public and private uses. The Federal Center site already represents a "business address" with a diversity of services and functions. Opportunities exist to grow business and retail in support of government and other institutional tenants. The implementation of the St. Anthony Central Hospital project will further catalyze a strong integration of residential, lodging, and working spaces.

Office supply characteristics within the trade area are summarized below and illustrated in Table D-5. As of mid-2005, the trade area maintained 10.6 million square feet of office space, of which 9.2 million square feet was occupied. The current trade area vacancy rate of 13 percent is up from the 2001 rate of 11 percent, but it is down from its peak of 16 percent in the beginning of 2005.

TABLE D-5:
Office Supply Indicators (Trade Area)

Indicator	All Space
Existing Buildings	347
Existing Inventory (sf)	10,624,217
Vacant	1,390,028 (13%)
Occupied	9,234,189
Net Absorption 2005	236,142 sf
Average age	30.5 years
Maximum Rent (per sf)	$20.00
Average Rent (per sf)	$13.19

Source: CoStar Group Inc. (http://www.costar.com/)
sf square feet

Demand for new office space is derived from two primary sources: expansion of existing industry and the relocation of new companies into the market. Tables D-6 and D-7, on pages D-13 and D-14, present employment growth projections by industry classification for the trade area that are used to estimate new demand for office space.

Based on the following analysis, the total trade area baseline demand for office space, including office demand from turnover, is estimated to be approximately 1.9 million square feet over the 10 years between 2005 and 2015. After 2015, demand is projected to increase to 2.4 million square feet through 2025. In addition to existing leases and federal needs, product demand will likely be limited to multi-tenant and medical office space developed in association with the new St. Anthony Central Hospital project. The exception will be space developed in proximity to the future multi-modal transit station. As the study area redevelops and land prices begin to increase, demand for higher density, mixed-use projects (e.g., “office-over-retail”) could also emerge. The more the Federal Center site is established as a destination, the greater will be its ability to capture demand from tenants seeking an urban setting in a suburban location.

Industrial. In addition to the demand for office space, the Federal Center site lends itself to other types of employment. As with office demand, certain industrial uses could expand the existing base, as well as provide for support for a growing cluster suppliers and users. The Federal Center site, as a key industrial enclave within the trade area, could provide a unique set of offerings in the form of amenities, services, transportation, living and lodging accommodations, and commercial outlets.

Industrial supply characteristics within the trade area are summarized in Table D-8 (below). As of mid-2005, the trade area maintained 3.6 million square feet of industrial space, of which 3.3 million square feet was occupied. The current trade area vacancy rate of 9 percent is more than double the first quarter 2004 vacancy rate of 4 percent, but it is down from its peak vacancy rate of 10 percent in the first quarter of 2005.

TABLE D-8:
Industrial Supply Indicators (Trade Area)

Indicator	All Space
Existing Buildings	127
Existing Inventory (sf)	3,580,610
Vacant	316,477 (9%)
Occupied	3,264,133
Net Absorption 2005	-124,638 sf
Average age	33 years
Maximum Rent (per sf)	$11.00
Average Rent (per sf)	$5.68

Source: CoStar Group Inc. (http://www.costar.com/)
sf square feet

TABLE D-6:
Office Demand (2005–2015)

Trade Area 10-Year Demand	Estimated 2005 Jobs	Annual Job Growth Rate*	10-Year Job Growth	Estimated Percent. Office	10-Year. Office Demand from Job Growth (sf)	Estimated 10-Year Turnover/ Replacement	Estimated Office Demand From Turnover (10-Year)
Agriculture and Mining	1,083	1.09%	124	20%	6,201	10%	5,415
Construction	4,857	1.09%	556	20%	27,807	10%	24,285
Manufacturing	2,244	1.09%	257	15%	9,636	10%	8,415
Transportation	912	1.09%	104	20%	5,219	10%	4,558
Communication	234	1.09%	27	25%	1,673	10%	1,461
Electric, Gas, Water, Sanitary	771	1.09%	88	25%	5,521	10%	4,821
Wholesale Trade	4,324	1.09%	495	15%	18,569	10%	16,217
Retail Trade	19,732	1.09%	2,259	10%	56,484	10%	49,329
Finance, Insurance, Real Estate	8,398	1.09%	962	90%	216,370	10%	188,962
Services (Non-Retail)							
Hotels and Lodging	1,269	1.09%	145	5%	1,816	10%	1,586
Automotive Services	1,199	1.09%	137	10%	3,431	10%	2,997
Entertainment and Recreation	3,418	1.09%	391	10%	9,784	10%	8,545
Health Services	7,783	1.09%	891	40%	89,116	10%	77,827
Legal Services	651	1.09%	74	90%	16,762	10%	14,639
Educational Institutions	6,044	1.09%	692	20%	34,603	10%	30,219
Other Services	17,586	1.09%	2,014	70%	352,398	10%	307,758
Government	8,385	1.09%	960	70%	168,028	10%	146,743
Other	308	1.09%	35	60%	5,286	10%	4,617
Totals	**89,197**		**10,213**		**1,028,704**		**898,393**

Source: ESRI Business Information Solutions, DRCOG, Leland Consulting Group
* Trade area employment growth rate of 1.09 percent based on DRCOG forecasts.
sf square feet
Note: Assumes 250 square feet of office space per office employee

TABLE D-7:
Office Demand (2015–2025)

Trade Area 10-Year Demand	Estimated 2005 Jobs	Annual Job Growth Rate*	10-Year Job Growth	Estimated Percent. Office	10-Year Office Demand from Job Growth (sf)	Estimated 10-Year Turnover/ Replacement	Estimated Office Demand From Turnover (10-Year)
Industry							
Agriculture and Mining	1,207	1.32%	169	20%	8,457	10%	6,035
Construction	5,413	1.32%	758	20%	37,925	10%	27,065
Manufacturing	2,501	1.32%	350	15%	13,142	10%	9,379
Transportation	1,016	1.32%	142	20%	7,118	10%	5,080
Communication	261	1.32%	37	25%	2,282	10%	1,628
Electric, Gas, Water, Sanitary	860	1.32%	120	25%	7,529	10%	5,373
Wholesale Trade	4,820	1.32%	675	15%	25,325	10%	18,074
Retail Trade	21,991	1.32%	3,081	10%	77,036	10%	54,977
Finance, Insurance, Real Estate	9,360	1.32%	1,312	90%	295,098	10%	210,599
Services (Non-Retail)							
Hotels and Lodging	1,414	1.32%	198	5%	2,477	10%	1,768
Automotive Services	1,336	1.32%	187	10%	4,680	10%	3,340
Entertainment and Recreation	3,809	1.32%	534	10%	13,345	10%	9,523
Health Services	8,674	1.32%	1,215	40%	121,542	10%	86,739
Legal Services	725	1.32%	102	90%	22,861	10%	16,315
Educational Institutions	6,736	1.32%	944	20%	47,193	10%	33,680
Other Services	19,600	1.32%	2,746	70%	480,620	10%	342,998
Government	9,345	1.32%	1,310	70%	229,166	10%	163,546
Other	343	1.32%	48	60%	7,210	10%	5,145
Totals	**99,410**		**13,930**		**1,403,004**		**1,001,264**

Source: ESRI Business Information Solutions, DRCOG, Leland Consulting Group
* Trade area employment growth rate of 1.32 percent based on DRCOG forecasts
sf square feet
Note: Assumes 250 square feet of office space per office employee

Demand for new industrial space is derived from two primary sources: expansion of existing industry and the relocation of new companies into the market. As shown in Tables D-9 and D-10 employment growth projections by industry classification for the trade area were used to estimate new demand for industrial space. Based on this analysis, total trade area baseline demand is estimated to be approximately 744,000 square feet over 10 years between 2005 and 2015. After 2015, total trade area demand, including demand from turnover, is estimated to increase to approximately 1.4 million square feet.

TABLE D-9:
Industrial Demand (2005–2015)

Trade Area 10 Year Demand	Estimated 2005 Jobs	Annual Job Growth Rate*	10-Year. Job Growth	Estimated Percent Office	10-Year Industrial Demand from Job Growth (sf)	Estimated 10-Year Turnover/ Replacement	Estimated Industrial Demand From Turnover (10-Year)
Industry							
Agriculture and Mining	1,083	1.09%	124	20%	11,161	10%	5,415
Construction	4,857	1.09%	556	20%	50,053	10%	24,285
Manufacturing	2,244	1.09%	257	85%	98,285	10%	47,686
Transportation	912	1.09%	104	20%	9,395	10%	4,558
Communication	234	1.09%	27	20%	2,409	10%	1,169
Electric, Gas, Water, Sanitary	771	1.09%	88	20%	7,950	10%	3,857
Wholesale Trade	4,324	1.09%	495	85%	189,403	10%	91,895
Retail Trade	19,732	1.09%	2,259	5%	50,835	10%	24,664
Finance, Insurance, Real Estate	8,398	1.09%	962	5%	21,637	10%	10,498
Services (Non-Retail)							
Hotels and Lodging	1,269	1.09%	145	5%	3,269	10%	1,586
Automotive Services	1,199	1.09%	137	20%	12,353	10%	5,993
Entertainment and Recreation	3,418	1.09%	391	5%	8,806	10%	4,273
Health Services	7,783	1.09%	891	5%	20,051	10%	9,728
Legal Services	651	1.09%	74	5%	1,676	10%	813
Educational Institutions	6,044	1.09%	692	10%	31,142	10%	15,110
Other Services	17,586	1.09%	2,014	15%	135,925	10%	65,948
Government	8,385	1.09%	960	20%	86,414	10%	41,927
Other	308	1.09%	35	20%	3,172	10%	1,539
Totals	**89,197**		**10,213**		**743,936**		**360,944**

Source: ESRI Business Information Solutions, DRCOG, Leland Consulting Group
* Trade Area employment growth rate of 1.09 percent based on DRCOG forecasts
sf square feet
Note: Assumes 250 square feet of office space per office employee

TABLE D-10:
Industrial Demand (2015–2025)

Trade Area 10 Year Demand	Estimated 2005 Jobs	Annual Job Growth Rate*	10-Year Job Growth	Estimated Percent Office	10-Year Industrial Demand from Job Growth (sf)	Estimated 10-Year Turnover/ Replacement	Estimated Industrial Demand From Turnover (10-Year)
Industry							
Agriculture and Mining	1,207	1.32%	169	20%	15,223	10%	6,035
Construction	5,413	1.32%	758	20%	68,264	10%	27,065
Manufacturing	2,501	1.32%	350	85%	134,047	10%	53,146
Transportation	1,016	1.32%	142	20%	12,813	10%	5,080
Communication	261	1.32%	37	20%	3,285	10%	1,303
Electric, Gas, Water, Sanitary	860	1.32%	120	20%	10,842	10%	4,299
Wholesale Trade	4,820	1.32%	675	85%	258,319	10%	102,417
Retail Trade	21,991	1.32%	3,081	5%	69,332	10%	27,489
Finance, Insurance, Real Estate	9,360	1.32%	1,312	5%	29,510	10%	11,700
Services (Non-Retail)							
Hotels and Lodging	1,414	1.32%	198	5%	4,458	10%	1,768
Automotive Services	1,336	1.32%	187	20%	16,847	10%	6,679
Entertainment and Recreation	3,809	1.32%	534	5%	12,010	10%	4,762
Health Services	8,674	1.32%	1,215	5%	27,347	10%	10,842
Legal Services	725	1.32%	102	5%	2,286	10%	906
Educational Institutions	6,736	1.32%	944	10%	42,474	10%	16,840
Other Services	19,600	1.32%	2,746	15%	185,382	10%	73,500
Government	9,345	1.32%	1,310	20%	117,857	10%	46,727
Other	343	1.32%	48	20%	4,326	10%	1,715
Totals	**99,410**		**13,930**		**1,014,622**		**402,273**

Source: ESRI Business Information Solutions, DRCOG, Leland Consulting Group
* Trade area employment growth rate of 1.09 percent based on DRCOG forecasts
sf square feet
Note: Assumes 250 square feet of office space per office employee

Retail. Existing retail space in the study area is both aging and relatively dispersed. A significant oversupply of commercial land along 6th Avenue contributes to flat and declining property values and limited reinvestment activity. There are few concentrations of commercial space that provide the “critical mass” necessary to attract an adequate mix of quality retail tenants or draw shoppers from a broader trade area. One of the goals of the Federal Center Site Master Plan will be to create an environment able to direct retail/service activity to key centers, or “nodes,” associated with transit and employment concentrations. By doing this, activity is concentrated, rather than diluted, and is supportive of existing users. The resulting activity centers serve to encourage both expansion and diversification of the area’s overall retail/service tenant base. Retail supply characteristics for the trade area are summarized below and in Table D-11:

- The retail trade area currently has approximately 8.3 million square feet of retail space, of which 7.9 million square feet, or approximately 95 percent, is occupied.
- Retail vacancy rates have continued to increase since the introduction of significant commercial concentrations, including Colorado Mills and Belmar.
- Vacancies reached a high of 6 percent in mid-2003, but fell to approximately 4 percent in 2005.
- The average age of retail buildings in the trade area is 29.6 years according to CoStar Group Inc. (http://www.costar.com/), suggesting an aging store inventory.
- In the overall Denver MSA, 60 percent of all retail space was built after 1985, versus 68 percent in the trade area.

TABLE D-11:
Retail Supply Indicators (Trade Area)

Indicator	All Space
Existing Buildings	163
Existing Inventory (sf)	8,250,933
Vacant	356,031 (4.3%)*
Occupied	7,894,902
Net Absorption 2005	236,142 sf
Average age	29.6 years
Maximum Rent (per sf)	$35.00
Average Rent (per sf)	$13.32

Source: CoStar Group Inc.(http://www.costar.com/)
* These figures are well below standard market equilibrium estimates of 8 to 9 percent
sf square feet

Demand for retail space is determined by the potential level of retail expenditures in a given trade area (Table D-12). Existing and projected total household retail expenditures in the trade area were determined by multiplying growth in households with that portion of household income typically spent on general retail purchases. The results of this analysis indicate baseline demand for approximately 1.6 million square feet of additional retail space in the trade area over the next 10 years. Between 2015 and 2025, an additional 2.3 million square feet could be absorbed (Table D-13). The demand analysis completed for this work effort suggested several spending categories experience a retail void (evidence that money is being spent outside the trade area). Given the number of retail centers in the area, however, no attempt was made to accurately account for this additional impact on demand.

TABLE D-12:
Retail Demand Analysis 2005–2015

Trade Area Ten–Year Demand Estimates	2005 Demand (Trade Area retail potential)	Estimated Sales/sf	2005 Supportable Retail (sf)	Additional 10-Year Demand from Household Growth
Auto Parts, Accessories, and Tire Stores	$44,462,239	$250	177,849	23,325
Furniture and Home Furnishings Stores	$58,661,545	$225	260,718	34,194
Electronics and Appliance Stores	$42,893,438	$225	190,638	25,003
Building Material, Garden Equipment, and Supply	$94,810,722	$300	316,036	41,449
Food and Beverage Stores				
Grocery Stores	$352,106,809	$375	938,951	123,146
Specialty Food Stores	$10,825,553	$350	30,930	4,057
Beer, Wine, and Liquor Stores	$28,454,149	$300	94,847	12,439
Health and Personal Care Stores	$66,836,295	$275	243,041	31,876
Clothing and Clothing Accessories Stores	$71,984,010	$200	359,920	47,205
Sporting Goods, Hobby, Book, and Music Stores	$44,465,675	$200	222,328	29,159
General Merchandise Stores	$250,880,049	$325	771,939	101,242
Miscellaneous Store Retailers	$45,945,437	$200	229,727	30,129
Food Services and Drinking Places				
Full Service Restaurants	$127,448,841	$250	509,795	66,861
Limited-Service Eating Places	$165,751,207	$325	510,004	66,889
Special Food Services	$21,420,796	$250	85,683	11,238
Drinking Places (Alcoholic Beverages)	$36,654,923	$350	104,728	13,735
Totals of Selected Categories				**661,947**
Excluded Categories (entertainment, professional office, banking, etc.)`				**132,389**
Additional Demand from Turnover/Obsolescence (10-year)				**789,490**
Total 10-year Demand (2005 – 2015)				**1,583,827**

Source: U.S. Census, DRCOG, ESRI Business Information Solutions, Urban Land Institute, Leland Consulting Group
sf square feet
Note: Assumes trade area household growth of 1.24 percent annually (ESRI Business Information Solutions, DRCOG average projection)
Note: Conservative assumption of 1 percent annual turnover from retail space obsolescence

TABLE D-13:
Retail Demand Analysis 2015–2025

Trade Area Ten Year Demand Estimates	2015 Demand (Trade Area retail potential)	Estimated Sales/sf	2015 Supportable Retail (sf)	Additional 10-year Demand from Household Growth
Auto Parts, Accessories, and Tire Stores	$50,293,597	$250	201,174	44,778
Furniture and Home Furnishings Stores	$66,355,185	$225	294,912	65,643
Electronics and Appliance Stores	$48,519,043	$225	215,640	47,998
Building Material, Garden Equipment, and Supply	$107,245,436	$300	357,485	79,571
Food and Beverage Stores				
Grocery Stores	$398,286,685	$375	1,062,098	236,406
Specialty Food Stores	$12,245,357	$350	34,987	7,788
Beer, Wine, and Liquor Stores	$32,185,997	$300	107,287	23,880
Health and Personal Care Stores	$75,602,078	$275	274,917	61,192
Clothing and Clothing Accessories Stores	$81,424,931	$200	407,125	90,620
Sporting Goods, Hobby, Book, and Music Stores	$50,297,483	$200	251,487	55,977
General Merchandise Stores	$283,783,729	$325	873,181	194,356
Miscellaneous Store Retailers	$51,971,320	$200	259,857	57,840
Food Services and Drinking Places				
Full Service Restaurants	$144,164,143	$250	576,657	128,355
Limited-Service Eating Places	$187,489,981	$325	576,892	128,407
Special Food Services	$24,230,198	$250	96,921	21,573
Drinking Places (Alcoholic Beverages)	41,462,327	$350	118,464	26,368
Totals of Selected Categories				**1,270,753**
Excluded Categories (entertainment, professional office, banking, etc.)				**254,151**
Additional Demand from Turnover/Obsolescence (10 year)				**789,490**
Total 10-year Demand (2005–2015)				**2,314,394**

Source: U.S. Census, DRCOG, ESRI Business Information Solutions, Urban Land Institute, Leland Consulting Group
sf square feet
Note: Assumes trade area household growth of 1.24 percent annually (ESRI Business Information Solutions, DRCOG average projection)
Note: Conservative assumption of 1% annual turnover from retail space obsolescence

Residential. Residential uses dominate the study area land mix, including a combination of single and multi-family residences. The neighborhoods that abut the Federal Center site to the east were largely built prior to the 1950s and 1960s, with multi-family and senior housing components added during the 1970s and 1980s. Although the area features many of the elements that have contributed to significant levels of appreciation in other urban and inner-ring neighborhoods (mature trees, sidewalks, parks, nearby medical services, etc.), central Lakewood neighborhoods have not historically attracted the same level of investor interest. One factor contributing to depressed home prices in the area is an overall lack of new inventory. Comparatively few housing units were built in the area since 1985 because of the limited availability of land for new communities.

Opportunities to introduce new housing units, denser housing, and a potential increase in home ownership will likely accompany future construction of light rail lines within the 6th Avenue corridor. RTD's West Corridor Light Rail Transit Line construction program includes light rail stations and increased investment at key locations, so an increased demand for more units and reinvestment in existing units swill likely ripple through the area's housing markets.

A number of recent and planned residential infill projects in the trade area suggest steady demand for well-designed projects where scarce infill sites are available. Selected residential developments are profiled briefly below and in Tables D-14 and D-15:

- Among attached ownership units, there are seven active projects in the trade area with 487 total new homes planned. Prices among these projects range from $106,000 to $289,000 for townhomes and condominiums.
- Sales activity among these projects suggests less than a 2-year supply with nearly half (261 units) already sold and a monthly average of 21 units sold.
- Three projects are located in the trade area selling new detached homes. The total planned inventory among these projects is 335 units of which 324 units have already been sold.
- Sales activity among these projects is less than half that of the attached unit projects at 7 homes per month.
- Prices among the detached homes range from $307,000 to $620,000.

Demand for new residential units is primarily a factor of growth in income-qualified households within a trade area. Projected household growth was analyzed along with historical patterns of single and multi-family development to arrive at a baseline demand estimate within the trade area of approximately 10,770 units between 2005 and 2015 (Table D-16). After 2015, total trade area demand increases to approximately 20,620 units, or 13,200 ownership units and 7,420 rental units (Table D-17).

TABLE D-14:
Residential Supply (For Sale) Trade Area Attached Ownership Sales Activity (2005)

Project	Type	Location	Builder	Planned Units	Price Range	Absorption Rate (units/mo.)	Sold to Date
Ponderosa Ridge	Condo	Near Union and Alameda	Clover Hill Condos, LLC	108	$106–162K	8.28	31
Belmar Row Homes	TH	Wadsworth and Alameda	McStain	132	$298–372K	5.18	36
Lakeview	Condo	Near Jewell and Old Kipling	Fairfield Homes	45	$194–261K	2.85	45
Peaks at Green Mountain	Condo	W. of Union and Alameda	Hanover Realty	96	$130–150K	2.2	76
White Fence Farm	TH	N. of Jewell, W. of Sheridan	Remington Homes	49	$238–273K	1.56	49
Thraemoor in the Park – Ph. 1	TH	Near Sheridan and Yale	Equinox Homes	21	$255–256K	0.76	21
Thraemoor in the Park – Ph. 2	TH	Near Sheridan and Yale	Kahn Construction	36	$259–289K	0.53	3
				Overall Absorption/mo.		21	
				Effective Annual Absorption		256	

TH Townhome

TABLE D-15:
Residential Supply (For Sale) Trade Area Detached Ownership Sales Activity (2005)

Project	Type	Location	Builder	Planned Units	Price Range	Absorption Rate (units/mo.)	Sold to Date
White Fence Farm Patio Homes	SF	N. of Jewell, W. of Sheridan	Remington Homes	78	$307–393K	1.93	78
Tamarisk	SF	N. of Bear Creek Lake	Village Homes	162	$347–489K	3.47	162
Overlook at Bear Creek	SF	Near Bear Creek Lake	Sheffield	95	$432–620K	1.59	84
				Overall Absorption/mo.		7	
				Effective Annual Absorption		84	

SF Single family

TABLE D-16:
Residential Demand Analysis—Ten-Year Demand Estimates (2005–2015)

Annual Income Range (2005 dollars)	Approx. Rent Range	Approx. Home Price Range	Current HHs in Income Bracket (2005)	Est. Net New HHs by Income Bracket	*Total Units*	Est. Pct. Renters	Total Rental Units	Total Ownership Units
Up to $15K	Up to $375	Up to $50K	7%	2%	***215***	95%	205	11
$15–25K	$375–$625	$50–85K	8%	8%	***862***	90%	776	86
$25–35K	$625–$875	$85–$120K	11%	11%	***1,185***	70%	829	355
$35–50K	$875–$1,000	$120–$175K	17%	18%	***1,939***	40%	776	1,163
$50–75K	$1,000+	$175–$250K	23%	24%	***2,585***	30%	776	1,810
$75–100K	$1,000+	$250–$350K	14%	15%	***1,616***	20%	323	1,293
$100–150K	$1,000+	$350–$500K	13%	14%	***1,508***	10%	151	1,357
$150K+	$1,000+	$500K+	7%	8%	***862***	5%	43	819
Totals			100%	100%	***10,772***	36%	3,878	6,894

Source: ESRI Business Information Solutions, DRCOG, U.S. Census, and Leland Consulting Group
Note: Household growth rate is based on DRCOG Traffic Analysis Zone-level forecast

Federal Center Trade Area

Households	2005	77,389		
	2010	82,290	Annual Growth Rate	1.24%
	2015	87,501		
Household Growth	(05-15)	10,112	Demolition Rate/yr.	0.02%
			Annual Pct. “2nd Home”	5.0%
Total Unit Requirement		10,772	Current Pct. Renters	36%

TABLE D-17:
Residential Demand Analysis—Ten-Year Demand Estimates (2015–2025)

Annual Income Range (2005 dollars)	**Approx. Rent Range**	**Approx. Home Price Range**	**Current HHs in Income Bracket (2005)**	**Est. Net New HHs by Income Bracket**	***Total Units***	**Est. Pct. Renters**	**Total Rental Units**	**Total Ownership Units**
Up to $15K	Up to $375	Up to $50K	7%	2%	***412***	95%	392	21
$15–25K	$375–$625	$50–85K	8%	8%	***1,650***	90%	1,485	165
$25–35K	$625–$875	$85–$120K	11%	11%	***2,268***	70%	1,588	681
$35–50K	$875–$1,000	$120–$175K	17%	18%	***3,712***	40%	1,485	2,227
$50–75K	$1,000+	$175–$250K	23%	24%	***4,949***	30%	1,485	3,464
$75–100K	$1,000+	$250–$350K	14%	15%	***3,093***	20%	619	2,475
$100–150K	$1,000+	$350–$500K	13%	14%	***2,887***	10%	289	2,598
$150K+	$1,000+	$500K+	7%	8%	***1,650***	5%	82	1,567
Totals			100%	100%	***20,621***	36%	7,424	13,198

Source: ESRI Business Information Solutions, DRCOG, U.S. Census, and Leland Consulting Group
Note: Household growth rate is based on DRCOG Traffic Analysis Zone -level forecast

Federal Center Trade Area

Households	2015	87,501		
	2020	96,749	Annual Growth Rate	2.03%
	2025	106,975		
Household Growth	(15-25)	19,473	Demolition Rate/yr.	0.02%
			Annual Pct. “2nd Home”	5.0%
	Total Unit Requirement	20,621	Current Pct. Renters	36%

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2.0 Federal Center Site Overview

The land on which the Federal Center is located is potentially quite valuable real estate. Because the parcels have been off limits to developers for more than 50 years, the cities of Lakewood and Golden grown up around the site and continued on to the west, leaving the Federal Center site surrounded by substantial density, creating latent demand on the subject property across multiple land use types.

The site comprises four "hard corners," especially attractive to retail development, at the junctions of Alameda Avenue, Kipling Street, Union Street, and 6th Avenue. Easy access to Downtown and western suburbs via Alameda Avenue and 6th Avenue make the site attractive as a location for residential development, particularly higher density products. The planned expansion of the West Corridor LRT, with a key station stop planned within the subject property further enhances connectivity and provides opportunity for robust mixed-use transit-oriented development. The relocation of St. Anthony Central Hospital to the southwestern portion of the property will increase the viability of certain retail categories, boost potential residential demand, and generate spillover medical office space demand. Available mountain views and potentially attractive green space along McIntyre Gulch add natural amenities that enhance the possibilities for residential development. Indeed, if the Denver Federal Center parcels were vacant, they would represent some of the more sought-after pieces of development land in the metropolitan area.

Of course, the land in question is not vacant, but is home to a very large and unique land use in the Federal Center—one that will serve as a centerpiece for any redevelopment efforts on the overall property even as it expands its own presence. Future development will serve the Federal Center tenants first and foremost—allowing for a more optimal physical distribution of facilities, accommodating for employment growth and expansion among existing tenants, and providing a more attractive menu of space to attract other federal tenants currently operating out of facilities off-campus.

As a major employment base, the Federal Center itself provides additional appeal to private sector developers of retail, high-density residential, as well as complementary office and research space. However, because of the special security/access requirements of many of its tenants and its unique mix of land use types, the Federal Center presents certain constraints to any efforts at "highest and best use" development. These constraints and barriers include:

- Disruption of the local street grid for all roads except the bounding arterials
- Perceptions (on the part of prospective retailers, residents, and private-sector employees) of potentially onerous security-related impositions
- Perceptions of costly bureaucratic development complexities given the unusual jurisdictional arrangements governing the site

- Potential mismatch between real estate market demands and the redevelopment preferences of existing federal tenants and other key stakeholders (such as residential neighbors)

Despite these constraints, both perceptual and physical, the Federal Center property is well positioned to capture a significant share of trade area demand potential across all major land use types. The currently disrupted local street grid is partially addressed, under the Federal Quad and Federal Mall alternatives, by adding new through-streets running both east-west and north-south. Perceptions of security impositions are grounded in reality, but these are also expected to be mitigated as the site moves closer to redevelopment (through a more stratified approach to security). Jurisdictional and other regulatory complexities will likely remain a challenge to developers, but they can be addressed through educational outreach and a concerted effort on the part of the General Services Administration (GSA) and the city of Lakewood to make the site at development as development-friendly as possible given the needs of the federal government. Finally, although existing federal tenants, adjacent residential neighbors, and the St. Anthony Central Hospital stakeholders will have many development preferences that go against the wishes of an unconstrained market, outreach meetings held to date (see Appendix C) suggest that these legitimate constraints leave ample room for several robust redevelopment options, assuming an atmosphere of cooperative stakeholder negotiation.

Specific attainable market capture rates and expected absorption for each land use type are discussed in the section that follows.

2.1 Attainable Absorption/Capture by Land Use

While the preceding overview sections of this market analysis showed estimates for future trade area demand across several land use categories, the following discussion summarizes how much of that overall trade area demand could be "captured" and translated into development on the Federal Center campus, given the strengths and weaknesses of the site and its planned amenities. Those estimates of attainable capture are shown as a range: from *conservative* to *moderate* to *aggressi*ve, reflecting some uncertainty in the future ability of the site to capture demand. These are "top-down" market benchmarks, in that they are meant to show the upper limit of unconstrained market potential for the site. They do not consider constraints such as security needs, environmental/topographic barriers, configuration problems, and the desires of tenants or stakeholders. These "bottom-up" factors will all generally work to decrease, rather than increase, the ultimate level of development on the site. Sections 2.3 and 2.4 of this appendix discuss these and other "bottom-up factors in the allocations of space given to various land uses.

The *conservative*, *moderate*, and *aggressive* levels of market capture should therefore be used only as benchmarks for understanding how ambitious a given alternative is relative to the estimate of market support for each land use type. An alternative exceeding the *aggressive* market capture levels would be seen as overly ambitious relative to market demand. While neither the Federal Quad nor the Federal Mall alternatives exceed *aggressive* levels for any use, both show certain land uses that fall below even the conservative capture levels based on consideration of "bottom-up constraints unrelated to the market. For example, residential development is shown lower than conservative capture levels in both alternatives. This reflects tenant and other stakeholder input suggesting that residential development should be restrained (given a perception of incompatibility between large-scale residential development and certain federal land uses).

2.1.1 Residential

Demand for new residential units is primarily a factor of growth in income-qualified households within a trade area. Projected household growth was analyzed along with historical patterns of single and multi-family development to arrive at a baseline demand estimate within the trade area.

A review of key demographic and psychographic indicators suggests that residential demand opportunities lie primarily in the ownership of attached (condominium and townhome) housing products and within rental apartments. Demand in both sectors should cross a wide price spectrum. Increasing the density of housing near planned transit improvements will provide additional demand for convenience and/or service retail space within the study area and will help to complete a desirable New Urbanist atmosphere around the station stop. Because light rail will not be complete and available until approximately 2015, it is expected that capture rates for residential will increase after that time.

The Conservative scenario assumes that there will be no residential capture on the subject property, primarily because of stakeholder preferences.

The Moderate scenario uses a capture rate for ownership housing units (assumed to be all attached condominium or townhome products) of 6 percent in the first 10 years, increasing to 9 percent in the second 10 years, resulting in total absorption of 1,584 units through 2025. Rental housing capture rates increase from 8 percent to 13 percent (reflecting increased appeal of rental housing with transit-oriented development (TOD), resulting in 1,274 new units over 20 years.

The Aggressive scenario has ownership capture rates holding at 10 percent over 20 years for 1,990 new units and rental capture rates moving from 13 to 16 percent, resulting in expected absorption of 1,691 units.

It should be noted that residential demand, even at conservative capture rate, is likely to exceed both land capacity and stakeholder preference for this use on the Federal Center site. As such, the Federal Quad and Federal Mall alternatives fall well below theoretically supportable market levels.

2.1.2 Retail

Retail capture for the Federal Center site is likely to take the form of TOD together with a mid-sized grocery-anchored neighborhood center. Some retail niches suggested by the trade area retail demand analysis include food and drink away from home, personal and professional service, medical, convenience, storefront professional office, and entertainment.

As with residential, retail demand (capture) is likely to increase after the completion of the light rail transit line through the site.

The Conservative scenario calls for capture rates beginning at 7 percent and increasing to 9 percent, for 319,140 square feet of attainable retail development over 20 years.

The Moderate scenario uses 10 percent capture for the first 10 years, rising to 15 percent in the years following 2015, resulting in potential absorption of 505,500 square feet of new retail within the Federal Center property.

In the Aggressive scenario, the Federal Center absorbs 747,920 square feet of retail over 20 years, with capture rates rising from 18 percent to 20 percent over that timeframe.

2.1.3 Office

Office demand in the trade area is viewed as being a function of overall employment growth in Lakewood. The portion of that demand that can be captured at the Federal Center depends in part on the attractiveness of the sight (access, visibility, design quality, amenities, etc.), and will also be heavily influenced by growth in the specific government programs found at the Federal Center. To the extent with which those programs “spin off” related private-sector activity requiring office space, the Federal Center should capture a disproportionate share of office sector growth. Favorable site characteristics of the subject property, together with its unique proximity to federal employment activity, suggest that the Federal Center could capture a significant share of trade area demand.

Product demand will likely be limited to Class B multi-tenant and medical office space developed in association with the new St. Anthony Central Hospital. The exception will be Class A and/or B space developed in proximity to the future multi-modal facility. As the study area redevelops and land prices begin to increase, demand for higher density mixed-use projects (e.g., “office-over-retail”) could also begin to emerge. The more successful the property owner is in establishing the Federal Center as a destination, the greater will be the site’s ability to capture demand from tenants seeking an urban setting in a suburban location.

The Conservative scenario, in which capture rates go from 13 percent to 16 percent, calls for 635,000 new square feet of office demand to be absorbed within the Federal Center property.

The Moderate scenario has capture rates ranging from 18 to 20 percent and absorption of 827,660 square feet of office space.

The Aggressive scenario shows capture rates holding steady at 25 percent over the 20-year timeframe and absorption of 1,082,750 square feet of new office space.

It should be noted that the attainable absorption figures described in these scenarios are exclusive of any medical office space development that will occur on St. Anthony Central Hospital’s property.

2.1.4 Industrial/Research and Development

In addition to demand for office space, the Federal Center campus lends itself to other employment products, including a range of industrial and flex space. As with office space, certain industrial products could be introduced to grow the existing base as well as provide for support and "cluster" among suppliers and users. The Federal Center campus, as a key industrial enclave within the trade area, could provide a unique set of offerings in the form of amenities, services, transportation, living and lodging accommodations, and commercial outlets. As with office space, the Federal Center could capture a disproportionate share of industrial space from the trade area if it can leverage relationships between federal tenants and complementary private-sector firms.

Unlike the previous land use types, industrial/research and development (R&D) demand is unlikely to be significantly impacted by completion of the light rail facilities. As such, capture rates are shown as constant through out the 20-year timeframe under consideration here.

In the Conservative scenario, industrial/R&D capture rates are 15 percent, with cumulative absorption of 378,300 square feet.

In the Moderate scenario, capture rates are 20 percent with overall absorption of 504,400 square feet.

In the Aggressive scenario, capture rates are 25 percent with absorption of 630,500 over 20 years.

2.1.5 Federal Uses

In addition the various sources of private sector real estate growth, the Denver Federal Center will also attract construction of new federal facilities (a combination of office and lab/R&D space). This demand will come from three primary sources. First, approximately 1 million square feet of federal tenant space will be demolished in the coming years. Most of these facilities are expected to be rebuilt in some improved form and/or physical configuration within the Denver Federal Center. Secondly, the employment base within the trade area is expected to grow at an annual compound rate of approximately 1.3 percent. It is reasonable to assume that locally based federal jobs will grow at a similar rate—i.e., track along with job growth in the overall economy—over the next 20 years. At that rate, the Federal Center's facility needs (a function of job growth), will expand by some 1.1 million square feet. Finally, as the quality of the Federal Center campus and surrounding developments improve, it is expected that some of the federal tenants who have found space outside the Federal Center in recent years may return to the campus. This amount of recaptured federal tenant space could range from 500,000 to 1,000,000 square feet over the 20-year timeframe under analysis here.

2.2 Development Alternatives: Common Market Factors

The Federal Quad and Federal Mall alternatives are two redevelopment scenario options for the Federal Center campus that differ primarily in their physical layout, circulation patterns, and appearance. The market forces underlying the two alternatives, though, are fundamentally the same. Both rely on three primary catalyst projects: the RTD transit station development, the St. Anthony Central Hospital relocation, and reconfiguration/redevelopment of federal tenant space, to drive demand for real estate demand within the Federal Center property.

In general, the RTD light-rail transit center will provide not only increased commuter transportation options, but will open a wide array of pedestrian-oriented land use configurations focused around the transit station itself. This transit-oriented development opportunity increases the viability of much denser, higher value development with a more diverse mixes of uses. The greater access and decreased community isolation from the transit connection should improve the working and living environment for those within the overall campus and the broader neighborhood.

The major hospital relocation, occurring just south of the transit station, will further enhance the vitality of the TOD development (particularly of ground-floor retail and medical-related office uses) by providing a mix of passengers and increasing ridership and pedestrian activity in general.

The improvements to the Federal Center's federal tenant campus (together with the transit-oriented development and hospital activity) should attract federal agencies to the Federal Center site, especially as the workplace quality-of-life dimension improves through better commuting access, broader amenity base, and greatly enhanced aesthetic environment.

Under both alternatives, the Federal Center is transformed from a large, restricted-access employment center to a multifaceted activity center that serves a broader community while retaining requisite security for sensitive federal facilities. However, because all but one of the prime retail corner locations are either taken by federal users, assigned to open space, or owned by the hospital developers, realistic absorption potential is below what is shown in the unconstrained market capture analysis.

The successful redevelopment of the Federal Center site overall is highly dependent on the synergy generated by the primary proposed activity centers. The absence of any one of the three main catalysts (RTD, St. Anthony Central Hospital, Federal Center) would significantly affect the redevelopment potential of the whole site.

2.2.1 Development Opportunity Matrix

Table D-18 reflects non-market factors influencing the direction of the two land use alternatives presented. Although no formal survey of stakeholders was conducted, their input was gathered over the course of round table meetings, informal discussions and a design charette held at the Federal Center (see Appendix C). This matrix is an attempt to summarize the opinions of (a) agency tenants and employees, (b) neighboring businesses and residents,

(c) constraints related to use compatibility and physical configuration ("fit"), and, finally, (d) the relative legal and bureaucratic ease of disposition (conversion from federal to non-federal uses). The darker circles indicate more favorable conditions/preferences. Although there was not consensus among stakeholders on redevelopment preferences, there was typically a strong enough indication of general preference on most issues.

TABLE D-18:
Federal Center Development Opportunity Matrix

Development Component	Desirable to DFC Tenants	Desirable to Neighborhood	Fit with Site and Existing Uses	Disposition Fit
Employment				
Office	●	○	●	◉
Medical Office	◉	○	◉	◉
Other R&D/Flex	●	○	●	●
Warehouse/Industrial	◉	○	◉	◉
Residential				
Town Home/Condo	◉	○	◉	○
Apartments	◉	○	◉	○
Single Family Detached	○	○	○	○
Mixed Income Housing	○	○	◉	◉
Retail				
Regional Mall	○	○	○	○
Lifestyle Center Retail	○	○	○	○
Grocery-Anchored Retail	◉	◉	◉	○
Neighborhood/TOD Retail	●	◉	●	◉
Other Commercial				
Lodging	◉	○	◉	◉
Community				
Rec/Community Center	●	●	◉	◉
Parks/Open Space	●	●	◉	◉

Legend: Darker circle = More favorable

2.2.2 Market Factors Unique to Each Alternative

As previously mentioned, the two alternatives are quite similar in terms of how they address market forces, differing more in their physical design and how they address certain non-market constraints. There are, however, some aspects of land use prioritization and physical layout inherent in each alternative that merit discussion in relation to the market analysis.

2.3 Federal Quad Alternative

The Federal Quad alternative is a less intense development overall, organized around two formal ovals and suggestive of a university campus setting.

2.3.1 Office Center

In this alternative, this district, located in the northwestern corner of the Federal Center site, near the desirable Union Street corner, is devoted to office uses. Excellent visibility along 6th Avenue and a prominent position across the smaller of the two ovals could make this an attractive location for office space. Because the Denver MSA office market is still recovering from a sharp downturn in 2002 and 2003, it may be prudent to consider some retail development north of North Avenue in this alternative. This district is perhaps the most obviously valuable parcel for conventional (i.e., auto-oriented, non-transit-oriented development) retail development, given its visibility from 6th Avenue. Given the separation afforded by a landscaped North Avenue, such a use would not conflict with Office Center development to the south. Under conditions of a strong regional office recovery, however, an office use may be more appropriate and valuable here. Such a scenario would have the added benefit of helping to concentrate retail density within the Mixed-Use Core.

2.3.2 Mixed-Use Core

This district would be the central element of the transit-oriented development, concentrating high-value lodging, housing, office and ground-floor retail uses on either side of an urban Center Avenue, just east of the transit station.

Despite significant additions of upscale rooms to the market, the lodging market in Denver MSA is improving, especially downtown, and occupancy numbers are climbing. With its central location, the Mixed-Use Core presents an interesting and potentially quite desirable location for a boutique to mid-sized hotel. A hotel at that location would serve business travelers (drawn by federal users and related businesses), hospital guests/families, and area visitors desiring a location convenient to both downtown and westbound Interstate 70. A vertical building design would be important for visibility given the interior locations.

Apartments, together with lofts and other more dense ownership, particularly in a neo-traditional transit-oriented environment, should appeal first and foremost to Federal Center employees (primarily to those in smaller households, whether empty nesters or younger adults) as well as to doctors, nurses, and other hospital employees at St. Anthony Central

Hospital. The site should have generally strong and increasing appeal as a residential option because of its convenience to transit, especially if gas prices continue to rise.

Retail in the Mixed-Use Core would be of the ground-floor transit-oriented variety (below offices and residences). Although retail tenant site selection criteria may change over time as light rail TOD becomes more prevalent, there is currently limited demand for grocery space that is limited to structured parking. As such, initial tenants are more likely to be specialty and service retailers, with tenant interest moving from west to east over time along Center Avenue and away from the primary north-south connection of Quail Street. Retail should benefit from excellent pedestrian visibility and an aesthetically appealing environment.

The Mixed-Use Core also provides space for Class B office tenants who have smaller floorplate requirements and who desire a more mixed, urban environment. These may include smaller medical and other health-related offices (e.g., chiropractors, Pilates or yoga studios, dentists, etc.), as well as banking, real estate and other consumer-oriented financial service providers.

2.3.3 Research and Development

The R&D district is designed specifically to accommodate, within a dedicated area, private-sector users of flexible quasi-industrial space who may benefit from being in proximity to Federal Center tenants engaged in complementary industries. The Federal Quad Alternative takes a somewhat more cautious approach to serving this demand sector, anticipating demand between the moderate and conservative market support levels. If private-sector research space demand materializes more quickly, as a result of federal agency spin-offs or purely market reasons, such development may need to be integrated within the Federal Campus itself.

2.3.4 Federal Campus/Federal Quad

Real estate development within the Federal Campus and Federal Quad districts will be determined in large part by decisions made in Washington, D.C., by the federal agencies represented within the campus. These agencies may add or cut programs or otherwise expand or contract their workforce. Agencies may close altogether, while entirely new agencies (e.g., Homeland Security) may be created. These shifts in demand are essentially not predictable, especially in terms of how they will manifest themselves in the Denver area.

Federal tenants are, however, free (within the parameters of their GSA leases) to move to other office and R&D properties outside the Federal Center campus, as some have done in recent years. This phenomenon introduces some market considerations into the equation. To the extent that the Federal Center can become more desirable to tenants (particularly agency decision-makers), renewal of federal leases can be more easily achieved. Improvements to transportation/access, off-site amenities, building/campus configuration, shared facilities, etc. should all serve to increase the attractiveness of the site. The Federal Quad alternative is perhaps the most aggressive in terms of addressing aesthetics (via the oval) and convenience to urban amenities (via adjacency to the Mixed Use Core). To the extent that these factors trump perceived needs for high security for certain tenants, this alternative should succeed in retaining agency leases.

2.3.5 Neighborhood Retail

The Neighborhood Retail district at Oak Street and Alameda Avenue capitalizes on the fact that this intersection may increase in terms of significance over time. As Oak Street to North Avenue becomes a viable diagonal route connecting Alameda Avenue to 6th Avenue (via Union Boulevard), this corner will increase in value. The existing post office provides some ingoing site awareness and would help to boost overall traffic and activity for a neighborhood-oriented retail development. While a grocery anchor would be a logical choice for the site, given its size and location, it is unlikely that a national chain would add a store at this location given the grocery stores located further west on Alameda Avenue. Some new regional tenant coming to the market between now and 2030 would seem to be a more logical anchor, with a mix of in-line retail rounding out the center.

2.3.6 Summary of Land Use

A land use summary for the Federal Quad Alternative is presented in Table D-19.

TABLE D-19:
Land Use Summary: Federal Quad Alternative

		Market Benchmarks		
Land Use	**Planned**	**Conservative**	**Moderate**	**Aggressive**
Office (new non-federal)	800,000 sf	635,150 sf	827,660 sf	1,082,750 sf
R&D (new mixed-tenant)	633,000 sf	378,300 sf	504,400 sf	630,500 sf
Retail (new)	212,000 sf	319,140 sf	505,500 sf	747,920 sf
Federal (new*)	1,800,000 sf	1,600,000 sf	1,800,000 sf	2,100,000 sf
Lodging (200 new units)	200,000 sf	164 units	195 units	244 units
Total new development (less residential)	3,645,000 sf			
Existing Federal* (to be retained)	2,837,000 sf			
Total net developed space (new and retained existing)	6,482,000 sf			
Residential	290 units	0 units	2,858 units	3,681 units
Parking Spaces (new and existing)	12,977			

sf = gross square feet
* Includes varied federal uses including office, R&D, laboratory, etc.

2.4 Federal Mall Alternative

The Federal Mall Alternative is a more intense development, in general, than the Federal Quad Alternative, with additional space allocated to federal uses and a tract devoted to residential development in the southeastern portion of the property. This alternative also reserves more land for office and retail development. Its physical arrangement features a linear Mall as an organizing element.

2.4.1 Mixed Use Core

In the Federal Mall alternative, the Mixed Use Core is also adjacent to the light rail station, but the transit-oriented residential/commercial mix is pushed more towards the southeast corner of 6th Avenue and Union Street. This arrangement preserves the transit-oriented development theme to the Mixed Use Core, but allows for more auto-oriented access and visibility to the retail and lodging components given the prominent corner location.

The hotel location, at the far northwestern corner, is connected to the RTD station via a landscaped retail corridor. This is a favorable arrangement for the ground-floor retail tenants, given the increased potential for pedestrian traffic.

This alternative also has a strong residential component, concentrated in multi-story apartment and condominium buildings. The relocated hospital, Federal Center offices, and proposed related employment should all serve to increase the desirability of multi-family housing on the property. Live-work units, either above retail or on the ground floor, should also have strong appeal within such an urban environment, especially given the proximity of light rail

2.4.2 Office Center

The Office Center district, in the Federal Mall Alternative, is located between the Mixed Use Core and the Federal Campus itself. Visibility from 6th Avenue to offices in this district would be unobstructed and access from 6th Avenue or Union would be excellent. This alternative shows office development as quite strong—near *aggressive* attainable capture rates per the market study. Given the unpredictable nature of the federal sector's ability to spin-off private-sector development, this alternative ensures that the impact of a successful joint development scenario is explored. Being adjacent to major federal office tenants is a positive draw for this site. Office development in this location is near enough to the hospital site to capture medical office expansion related to that relocation. Aesthetically, the Office Center district would benefit from being adjacent to a planned park on the south, with a landscaped 7th Street as a center element.

2.4.3 Research and Development

The R&D district is designed specifically to accommodate, within a dedicated area, private-sector users of flexible quasi-industrial space who may benefit from being in proximity to Federal Center tenants engaged in complementary industries. The Federal Quad alternative takes a proactive approach to serving this demand sector, anticipating demand at the *aggressive* market support level of 630,000 square feet. Because of the unpredictable nature of public-private research partnerships at the federal level, it may be wise to have a district reserved for such uses should a significant opportunity arise. If private-sector research space demand is slow to materialize, this parcel is well positioned to serve as a "land bank" for other future development, related either to the Mixed-Use Core or the Hospital.

2.4.4 Federal Campus/Federal Mall

Real estate development within the Federal Campus and Federal Quad districts will be determined in large part by decisions made in Washington, D.C., by the federal agencies represented within the campus. These agencies may add or cut programs or otherwise expand or contract their workforce. Agencies may close altogether while entirely new agencies (e.g., Homeland Security) may appear. These shifts in demand are essentially not predictable, especially in terms of how they will manifest themselves in the Denver area.

Federal tenants are, however, free (within the parameters of their GSA leases) to move to other office and R&D properties outside the Federal Center campus, as some have done in recent years. This phenomenon introduces some market considerations into the equation. To the extent that the Federal Center can become more desirable to tenants (particularly agency decision-makers), renewal of federal leases can be more easily achieved. Improvements to transportation/access, off-site amenities, building/campus configuration, shared facilities, etc. should all serve to increase the attractiveness of the site. The Federal Mall Alternative addresses aesthetics via a linear landscaped mall. Federal tenant employees are further away from dining and service retail opportunities than under the Federal Quad Alternative, although these are still accessible by walking. Federal Mall employees are still reasonably close to the RTD station to make rail commuting a possibility without resorting to a shuttle. Federal Campus employees housed beyond the Mall area, however, are a considerably longer walk away from retail and rail.

While security arrangements for agencies located east of 6th Street could be similar to what is now in place, those federal tenants in the Mall itself would likely rely on building-by-building security measures. Security preferences in the "market" for federal space are not well understood, but to the extent that an agency prefers a centralized security element with a clear physical separation, that prospective tenant would probably prefer the Federal Quad Alternative to the Federal Mall Alternative, with its emphasis on semi-public spaces.

2.4.5 Residential Neighborhood District

A key distinction between the Mall and Quad alternatives is that the Federal Mall Alternative places a medium-density residential neighborhood near the southeastern corner of the property. In a real estate market unconstrained by Federal Center tenants and their needs, residential development would have strong potential for success at this location—as reflected in the market study's projections of attainable capture. In fact, only the Federal Mall Alternative approaches levels of market-supportable residential unit capture in the *moderate* scenario (the conservative scenario assumed no residential). Apartments and single-family attached dwellings (townhomes, condominiums, and patio homes) would likely enjoy strong market support in this location.

This district also has a neighborhood-serving retail component. The existing post office provides some ingoing site awareness and would help to boost overall traffic and activity for a neighborhood-oriented retail development. While a grocery anchor would be a logical choice for the site, given its size and location, it is unlikely that a national chain would add a store at this location given the grocery stores located further west on Alameda Avenue. Some new regional tenant coming to the market between now and 2030 would seem to be a more logical anchor, with a mix of in-line retail rounding out the center.

Open space and more formal recreation component are possible in the space between the Residential Neighborhood and the Federal Center users to the north. Such amenities, integrated into the McIntyre Gulch open space system, would be a strong selling amenity for homes in this district and would be in a reasonably convenient location to serve employees within the Federal Center and the private R&D district.

2.4.6 Summary of Land Use

A land use summary for the Federal Mall Alternative is presented in Table D-20.

TABLE D-20:
Land Use Summary: Federal Mall Alternative

		Market Benchmarks		
Land Use	**Planned**	**Conservative**	**Moderate**	**Aggressive**
Office (new non-federal)	950,000 sf	635,150 sf	827,660 sf	1,082,750 sf
R&D (new mixed-tenant)	446,500 sf	378,300 sf	504,400 sf	630,500 sf
Retail (new)	250,000 sf	319,140 sf	505,500 sf	747,920 sf
Federal (new*)	2,000,000 sf	1,600,000 sf	1,800,000 sf	2,100,000 sf
Lodging (200 units)	200,000 sf	164 units	195 units	244 units
Total new development	3,846,500 sf			
Existing federal* (to be retained)	2,876,330 sf			
Total net developed space (new and retained existing)	6,722,830			
Residential (Mixed-Use District)	1,160	0 units	2,858 units	3,681 units
Residential Units (Residential Neighborhood District)	240	0 units	2,858 units	3,681 units
Parking Spaces (new and existing)	14,902			

sf = gross square feet
* Includes varied federal uses including office, R&D, laboratory, etc.

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