

The Economic and Fiscal Impacts of the Downtown Denver Auraria Campus

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DOWNTOWN DENVER
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EXECUTIVE SUMMARY

The Auraria Campus in Downtown Denver has the largest concentration of students in the Denver metropolitan area. Three academic institutions share the 151.5-acre Campus serving nearly 43,100 total students: the Community College of Denver, Metropolitan State College of Denver, and the University of Colorado Denver. The Campus is managed and maintained by the Auraria Higher Education Center for the use of the academic institutions and students. In addition to these entities, the Campus includes nearly 20 retail and auxiliary use businesses.

This study estimates the economic and fiscal impacts of all of the entities operating at the Auraria Campus, as well as impacts from student and visitor spending. Throughout this study, economic impacts refer to the exchange of dollars between businesses, organizations, and individuals. Fiscal impacts refer to state and local tax revenue generated because of this economic activity. The economic and fiscal impacts are estimated at two geographic levels - the City and County of Denver and Colorado.

The typical annual direct economic impact of Campus operations, student spending, and visitor spending in Colorado is nearly \$475 million and provides employment for over 7,500 workers. In addition, ***these spending patterns generate about \$2.2 million in sales/use tax revenue for the state.*** As these direct dollars circulate throughout the economy, ***the direct and indirect economic impact of the Auraria Campus on Colorado is just over \$1 billion and supports over 14,000 employees.***

Isolating this spending to that which occurs in the City and County of Denver reveals that the typical annual direct economic impact of the Auraria Campus on the City and County of Denver is \$209 million and provides employment for nearly 2,800 workers. In addition, ***these spending patterns generate about \$2.3 million in sales/use tax, property tax, lodging tax, and occupational privilege tax revenues for the city.*** As these direct dollars circulate throughout the economy, ***the direct and indirect economic impact of the Auraria***

Campus on the City and County of Denver is \$381 million and supports nearly 3,700 workers.

The following sections give a brief overview of the spending components included in the impact values.

Campus Operations Impacts

Operating and capital expenditures by the Auraria Campus entities total \$339 million in a typical operating year. These expenditures include purchases of furniture, fixtures, computer equipment, utilities, and other operating expenses, as well as \$216 million in payroll to over 4,000 full-time equivalent employees. Over 91 percent of this spending occurs in Colorado, resulting in a direct economic impact of Campus operations of \$309 million in Colorado. This spending generates about \$659,000 in sales/use tax revenue for the state.

Over half of this Colorado spending is transacted with businesses, individuals, and organizations located in the City and County of Denver. The direct economic impact of Campus operations in the City and County of Denver is about \$175 million, including \$110 million in payroll for nearly 2,100 resident workers. This spending generates about \$1.1 million in various tax revenues for the city.

Expenditures on Campus operations and payroll by Auraria's operating entities circulate throughout the economy, multiplying its impact on the Denver and Colorado economies. The total impact of the Auraria Campus operations in the City and County of Denver, including all direct and multiplicative impacts, is \$312 million. This figure is included in the total direct and indirect economic impact of Campus operations in Colorado of \$721 million, including \$392 million in payroll earned by 6,100 direct and indirect employees.

Student Spending Impacts

The 43,100 students (14,300 FTE students) attending classes at the Auraria Campus spend money on housing, food, transportation, medical expenses, and other personal expenses. These expenditures total an estimated \$204 million in a

EXECUTIVE SUMMARY

typical year. Nearly 80 percent of this spending occurs in Colorado, resulting in an annual direct economic impact of student spending of over \$162 million in Colorado. This spending generates about \$1.5 million in sales tax revenue for the state.

As almost 30 percent of the students at the Auraria Campus reside in the City and County of Denver, the direct economic impact of student spending in the City and County of Denver is about \$32 million per year. The direct fiscal impact of student spending in the City and County of Denver is \$1.1 million in sales tax and property tax revenue.

Student spending creates significant multiplier effects as the money circulates throughout the Denver and Colorado economies. Student spending results in a total direct and indirect economic impact of \$325 million throughout Colorado, of which \$64 million of impact occurs in Denver.

The Colorado spending supports the direct employment of 3,500 employees in the real estate, healthcare, retail trade, and food services industries and 4,300 indirect workers in all industries. Of the total 7,800 direct and indirect workers, an estimated 1,000 workers are residents of Denver.

Visitor Spending Impacts

An estimated 59,300 people visit the Auraria Campus annually for private events and school prospecting trips, including about 8,800 overnight visitors. These Campus visitors spend about \$3.4 million annually on both lodging and non-lodging expenditures throughout the state, generating about \$83,000 in state sales tax revenue.

The majority of the visitor non-lodging spending and about half of the lodging spending occur in the City and County of Denver. The direct economic impact of visitor spending on lodging and non-lodging expenditures in the City and County of Denver is \$2.5 million annually, generating \$112,000 in sales tax and lodging tax revenue.

The multiplied impact of visitor spending in the City and County of Denver is \$4 million per year,

representing about 56 percent of the total direct and indirect state impact of \$7 million per year. This spending supports the employment of 84 workers in the state, about 17 of which reside in the City and County of Denver.

Science Building Impacts

Campus construction projects result in occasional, additional impacts on the region. The Auraria Campus is currently renovating and expanding its existing Science Building at a cost of about \$110 million, slated for completion in 2010.

Construction spending on materials, labor, and soft costs impact the Denver and Colorado economies during the construction period. An estimated \$106 million will be transacted with construction workers and suppliers located throughout the state. Of this amount, approximately \$26 million will flow directly to businesses and individuals located in the City and County of Denver. As these dollars circulate throughout the economy, the total direct and indirect economic impact of the Science Building construction project reaches \$251 million throughout the state, of which about \$41 million is concentrated in the City and County of Denver.

Beyond the Numbers

During the 2008-09 fiscal year, AHEC and the three institutions received about \$95.8 million in state appropriations for maintenance operations, grants, and resident tuition. Therefore, for every dollar the state invested in the Campus, the direct impact of the Auraria Campus-related expenditures created \$4.96 in statewide spending. When the indirect and induced impacts of Auraria Campus-related spending are included, the total spending impact ratio rises to \$11 for every dollar the state invests.

Beyond the dollars generated, the Auraria Campus provides cultural activities and fine arts productions, enhances the skills of the workforce, and provides diversity in the community. The combination of these qualitative benefits with the economic and fiscal impacts of the Auraria Campus highlights the importance of this Downtown Denver asset.

INTRODUCTION

The Auraria Campus, adjacent to Downtown Denver, has the largest concentration of students in the Denver metropolitan area. Three academic institutions share the 151.5-acre Campus, serving nearly 43,100 total students: the Community College of Denver (CCD), Metropolitan State College of Denver (Metro State), and the University of Colorado Denver (UC Denver). The Campus is managed and maintained by the Auraria Higher Education Center (AHEC) for the use of the academic institutions and students. This study combines the impacts of several distinct operating entities that conduct business operations at the Auraria Campus, as well as impacts from student and visitor spending. The operating entities that conduct business at the Campus include each of the three academic institutions, the private tenants at the Auraria Campus, and AHEC.

The intent of this study is to estimate the economic and fiscal impacts of the Auraria Campus at two geographic levels - the City and County of Denver and Colorado. As this study demonstrates, the spending patterns and operations of the Campus entities have significant impacts on businesses throughout Colorado. Beyond the dollars generated by Auraria, there are various qualitative benefits that the facility provides to the community such as providing cultural activities and fine arts productions, enhancing the skill sets of the workforce, and providing diversity in the community. The value of these qualitative benefits, while important, cannot be estimated in dollar terms.

Economic and Fiscal Impacts Defined

Economic impact analysis is the analytical approach used to assess the measurable direct and indirect benefits resulting from a project or entity over a specific period of time. Only those benefits that can be measured or quantified are included. Intangible benefits, such as enhancement of community character or diversification of the job base, are not included.

Further, the economic impacts include only that spending which occurs in the local area. In this

analysis, the economic impact of the Auraria Campus on the City and County of Denver includes only that spending directly related to the Auraria Campus and transacted with businesses located in the City and County of Denver. Likewise, the economic impact of Auraria Campus on Colorado includes only that spending directly related to the Auraria Campus and transacted with businesses located in Colorado. The City and County of Denver impacts are included in the Colorado impacts; the two values are not additive.

Fiscal impact analysis is a narrower concept that measures only the direct, public (governmental) costs and/or public revenues associated with a project or entity. While most of the operations of the three academic institutions and AHEC are tax exempt, there is still tax revenue generated from employee and student spending.

This analysis includes a limited fiscal impact analysis, providing estimates of sales/use tax, property tax, and occupational privilege tax revenue only for the City and County of Denver and Colorado. The estimates include tax revenue for just the City and County of Denver and not other taxing entities operating within the city, such as the school district and other special districts. The tax revenue for Colorado includes just tax revenue generated for the state and not other taxing entities operating in the state, such as cities, counties, and special districts.

The economic and fiscal impact analysis described in this report was completed using the SiteStats™ model, a proprietary impact model developed by Development Research Partners. The model values were derived from primary data supplied by the Campus entities and a variety of standard secondary sources, including data from the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis, and Dun & Bradstreet. In addition, local data sources included the City and County of Denver, the Colorado Department of Revenue, and the Colorado Department of Labor and Employment.

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The economic and fiscal impacts were calculated based on four categories of activities: typical annual Campus business operations, typical annual student spending, typical annual visitor spending, and construction activity. From time to time, the Campus's operating entities are involved in large construction projects and invest in capital expenditures that are not typical of normal business operations. The new Science Building is an example of the impact of special Campus projects, discussed in this report separately from the on-going annual operating and spending impacts.

The spending patterns associated with the Campus entities have multiplicative impacts on the community. Therefore, multiplier analysis is used to trace the impacts on businesses, organizations, and individuals affected by the direct spending as this impact works its way through the economy.

The indirect and induced jobs and income flows generated by the direct spending patterns are estimated using the Regional Input-Output Modeling System II (RIMS II) multipliers developed by the Bureau of Economic Analysis of the U.S. Department of Commerce. The RIMS II multipliers are the most widely used and respected for economic impact analysis. These multipliers are geographic and industry specific, and are used to estimate the total impact of a project on regional output, earnings, and employment.

Using the RIMS II multipliers for the City and County of Denver and Colorado, total output, employment, and earnings impacts from the Auraria Campus are estimated for a typical operating year. Some numbers may not add exactly due to rounding. This analysis considers the economic and fiscal impacts in 2008 dollars.

Report Organization

The report includes several sections. The first section details the impacts from annual campus operations at Auraria. Operating entities at the Auraria Campus include AHEC, CCD, Metro State, UC Denver, and private retail and auxiliary use tenants. This section includes the direct and indirect impacts of spending on Campus operations as well as the impacts of the operating entities' employee spending.

The second section of the report details the impacts of student spending. The Auraria Campus attracts both in-state and out-of-state students to its three higher education institutions. Students make purchases of housing, food, entertainment, and other expenses.

The third section of the report deals with another facet of the Auraria Campus' economic and fiscal impacts, the visitor spending. Invariably, a large student presence attracts visitors to the Campus. In addition, visitors to special events and conferences at Auraria's facilities impact the local economy.

The fourth section describes the impact of new construction, using the new Science Building as an example. Construction activity often results in large, but temporary, impacts to the community.

All of these categories of direct and indirect employment, earnings, and spending are combined and annualized to establish the overall economic and fiscal impacts of the Auraria Campus on the City and County of Denver and Colorado. These final total values are included in the Summary of the report.

CAMPUS OPERATIONS IMPACTS

Campus Entities

Several entities conduct business operations at the Auraria Campus. These include the Auraria Higher Education Center, Community College of Denver, Metropolitan State College of Denver, University of Colorado Denver, and various private retail and auxiliary tenants.

Each operating entity has its own unique dynamics. A summary of each operating entity is included, followed by the analysis of the direct and indirect impacts of the operations at the Auraria Campus.

Auraria Higher Education Center

The Auraria Higher Education Center was created by a Governor's Executive Order in 1971, and was formalized in state statute in 1974 by the legislature. The Campus opened in 1977. The State created the Auraria Enterprise (now called the Auraria Higher Education Center or AHEC) to manage the center facilities, buildings, and grounds. In addition to maintaining the real assets of the Auraria Campus, AHEC allocates shared space on the Campus, operates auxiliary support services such as the Tivoli Student Union, dining, vending, the Campus Bookstore, and Clicks! Copy Center, and facilitates the various needs of the three institutions that use the Campus.

AHEC receives its funding from several sources. Major sources of funding include appropriations from the institutions that AHEC serves, student fees for Campus services, parking revenue, and sales from auxiliary functions located on the Auraria Campus.

AHEC employs approximately 350 full-time equivalent (FTE) employees annually. These employees include administrative staff, maintenance personnel, Campus police, auxiliary staff, telecommunications personnel, and other Campus services employees.

FTE employees of AHEC earn an average annual salary of about \$40,900. This does not include the value of benefits or other employee compensation.

The majority, or 61.6 percent, of AHEC's employees live in the City and County of Denver. All of AHEC's employees are residents of Colorado.

Community College of Denver

The Community College of Denver offers two-year degrees and certificates in a variety of program areas. CCD was established in 1967 and served nearly 8,300 students in fall 2008.

CCD operates at several locations across Denver. Most of CCD's operations occur at two locations, the Auraria Campus and the Center for Health Sciences at the Lowry site. In order to portray accurately CCD's economic impacts, operating expenses, employment, and student data were divided among the various locations to identify the impact of CCD at the Auraria Campus specifically. The majority of CCD's business operations are at the Auraria Campus.

CCD employs nearly 280 permanent FTE employees. In addition, CCD employs hundreds of adjunct instructors to teach most courses. Adjunct instructors are paid based on the number of classes or credit hours taught. While total employment at CCD is over 1,000 workers, total FTE employment at CCD is approximately 320 workers annually. These employees earn an average annual salary of \$42,100, excluding benefits and other employee compensation. About 62 percent of CCD employees reside in the City and County of Denver and 99 percent of the employees live in Colorado.

Metropolitan State College of Denver

Metropolitan State College of Denver is a four-year public institution offering 53 majors in several programs. Metro State was formed in 1965 and over the last several decades has become one of Colorado's largest institutions of higher education. Metro State has over 21,700 students as of fall 2008.

Metro State's business operations are mainly at the Auraria Campus. While some operations take place outside of the Auraria Campus at the Metro North and Metro South Campuses, it was not possible to differentiate between Metro State's Auraria

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operations and operations at its other locations. For this analysis, all of the impacts from Metro State's typical annual business operations are considered Auraria Campus impacts.

Metro State employs about 1,080 FTE employees annually. These employees earn an average annual salary of \$57,800, excluding benefits and other employee compensation. Metro State employs people from across the Metro Denver region, of which about 38 percent are residents of the City and County of Denver. Nearly all of Metro State's employees, or 98.8 percent, are residents of Colorado.

Metro State is a key part of the Metro Denver economy. Based on accounts payable data from Metro State, over 61 percent of Metro State's procurements are conducted with suppliers and vendors located in the City and County of Denver, generating significant economic impacts. Estimates from Metro State suggest that between 79 percent and 83 percent of its purchases are from Colorado suppliers and vendors.

University of Colorado Denver

The University of Colorado Denver was formally organized in 1974 and soon became integrated with the Auraria Campus. UC Denver is one of Colorado's premier research institutions, attracting significant amounts of federal and other research dollars. UC Denver offers more than 80 undergraduate, graduate, and doctorate-level programs.

The University of Colorado Denver operates at two separate campuses. The Downtown Campus is located at the Auraria Campus, as well as a few other downtown locations. The Downtown Campus offers coursework in a variety of program areas, including architecture, arts and media, education, engineering, liberal arts, business, and public affairs. The UC Denver Downtown Campus served 13,100 students as of fall 2008. The second UC Denver campus is the Anschutz Medical Campus located at Fitzsimons in Aurora. Coursework for a variety of

health professions is available at Anschutz Medical Center.

The Auraria Campus impact analysis focuses on UC Denver's Downtown Campus. Employment, students, and expenses for total UC Denver operations were divided to represent those in Denver and those in Aurora. While UC Denver's Downtown Campus extends beyond Auraria, division of impacts between the Auraria Campus and other Downtown Denver locations was not possible. For the purpose of this study, all of UC Denver's downtown operations are considered Auraria Campus impacts.

UC Denver employs about 2,190 FTE employees annually at the Downtown Campus. This includes over 2,000 full-time staff and faculty and 1,456 part-time employees. The average annual salary for FTE employees at UC Denver in downtown is approximately \$56,700, excluding benefits and non-wage compensation. Most of UC Denver's employees at the Downtown Campus are Denver residents (54.5 percent) and about 96 percent of UC Denver's employees are residents of Colorado.

Retail and Auxiliary Uses

Several private tenants operate at the Auraria Campus, employing about 110 FTE workers. AHEC manages the leases and facility needs. Most of the tenants on Campus are related to the food services industry. In addition, tenants include caterers, two credit unions, United Parcel Service, army and marine recruitment offices, and the Starz Film Center. This report includes a conservative estimate of retail and auxiliary use impacts since not all tenant data was available. The analysis focuses on the food services, Campus caterers, and Starz Film Center operations. These businesses are collectively referred to in the report as Auraria's retail and auxiliary use businesses.

Sales at Auraria's retail and auxiliary businesses average about \$6.7 million in a typical operating year. Wages paid by businesses in the food and beverage, retail trade, and motion picture theater industries in the City and County of Denver average about \$17,300 annually per employee according to

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the Colorado Department of Labor and Employment's Quarterly Census of Employment and Wages. The retail and auxiliary use businesses operating at the Auraria Campus cater to the students and employees of the three institutions and AHEC. Total spending at these businesses by the Auraria Campus students and employees could not be determined. For the analysis, an estimated 80 percent of the sales of these operating entities are assumed to be from Auraria Campus students and employees. Despite retail and auxiliary uses recycling a large amount of dollars from one part of the Auraria Campus to another, these uses are an important component of the impact of the Auraria Campus.

Methodology

The economic and fiscal impacts of the Auraria Campus entities are estimated for a typical operating year. In order to depict the impacts of typical annual operations, an average of direct spending over the past few years was calculated. In most cases, this included three years of operating expenses and employee data. In some cases, only one or two years of data were available. These values were combined to describe the direct, annual operations of the Campus entities during a typical year.

The direct spending patterns of the Campus entities have multiplicative impacts on the community. Therefore, multiplier analysis is used to trace the impacts on businesses, organizations, and individuals affected by the direct spending as this money works its way through the economy.

Multiplier analysis recognizes the interdependence of various sectors of the economy as activities in one sector spill over into other sectors, stimulating business activity. For example, when an entity located at the Auraria Campus purchases supplies from a local vendor, that local vendor in turn provides payroll to its employees and makes purchases from other vendors. These other vendors in turn provide payroll to their employees, and so on, providing the indirect impact of the project.

On a separate but similar spending track, when employees working at one of Auraria's operating entities spend their paychecks at local businesses, these local businesses provide payroll to their employees, make purchases from other vendors, and so on, creating the induced impact on the community.

As a result, the initial dollar spent on business purchases or payroll is circulated throughout the economy a number of times. The sales revenue to local businesses supports business employment and payroll to companies throughout the City and County of Denver and Colorado.

The number of times that the initial dollar circulates throughout the economy may be estimated using economic multipliers. Generally, larger multipliers are associated with industries that (1) sell their goods and services outside of a targeted region, (2) pay high salaries, and/or (3) spend more dollars locally.

The indirect and induced jobs and income flows (collectively referred to as indirect impacts) generated by the direct spending patterns are estimated using the Regional Input-Output Modeling System II (RIMS II) multipliers developed by the Bureau of Economic Analysis of the U.S. Department of Commerce. The RIMS II multipliers are the most widely used and respected for economic impact analysis. These multipliers are geographic and industry specific, and are used to estimate the total impact of a project on regional output, earnings, and employment.

Using the RIMS II multipliers for the City and County of Denver and Colorado, total output, employment, and earnings impacts from Auraria are estimated for a typical operating year. Some numbers may not add exactly due to rounding. This analysis considers the economic and fiscal impacts in 2008 dollars.

Direct Economic and Fiscal Impacts

The direct economic impact of Campus operations on the City and County of Denver and Colorado is derived from business expenditures on such items as

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operational materials and capital equipment, in addition to the economic impact derived from employee payrolls. Auraria's institutions and AHEC are exempt from state and local sales and property taxes. Therefore, the direct fiscal impacts of Campus operations come from the retail and auxiliary business tenants and from employees who pay Occupational Privilege Tax in the City and County of Denver. The typical annual impact of on-going Campus operations at Auraria is estimated as an average of three years of operating data where possible.

- Operating and capital expenditures by the Auraria Campus entities total \$339.2 million in a typical operating year. These expenditures include purchases of furniture, fixtures, computer equipment, utilities, and other operating expenses, as well as \$216.3 million in payroll to about 4,050 FTE employees.
- Based on an analysis of operating expenditure patterns, the three academic institutions and AHEC purchase a total of \$122.4 million of furniture and fixtures, computer equipment, operating materials, travel expenses, and other operating purchases in a typical operating year. Based on Dun & Bradstreet business data and local procurement data from Metro State, an estimated \$64.7 million, or 48.9 percent, is spent in the City and County of Denver. Slightly more than 80 percent of the spending is transacted at Colorado vendors and suppliers, or a total of \$98.1 million.

| Annual Direct Economic and Fiscal Impacts of Auraria Campus | | | |
|--|----------------------|----------------------|----------------------|
| | Total | Colorado | Denver |
| Direct Economic Impacts | | | |
| Capital & Operating Expenditures | | | |
| AHEC, CCD, Metro, UCD | \$122,380,000 | \$98,147,000 | \$64,660,000 |
| Retail & Auxiliary Uses | \$559,000 | \$447,000 | \$116,000 |
| Total Capital & Operating Expenditures | \$122,939,000 | \$98,594,000 | \$64,776,000 |
| Employees (FTE) | 4,050 | 3,945 | 2,086 |
| Payroll | | | |
| AHEC, CCD, Metro, UCD | \$214,384,000 | \$208,560,000 | \$108,517,000 |
| Retail & Auxiliary Uses | \$1,895,000 | \$1,876,000 | \$1,184,000 |
| Total Payroll | \$216,279,000 | \$210,436,000 | \$109,702,000 |
| Total Direct Economic Impacts | \$339,218,000 | \$309,030,000 | \$174,478,000 |
| Direct Fiscal Impacts | | | |
| Sales/Use Tax Revenue | | \$659,000 | \$814,000 |
| Property Tax Revenue | | \$0 | \$6,000 |
| Occupational Privilege Tax Revenue | | \$0 | \$285,000 |
| Total Direct Fiscal Impacts | | \$659,000 | \$1,105,000 |
| Total Direct Economic and Fiscal Impacts | | \$309,689,000 | \$175,583,000 |

- AHEC receives funds from UC Denver, Metro State, and CCD to help maintain and manage the Campus. In order to avoid double-counting economic impacts, about \$15.7 million in average revenues paid to AHEC by the three institutions was removed from their operating impacts. The impact of these revenues is included in AHEC's operating impact.
- Retail and auxiliary uses at the Auraria Campus include several restaurants, the Starz Film Center, and several other businesses. These businesses cater mostly to the students and faculty of Auraria's institutions.
- Based on an analysis of purchasing patterns derived from the U.S. Census Bureau's Business Expenses Survey and the 2002 Economic Census for the retail trade and food and beverage industries, retail and auxiliary uses at Auraria purchase nearly \$560,000 in operating materials, capital expenditures, and other operating purchases in a typical year.
- Based on Dun & Bradstreet business data, retail and auxiliary uses at the Auraria Campus spend

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an estimated \$116,000, or 20.7 percent, of materials, equipment, and other purchases in the City and County of Denver. An estimated 80 percent of the spending occurs with Colorado vendors and suppliers, resulting in a direct impact of over \$447,000.

- The three institutions and AHEC employ about 3,940 FTE employees earning nearly \$214.4 million in salaries and wages in a typical operating year based on annual expenses and FTE employee data. Of this, approximately \$108.5 million in payroll is paid to over 2,000 FTE employees that are residents of the City and County of Denver. Over 97 percent of this workforce lives in Colorado, representing \$208.6 million in salaries and wages in a typical operating year.
- The operating entities at Auraria employ many student workers. In order to avoid double counting the impact from student wages, over \$2.8 million is excluded from the direct payroll impact. The impact from these wages is included in the student spending impacts section.
- Retail and auxiliary uses at the Auraria Campus employ about 110 FTE workers earning \$1.9 million in salaries and wages in a typical operating year based on an analysis of the Quarterly Census of Employment and Wages from the Colorado Department of Labor and on data from the 2002 Economic Census. Using commuting patterns for the City and County of Denver from the U.S. Census Bureau's American Community Survey 2007, an estimated 62.5 percent of the retail and auxiliary employees live in the City and County of Denver. Of the total FTE employees and payroll, an estimated \$1.2 million in payroll is paid to nearly 70 employees that live in the City and County of Denver.
- From the U.S. Census Bureau's American Community Survey 2007, 99 percent of the employees live in Colorado, representing nearly \$1.9 million in salaries and wages in a typical operating year.
- Retail and auxiliary uses at the Auraria Campus generate sales tax revenues for the City and County of Denver as these businesses purchase operating materials and equipment from other local Denver businesses. In addition, customers of the retail and auxiliary businesses and the Auraria Campus Bookstore pay sales tax on their purchases of retail goods, books, and supplies. Based on Denver's current sales tax rates of 3.62 percent on general purchases and four percent on food and liquor for immediate consumption, estimated yearly sales tax revenues from retail and auxiliary uses and bookstore sales for the City and County of Denver are about \$814,000 in a typical operating year.
- Based on the Colorado sales tax rate of 2.9 percent, retail and auxiliary use expenditures, business sales, and Auraria Campus Bookstore sales generate total sales tax revenue of \$659,000 annually in a typical operating year for Colorado.
- The City and County of Denver levies property tax on real and personal property within the city. Although AHEC is exempt from real property tax on the property it leases to retail and auxiliary tenants, these tenants are still liable for personal property tax. Based on the Denver mill levy of 27.119 (excluding school and special tax districts) and the current commercial assessment rate of 29 percent, retail and auxiliary uses at Auraria generate nearly \$6,000 in personal property tax revenue for the City and County of Denver in a typical operating year.
- The City and County of Denver levies an occupational privilege tax of \$9.75 per month on all employees in the city. The employer and the employee share the tax, with \$4.00 per employee per month paid by the employer and \$5.75 per month paid by the employee. The three institutions and AHEC are exempt from paying the employer portion of the tax. However,

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employees of the institutions, AHEC, retail, and auxiliary uses pay the employee portion of the occupational privilege tax. In a typical operating year, occupational privilege tax revenue from business operations at the Auraria Campus totals about \$285,000.

This value includes the \$174.5 million in direct economic activity plus \$137.8 million in indirect and induced impact. The indirect and induced impact represents the impact of the spending by the employees of the Campus entities and Auraria Campus supplier companies.

- Combining purchasing, payroll, and fiscal impacts associated with the institutional and auxiliary uses of the Auraria Campus results in direct economic and fiscal impacts of \$175.6 million per year in the City and County of Denver.
- Combining purchasing, payroll, and fiscal impacts associated with the institutional and auxiliary uses of the Auraria Campus results in direct economic and fiscal impacts of \$309.7 million per year in Colorado.
- The direct economic and fiscal impacts of the Auraria Campus operations will occur annually in the City and County of Denver and throughout Colorado, assuming similar operating conditions.

Indirect & Induced Economic Impacts

Multiplier Analysis

This section focuses on the multiplier impacts of the Campus operations and spending in the City and County of Denver and Colorado. As with the direct impacts, the indirect impacts in the City and County of Denver are included in the indirect impacts in Colorado; the results are not additive.

- Based on the RIMS II multipliers for educational facilities, Auraria Campus operations result in a total annual value of economic activity in the City and County of Denver of \$312.3 million.

Annual Direct and Indirect Economic Impacts of Auraria Campus Operations in the City and County of Denver

(\$ in millions)

| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
|--|---------------|------------|---------------------------|--------------|
| AHEC, CCD, Metro, UCD | | | | |
| Value of Activity | \$173.2 | 1.7905 | \$136.9 | \$310.1 |
| Payroll | \$108.6 | 1.3673 | \$39.9 | \$148.5 |
| Employment | 2,018 | 1.2442 | 493 | 2,511 |
| Retail and Auxiliary Uses | | | | |
| Value of Activity | \$1.3 | 1.6724 | \$0.9 | \$2.2 |
| Payroll | \$1.2 | 1.4644 | \$0.6 | \$1.8 |
| Employment | 68 | 1.2491 | 17 | 85 |
| Total Auraria Campus Operations | | | | |
| Value of Activity | \$174.5 | | \$137.8 | \$312.3 |
| Payroll | \$109.8 | | \$40.4 | \$150.2 |
| Employment | 2,086 | | 510 | 2,596 |

*Calculation Notes: Direct x Multiplier = Total Impact
Total Impact - Direct Impact = Indirect & Induced Impact*

Annual Direct and Indirect Economic Impacts of Auraria Campus Operations in Colorado

(\$ in millions)

| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
|--|---------------|------------|---------------------------|--------------|
| AHEC, CCD, Metro, UCD | | | | |
| Value of Activity | \$306.7 | 2.3333 | \$408.9 | \$715.6 |
| Payroll | \$208.6 | 1.8604 | \$179.5 | \$388.1 |
| Employment | 3,836 | 1.5551 | 2,129 | 5,965 |
| Retail and Auxiliary Uses | | | | |
| Value of Activity | \$2.3 | 2.2170 | \$2.8 | \$5.1 |
| Payroll | \$1.9 | 1.9028 | \$1.7 | \$3.6 |
| Employment | 108 | 1.5295 | 57 | 165 |
| Total Auraria Campus Operations | | | | |
| Value of Activity | \$309.0 | | \$411.7 | \$720.7 |
| Payroll | \$210.5 | | \$181.2 | \$391.7 |
| Employment | 3,945 | | 2,186 | 6,131 |

*Calculation Notes: Direct x Multiplier = Total Impact
Total Impact - Direct Impact = Indirect & Induced Impact*

CAMPUS OPERATIONS IMPACTS

- The \$109.8 million in earnings of Auraria Campus workers that live in the City and County of Denver results in a total earnings impact of \$150.2 million to 2,086 direct and 510 indirect FTE employees when multiplier effects are included.
- The direct economic impacts from Auraria Campus operations of \$309 million per year in Colorado result in total direct and indirect impacts of \$720.7 million when multiplier effects are included.
- The \$210.5 million in direct earnings for the Auraria Campus employees living in Colorado results in a total earnings impact of \$391.7 million to the 3,945 direct and 2,186 indirect employees when multiplier effects are included.
- The multiplier analysis does not attempt to quantify the fiscal impacts associated with the indirect and induced spending activity. However, these fiscal impacts may be significant, as described in the following example of the first round of induced impacts, the employee spending.

Employee Spending

The employees at Auraria Campus receive their paychecks and spend money in the community on retail activity and housing, generating revenue for local vendors and sales/use tax and property tax revenue for the local government. This represents the first round of the induced impact of the Auraria

Campus operations. Please note that these impacts are not in addition to the indirect and induced impacts noted in the previous section, but are presented as an example of how the multiplier impacts begin to work their way through the economic system.

While employees spend some dollars close to their work site, the majority of an individual's spending generally is conducted closer to their place of residence, resulting in a strong impact in their local region.

- According to the Consumer Expenditure Survey by the U.S. Bureau of Labor Statistics and an analysis of the local tax base, the typical household in the City and County of Denver spends about 33.7 percent of its income on taxable retail sales. Allowing for a 23 percent leakage of spending outside of Denver, local employees spend over \$27.6 million on taxable retail sales in the City and County of Denver and generate over \$1 million in sales tax revenue.
- In order to avoid double-counting economic and fiscal impacts from employee spending, about \$1.1 million in potential sales to employees at Auraria's retail and auxiliary businesses and the Auraria Campus Bookstore were subtracted from the total taxable retail sales from local, Denver Auraria employees. The impact of this money is included in the operating impacts of the retail and auxiliary use businesses.
- The average annual wages earned by the Auraria

Campus employees support housing – both single-family and apartment – valued at about \$329.1 million in the City and County of Denver, assuming that employees spend about one-third of their income on housing. Based on the current mill levy of 27.119 in the City and

| First Round Induced Economic and Fiscal Impacts: Employee Spending | | | |
|---|--------------|---------------------|---------------------|
| | Total | Colorado | Denver |
| Economic Impacts | | | |
| Taxable Retail Sales | \$67,912,000 | \$51,458,000 | \$27,649,000 |
| Fiscal Impacts | | | |
| Sales/Use Tax Revenue | | \$1,492,000 | \$1,001,000 |
| Property Tax Revenue* | | ***** | \$710,000 |
| Total Fiscal Impacts | | \$1,492,000 | \$1,711,000 |
| Total Economic and Fiscal Impacts | | \$52,950,000 | \$29,360,000 |

**There is no state property tax mill levy; local property tax rates vary by location.*

CAMPUS OPERATIONS IMPACTS

County of Denver (excluding school and special tax districts) and the residential assessment rate of 7.96 percent, total property taxes from local employees is about \$710,000 per year.

- The economic and fiscal impacts from the Auraria Campus employees total nearly \$29.4 million annually in the City and County of Denver.
- According to the Consumer Expenditure Survey by the U.S. Bureau of Labor Statistics and an analysis of the local tax base, the typical household in Colorado spends approximately 31.4 percent of its wage and salary income on taxable retail purchases. Taking into account a retail leakage rate of about 20 percent from the state, Colorado employees spend \$51.5 million on taxable retail sales in the state and generate nearly \$1.5 million in state sales tax revenue.
- The economic and fiscal impacts from the Auraria Campus employees total nearly \$53 million annually in Colorado. This figure does not include any local property tax revenue as property tax rates vary widely by location in the state.
- The economic and fiscal impacts of the spending patterns of the Auraria Campus employees will occur annually, assuming similar employment conditions.

STUDENT SPENDING IMPACTS

Students attending the Auraria Campus institutions generate economic and fiscal impacts from their spending patterns. In fall 2008, there were 43,100 students attending classes at the Auraria Campus. For economic impact purposes, the full-time equivalent (FTE) student value is used to avoid overstating impacts. In fall 2008, FTE student enrollment for UC Denver, Metro State, and CCD was over 14,300 students. These 14,300 FTE students spend an estimated \$227.3 million annually on housing, food, transportation, and personal expenses. Reducing this figure by the amount of spending already included in the Auraria Campus retail and auxiliary uses reveals that student spending outside of the campus totals \$203.9 million. This spending generates economic and fiscal impacts in the City and County of Denver and throughout Colorado.

Student spending on housing, transportation, medical, and personal expenses by no means encompasses the entire expenditures students make in the community. Student spending on tuition, fees, and other educational expenditures also creates economic impacts. However, the impacts from this spending are represented in the Campus operations impacts and are excluded here to avoid double counting.

The purchase of taxable goods and services by students also generates fiscal impacts. When a student buys a product from a business in the City and County of Denver, that business collects city and state sales tax. Likewise, students spend a large portion of their incomes on housing, generating property tax revenues. While most students rent housing and do not directly pay property tax, the cost of property taxes on these properties is passed on to the students via their rental payments.

Student spending on housing, transportation, medical expenses, and retail goods and services has multiplicative effects on the Denver and Colorado economies. Sales to students generate revenues for businesses that hire employees and pay salaries. The direct, indirect, and induced impact of student spending represents another facet of the impact of

the Auraria Campus on the City and County of Denver and the state of Colorado.

Direct Economic and Fiscal Impacts

Student residents of the City and County of Denver include about 1,900 FTE students living in student housing near the Campus and 2,300 FTE students living in other off-campus locations in Denver, according to zip code data collected by the institutions.

Student housing operations serving the Auraria Campus population include four complexes: Campus Village, The Regency, The Inn at Auraria, and The Station at River Front Park. Unlike other college campuses, all housing facilities serving the students are privately owned; there are no university-owned facilities. The vacancy rate is typically low for these housing complexes and was less than seven percent as of fall 2008.

An estimated 14,100 FTE students out of the 14,300 FTE students attending one of the Auraria Campus institutions currently reside in Colorado, according to data provided by the institutions. The number of students currently residing in Colorado may be higher than 14,100, but if current zip codes were not provided to the institutions, place of residence was determined by the student's permanent address.

The direct impacts of student spending in the City and County of Denver and Colorado are described in this section.

- Estimated spending by the 4,200 students that are residents of the City and County of Denver totals over \$74.8 million on housing, food, transportation, medical expenses, school supplies, and other expenses each year. Estimated spending from the 14,100 students reporting a current Colorado residence totals over \$224.3 million per year.
- Based on estimates of student spending used to determine federal student financial aid, the average FTE student living at one of the four student housing complexes spends about

STUDENT SPENDING IMPACTS

\$21,100 per year on housing, food, transportation, medical expenses, personal expenses, and school supplies.

- The average FTE student living with at least one parent spends about \$12,000 per year on housing, food, transportation, medical expenses, personal expenses, and school supplies. Students who live on their own outside of student housing spend an estimated \$17,200 per year on the above expenses. Based on a weighted average for students living outside of student housing either on their own or with parents, the average FTE student in non-student housing spends an estimated \$15,100 per year on housing, food, transportation, school supplies, and other expenses.
- To avoid double counting economic impacts, student spending at the Campus Bookstore, Clicks! Copy Center, and Campus retail and auxiliary businesses is excluded. In addition, the RTD bus pass fee collected by AHEC is excluded from the student spending impacts. These impacts are included in the expenditures of AHEC and the retail and auxiliary businesses. Spending at these entities from students that are residents of Colorado is about \$22.1 million per year, of which about \$6.6 million per year is spending by residents of the City and County of Denver.
- Students purchase and rent housing in the City and County of Denver and Colorado. Total spending on housing by students attending classes at the Auraria Campus is \$75.2 million per year. However, not all rental and mortgage

| Annual Direct Economic and Fiscal Impacts of Student Spending | | | |
|--|----------------------|----------------------|---------------------|
| | Total | Colorado | Denver |
| Direct Economic Impacts | | | |
| Students (FTE) | 14,300 | 14,100 | 4,200 |
| Market Value of Student Housing | \$681,990,000 | \$672,930,000 | \$224,460,000 |
| Local Student Spending | | | |
| Housing | \$75,164,000 | \$59,333,000 | \$3,092,000 |
| Transportation | \$3,141,000 | \$3,099,000 | \$1,035,000 |
| Medical Care | \$32,982,000 | \$26,036,000 | \$3,218,000 |
| Retail Spending | \$92,648,000 | \$73,939,000 | \$24,305,000 |
| Total Direct Economic Impacts | \$203,935,000 | \$162,407,000 | \$31,650,000 |
| Direct Fiscal Impacts | | | |
| Sales/Use Tax Revenue | | \$1,482,000 | \$614,000 |
| Property Tax Revenue* | | ***** | \$485,000 |
| Total Direct Fiscal Impacts | | \$1,482,000 | \$1,099,000 |
| Total Direct Economic and Fiscal Impacts | | \$163,889,000 | \$32,749,000 |

**There is no state property tax mill levy; local property tax rates vary by location.*

payments are made to Colorado-based housing providers. Assuming a 20 percent leakage from Colorado and based on an analysis of the components of personal income at the state and local level, 15.6 percent or \$3.1 million of the housing payments are captured in the City and County of Denver. The direct impact of housing spending from students throughout Colorado is \$59.3 million per year.

- Students spend money on other transportation needs in addition to the RTD bus pass fee they are required to pay. These costs include insurance, passenger services, and automotive services. Based on estimates of transportation spending from the Federal Financial Aid process, students spend \$3.1 million on transportation in Colorado, of which \$1 million is spent in the City and County of Denver.
- Students spend a large portion of their incomes on medical expenses. These expenses include insurance, hospital payments, and doctor fees. Based on estimates of medical spending from the Federal Financial Aid process, students spend about 14.7 percent of their yearly income on medical expenses. Assuming a 20 percent leakage rate for medical spending, student spending on medical expenses in Colorado is

STUDENT SPENDING IMPACTS

about \$26 million. Based on an analysis of Dun & Bradstreet data for relevant healthcare-related industries, the students residing in the City and County of Denver spend about \$3.2 million on medical care in the city.

- The majority of student income is spent on both taxable and non-taxable retail goods and services, such as food, personal expenses, books, school supplies, and computers. Based on an analysis of retail trade data from the Colorado Department of Revenue, City and County of Denver businesses capture nearly 77 percent of the retail purchases from Denver residents. Therefore, students spend about \$24.3 million each year with City and County of Denver businesses.
- Students residing throughout the state spend an estimated \$73.9 million on taxable and non-taxable retail activity with Colorado businesses, assuming a leakage rate of 20 percent from the state.
- Student retail activity generates sales tax revenue for the City and County of Denver and Colorado. Based on current sales tax rates, taxable student retail spending generates \$614,000 for the City and County of Denver and \$1.5 million for Colorado each year.
- The estimated market value of housing occupied by the 4,200 FTE students in the City and County of Denver is \$224.5 million. Based on the current residential assessment ratio of 7.96 percent and the current property tax mill levy of 27.119 collected by the City and County of Denver (excludes school and special districts), property tax revenue associated with student housing totals over \$485,000 per year.
- The total market value of student housing in Colorado from 14,100 FTE students is over \$672.9 million. While

the state does not collect property tax, this housing does create property tax revenue for the local jurisdictions.

- The direct economic and fiscal impacts of student spending total \$32.7 million in the City and County of Denver and \$163.9 million in Colorado.
- The direct economic and fiscal impacts of the student spending will occur annually in the City and County of Denver and throughout Colorado, assuming similar operating conditions.

Indirect & Induced Economic Impacts

As students spend money at retail and other businesses, those businesses hire employees and purchase goods and services, creating the indirect and induced impacts of student spending. The total

Annual Direct and Indirect Economic Impacts of Student Spending in the City and County of Denver

(\$ in millions)

| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
|--------------------------------------|---------------|------------|---------------------------|--------------|
| Housing | | | | |
| Value of Activity | \$3.1 | 1.4786 | \$1.5 | \$4.6 |
| Payroll | \$1.1 | 2.2561 | \$1.4 | \$2.5 |
| Employment | 65 | 1.8399 | 55 | 120 |
| Transportation | | | | |
| Value of Activity | \$1.0 | 1.7981 | \$0.8 | \$1.9 |
| Payroll | \$0.4 | 1.8244 | \$0.3 | \$0.7 |
| Employment | 22 | 1.8722 | 19 | 41 |
| Medical Care | | | | |
| Value of Activity | \$3.2 | 1.7952 | \$2.6 | \$5.8 |
| Payroll | \$1.1 | 1.7111 | \$0.8 | \$1.9 |
| Employment | 68 | 1.8762 | 59 | 127 |
| Retail Spending | | | | |
| Value of Activity | \$24.3 | 2.1439 | \$27.8 | \$52.1 |
| Payroll | \$8.5 | 1.9010 | \$7.7 | \$16.2 |
| Employment | 511 | 1.4894 | 250 | 761 |
| Total Student Spending Impact | | | | |
| Value of Activity | \$31.6 | | \$32.7 | \$64.3 |
| Payroll | \$11.1 | | \$10.2 | \$21.3 |
| Employment | 665 | | 383 | 1,048 |

Calculation Notes: $Direct \times Multiplier = Total\ Impact$

$Total\ Impact - Direct\ Impact = Indirect\ \&\ Induced\ Impact$

STUDENT SPENDING IMPACTS

impacts of student spending on housing, transportation, medical expenses, and retail goods and services in the City and County of Denver and Colorado are described in this section.

- Based on multipliers for the real estate, healthcare, transportation, and retail trade industries, the total impact from \$31.6 million in direct, local student spending in the City and County of Denver is \$64.3 million. The \$32.7 million in indirect and induced impact represents the impact of the spending by the direct employees, supplier companies, and the employees of the companies that serve as suppliers to the various businesses supported by the student spending. These values are included in the total impacts to the state.
- The total direct and indirect impacts from student spending in the City and County of Denver include \$21.3 million in payroll earned by 665 direct and 383 indirect employees in the real estate, transportation, healthcare, and retail industries supported by the student spending in a typical operating year.
- The total impact from \$162.4 million in direct, local student spending in Colorado is \$324.6 million when multiplier effects are included.
- The total direct and indirect impacts from student spending in Colorado include over \$150.5 million in payroll earned by 3,533 direct and 4,290 indirect employees supported by the student spending in a typical operating year.
- The multiplier analysis does not attempt to quantify the additional tax revenue associated with the indirect and induced spending activity. However, this tax revenue may be significant, as was described in the example of the first round of induced impact (employee spending) included in the prior Campus Operations Impacts section.

| Annual Direct and Indirect Economic Impacts of Student Spending in Colorado | | | | |
|--|----------------------|-------------------|--------------------------------------|---------------------|
| (\$ in millions) | | | | |
| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
| Housing | | | | |
| Value of Activity | \$59.3 | 1.5209 | \$30.9 | \$90.2 |
| Payroll | \$21.6 | 3.5514 | \$55.1 | \$76.6 |
| Employment | 1,291 | 3.0551 | 2,653 | 3,943 |
| Transportation | | | | |
| Value of Activity | \$3.1 | 2.3813 | \$4.3 | \$7.4 |
| Payroll | \$1.1 | 2.2477 | \$1.4 | \$2.5 |
| Employment | 67 | 2.1926 | 80 | 148 |
| Medical Care | | | | |
| Value of Activity | \$26.0 | 2.3514 | \$35.2 | \$61.2 |
| Payroll | \$9.5 | 2.0165 | \$9.6 | \$19.1 |
| Employment | 566 | 2.2776 | 724 | 1,290 |
| Retail Spending | | | | |
| Value of Activity | \$73.9 | 2.2415 | \$91.8 | \$165.7 |
| Payroll | \$26.9 | 1.9406 | \$25.3 | \$52.2 |
| Employment | 1,609 | 1.5182 | 834 | 2,442 |
| Total Student Spending Impact | | | | |
| Value of Activity | \$162.4 | | \$162.2 | \$324.6 |
| Payroll | \$59.1 | | \$91.4 | \$150.5 |
| Employment | 3,533 | | 4,290 | 7,823 |
| <i>Calculation Notes: Direct x Multiplier = Total Impact</i> | | | | |
| <i>Total Impact - Direct Impact = Indirect & Induced Impact</i> | | | | |

VISITOR SPENDING IMPACTS

The final component of the annual economic and fiscal impacts of the Auraria Campus is visitor spending. Visitors to the Campus generate impacts in Denver and in the state when they purchase food, lodging, and other goods and services from local businesses. They generate a fiscal impact from the taxes imposed on retail purchases and lodging.

Data on visitor spending is not collected and is hard to quantify. Rather than an exact estimate of visitor spending, this analysis focuses on potential spending from two major groups of visitors, including prospective students and Campus event attendees.

Each of the three institutions enrolls several hundred new students each year. Newly enrolled students represent a fraction of the total students who apply and are admitted to the three academic institutions. A portion of these admitted, prospective students are from out-of-state. Before enrolling in a university, prospective students will often visit the university's campus. The first visitor spending group is prospective students who have been admitted to one of the three institutions and their accompanying family or friends.

The second major group of visitors included in the analysis is event attendees. The Auraria Campus has several conference rooms and other facilities available for public use. For example, UC Denver annually hosts large events for the National Veterans Training Institute and the Department of Defense. AHEC charges rent for use of these facilities. Potential visitor activity was calculated based on this rental income and the maximum capacity of Auraria's event facilities.

Direct Economic and Fiscal Impacts

Combining the two visitor groups, an estimated 59,300 people per year visit the Auraria Campus. These people include both overnight and day visitors. These visitors affect the Denver economy with both lodging expenditures and non-lodging expenditures on food and other incidental expenses. Total spending from the 59,300 Auraria Campus

visitors is nearly \$3.4 million in a typical operating year.

Most of the visitor spending impact in Colorado related to the Auraria Campus occurs in the City and County of Denver. However, the impact of visitor spending spills into other parts of the state as well. While many visitors will choose lodging in the City and County of Denver, other parts of the state will also receive lodging and non-lodging dollars. All of the economic impacts from visitor spending in the City and County of Denver are included in the economic impacts of spending in Colorado.

The direct economic and fiscal impacts of visitor spending in the City and County of Denver and Colorado are described in this section.

- An estimated 20,100 prospective students are admitted to one of the three Auraria Campus institutions each year. Data supplied by UC Denver indicates that about 20 percent of their admitted students are from out-of-state. Based on the ratio of resident and non-resident students at the other institutions, and assuming this ratio reflects admitted students, there are about 2,000 out-of-state prospective students admitted to the three institutions each year. Prospective students from within Colorado total about 18,100 persons per year.
- Assuming out-of-state prospective students will require accommodations for their stay, and that these prospective students will travel with an average of one other person, overnight student visitors related to the Auraria Campus total about 3,900 persons per year.
- AHEC earns approximately \$169,000 in rental income per year for their conference rooms and facilities. Based on AHEC's current facility rental fees, the rental rate for all Auraria Campus facilities averages \$3.50 per person. Total potential event visitors based on yearly rental income and the average cost per attendee is 48,100 persons per year.

VISITOR SPENDING IMPACTS

- Many of the Campus events cater to local residents in the City and County of Denver and the surrounding region. Assuming 90 percent of the visitors are day visitors, 4,800 overnight visitors and 43,300 day visitors will attend events at the Auraria Campus annually.
- Combining student and event visitors, overnight visitors to the Auraria Campus total about 8,800 persons per year. Not all of these visitors will choose lodging in the City and County of Denver. Assuming 50 percent of the overnight visitors stay in the City and County of Denver and an average of 1.3 persons per room, visitors to the Campus generate 3,400 room nights of demand in the City and County of Denver per year.
- All of the overnight visitors are assumed to stay in Colorado. The 8,800 overnight visitors to the Auraria Campus generate 6,750 room nights of demand in Colorado per year.
- Based on an average room rate of \$104 for relevant Denver hotels from the Rocky Mountain Lodging Report for 2008, estimated lodging expenditures in the City and County of Denver total nearly \$353,000 per year.
- Based on an average room rate of \$111 for hotels outside of the City and County of Denver from the Rocky Mountain Lodging Report for 2008, estimated lodging expenditures in Colorado total nearly \$728,000 per year.
- Both overnight and day visitors to the Auraria Campus spend money on non-lodging expenditures such as meals, entertainment, and other retail purchases. The City and County of Denver will benefit the most from these

| Annual Direct Economic and Fiscal Impacts of Visitor Spending | | | |
|--|--------------------|--------------------|--------------------|
| | Total | Colorado | Denver |
| Direct Economic Impacts | | | |
| Total Visitors | 59,300 | 59,300 | 59,300 |
| Overnight Visitors | 8,800 | 8,800 | 4,400 |
| Room Nights of Demand | 6,750 | 6,750 | 3,400 |
| Total Lodging Expenditures | \$728,000 | \$728,000 | \$353,000 |
| Total Non-Lodging Expenditures | \$2,650,000 | \$2,650,000 | \$2,120,000 |
| Total Direct Economic Impacts | \$3,378,000 | \$3,378,000 | \$2,473,000 |
| Direct Fiscal Impacts | | | |
| Sales/Use Tax Revenue | | \$83,000 | \$74,000 |
| Lodging Tax Revenue | | \$0 | \$38,000 |
| Total Direct Fiscal Impacts | | \$83,000 | \$112,000 |
| Total Direct Economic and Fiscal Impacts | | \$3,461,000 | \$2,585,000 |

expenditures. Based on the IRS per diem reimbursement rate for meals and incidental expenses in the Denver-Aurora region, overnight visitors to the Campus spend an average of \$50 per person per day. Day visitors are assumed to spend about half as much on similar expenses while visiting the Auraria Campus. Non-lodging expenditures for overnight and day visitors in the City and County of Denver total \$2.1 million per year.

- The 59,300 estimated visitors to the Auraria Campus per year spend a total of \$2.7 million on non-lodging expenditures throughout the Colorado.
- Many of the prospective in-state students who are admitted to the three institutions at Auraria are from the City and County of Denver. Based on the current student population and assuming the same proportion of admitted prospective students are from Denver, between 26 to 27 percent of admits are from the City and County of Denver. These students are not included in the analysis of non-lodging expenditures to avoid overstating the visitor spending impact.
- Visitor spending activity on lodging and non-lodging expenditures also has a fiscal impact. In addition to the 3.62 percent tax on retail sales

VISITOR SPENDING IMPACTS

and the four percent tax on food and beverages for immediate consumption levied by the City and County of Denver, the city also collects a 10.75 percent lodging tax. Based on these tax rates, the \$2.5 million in direct visitor spending results in about \$112,000 in tax revenue per year.

- Based on the current sales tax rate of 2.9 percent levied by Colorado, the \$3.4 million in direct visitor spending results in about \$83,000 in tax revenue per year.
- The direct economic and fiscal impacts of visitor spending total \$2.6 million in the City and County of Denver and \$3.5 million in Colorado.
- The direct economic and fiscal impacts of the visitor spending will occur annually in the City and County of Denver and throughout Colorado, assuming similar operating conditions.

Indirect & Induced Economic Impacts

As visitors spend money at retail, food, and accommodation services businesses, those businesses purchase goods and services and hire employees who in turn purchase goods and services, thereby creating the indirect and induced impacts of visitor spending. The total impacts of visitor spending on lodging and non-lodging expenditures in the City and County of Denver and Colorado are described in this section.

- The direct economic impact of lodging and non-lodging expenditures in the City and County of Denver is \$2.5 million per year. Based on the multipliers for retail trade and accommodations, the total impact of visitor spending in the City and County of Denver is \$4

million per year when multiplier effects are included. The \$1.5 million in indirect and induced impact represents the impact of the spending by the direct employees, supplier companies, and the employees of the companies that serve as suppliers to the various businesses

| Annual Direct and Indirect Economic Impacts of Visitor Spending in the City and County of Denver | | | | |
|--|---------------|------------|---------------------------|--------------|
| (\$ in millions) | | | | |
| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
| Lodging Expenditures | | | | |
| Value of Activity | \$0.4 | 1.6403 | \$0.2 | \$0.6 |
| Payroll | \$0.0 | 1.4938 | \$0.0 | \$0.1 |
| Employment | 2 | 1.3443 | 1 | 2 |
| Non-Lodging Expenditures | | | | |
| Value of Activity | \$2.1 | 1.6177 | \$1.3 | \$3.4 |
| Payroll | \$0.3 | 1.5209 | \$0.1 | \$0.4 |
| Employment | 11 | 1.3109 | 3 | 14 |
| Total Visitor Spending Impact | | | | |
| Value of Activity | \$2.5 | | \$1.5 | \$4.0 |
| Payroll | \$0.3 | | \$0.2 | \$0.4 |
| Employment | 13 | | 4 | 17 |

*Calculation Notes: Direct x Multiplier = Total Impact
Total Impact - Direct Impact = Indirect & Induced Impact*

| Annual Direct and Indirect Economic Impacts of Visitor Spending in Colorado | | | | |
|---|---------------|------------|---------------------------|--------------|
| (\$ in millions) | | | | |
| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
| Lodging Expenditures | | | | |
| Value of Activity | \$0.8 | 2.0378 | \$0.8 | \$1.5 |
| Payroll | \$0.3 | 1.8554 | \$0.2 | \$0.5 |
| Employment | 11 | 1.5717 | 6 | 18 |
| Non-Lodging Expenditures | | | | |
| Value of Activity | \$2.6 | 2.1553 | \$3.1 | \$5.7 |
| Payroll | \$0.9 | 2.0029 | \$0.9 | \$1.8 |
| Employment | 39 | 1.6793 | 27 | 66 |
| Total Visitor Spending Impact | | | | |
| Value of Activity | \$3.4 | | \$3.8 | \$7.2 |
| Payroll | \$1.1 | | \$1.1 | \$2.3 |
| Employment | 51 | | 33 | 84 |

*Calculation Notes: Direct x Multiplier = Total Impact
Total Impact - Direct Impact = Indirect & Induced Impact*

VISITOR SPENDING IMPACTS

supported by the visitor spending. These values are included in the total impacts to the state.

- The total direct, indirect, and induced impacts of visitor spending include \$400,000 in payroll to 13 direct and four indirect employees in the retail trade and accommodations industries in the City and County of Denver.
- The direct economic impact of lodging and non-lodging expenditures in Colorado is \$3.4 million per year. Based on the multipliers for retail trade and accommodations, the total impact of visitor spending in Colorado is \$7.2 million per year when multiplier effects are included.
- The total direct, indirect, and induced impacts of visitor spending include \$2.3 million in payroll to 51 direct and 33 indirect employees in the retail trade and accommodations industries throughout Colorado.
- The multiplier analysis does not attempt to quantify the additional tax revenue associated with the indirect and induced spending activity. However, this tax revenue may be significant, as was described in the example of the first round of induced impact (employee spending) included in the Campus Operations Impacts section.

SCIENCE BUILDING IMPACTS

The three academic institutions and the Auraria Higher Education Center are collaborating to renovate the existing 142,000-square-foot science facility, and to construct a new 197,000-square-foot Science Building. The new Science Building addition will be located on the eastern edge of the Auraria Campus, attached to the existing Science Building. Design of the new building has been done with an emphasis on sustainability, and the Campus will be pursuing LEED Gold certification.

Construction of the new building began in January 2008 with completion scheduled for fall 2009. Renovations of the existing facility will be completed by fall 2010. Construction costs of the addition and renovation of the Science Building total over \$110.2 million. In addition, an estimated \$9.4 million will be spent on furniture, fixtures, computer equipment, telecommunications, and other equipment.

The Science Building addition and renovations will benefit all three institutions. Construction of the Science Building is a good example of projects that occur from time to time, but are not part of the typical annual operating expenditures of AHEC. Construction activities result in an increase in real property values, payrolls for construction workers, and sales for construction goods and services vendors. These impacts are temporary, occurring only during the construction period.

Direct Economic Impacts

Construction costs for the Science Building addition and renovation will total over \$110.2 million, including nearly \$43 million in construction materials and supplies purchases, \$14.7 million in construction soft costs, and \$52.5 million in construction payroll.

- Based on developer cost estimates, 95.7 percent of material purchases will be transacted with vendors located throughout Colorado. Based on an analysis of the location and sales volume of construction materials vendors using Dun & Bradstreet data, vendors in the City and County



of Denver are likely to capture around 25 percent of the total purchases of construction materials needed to complete the Science Building. Therefore, purchases of construction materials from Colorado businesses and vendors will total \$41.1 million, with \$10.8 million purchased in the City and County of Denver and \$30.3 million purchased across the rest of Colorado.

- Based on developer cost estimates, 96.6 percent of soft costs will be paid to Colorado vendors. A similar analysis of the location and sales volume of engineering and other construction services companies yields the estimate that Denver has the potential to capture about 12.5 percent of the total spending on these services. Engineering and design services and other soft costs purchased from Colorado businesses and vendors will total \$14.2 million, with \$1.8 million purchased in the City and County of Denver and \$12.4 million purchased from vendors located throughout the rest of Colorado.
- By the time construction is complete, construction employment will have reached 1,035 person-years, defined as one person working full-time for one full year. Based on developer cost estimates and U.S. Census Bureau occupational data, 96.1 percent of the construction payroll, or \$50.5 million, will be paid to 995 construction workers in person-years who are Colorado residents.
- Based on an analysis of U.S. Census Bureau occupational data, it is estimated that 25.5 percent of the construction workers will be residents of the City and County of Denver,

SCIENCE BUILDING IMPACTS

Direct Economic Impacts of the Science Building Construction

| | Total | Colorado | Denver |
|-------------------------------------|----------------------|----------------------|---------------------|
| Construction Materials | \$42,973,000 | \$41,125,000 | \$10,836,000 |
| Soft Costs | \$14,723,000 | \$14,223,000 | \$1,840,000 |
| Labor | \$52,527,000 | \$50,479,000 | \$13,394,000 |
| Total Direct Economic Impact | \$110,223,000 | \$105,827,000 | \$26,070,000 |
| Employment (Person-Years) | 1,035 | 995 | 264 |

representing \$13.4 million in payroll over the development period to 264 City and County of Denver residents in person-years. The remaining workers will likely travel to the site from other parts of the Denver metropolitan area and Colorado.

- Since AHEC and the academic institutions are tax-exempt, there is no use tax on construction materials.
- In addition to the construction costs, furniture, fixtures, computers, equipment, and other personal property will be purchased for operations at the Science Building. Total purchases of furnishings and other equipment for the new Science Building are estimated at over \$9.4 million. An estimated \$7.5 million will be purchased directly from Colorado businesses and suppliers, including \$1.6 million transacted with City and County of Denver suppliers and \$5.9 million from other vendors across the state. When AHEC or other entities at Auraria make these purchases, the impact of this spending will be a part of their operating impacts and are excluded from the construction impacts.
- The direct impact of constructing the new Science Building totals \$105.8 million in Colorado. Included in this value is direct spending of \$26.1 million in the City and County of Denver.
- Construction impacts occur only during the construction period.

Indirect & Induced Economic Impacts

- The construction activity has multiplicative impacts on the City and County of Denver. Based on the RIMS II multipliers for

the construction industry in the City and County of Denver, the construction of the Auraria Campus Science Building results in a total economic impact of \$40.9 million. The \$14.8 million in indirect and induced impact represents the impact of the spending by the construction employees, supplier companies, and the employees of the companies that serve as suppliers to the construction activity. These values are included in the total impacts to the state.

- The total direct, indirect, and induced impacts of the construction activity includes \$20.2 million in payroll for the 264 direct construction person-years and the 152 indirect employees supported by the construction activity.

Total Direct and Indirect Economic Impacts of the Science Building Construction in the City and County of Denver

(\$ in millions)

| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
|-------------------|---------------|------------|---------------------------|--------------|
| Value of Activity | \$26.1 | 1.5684 | \$14.8 | \$40.9 |
| Payroll | \$13.4 | 1.5053 | \$6.8 | \$20.2 |
| Employment | 264 | 1.5759 | 152 | 416 |

Calculation Notes: $Direct \times Multiplier = Total\ Impact$

$Total\ Impact - Direct\ Impact = Indirect\ \&\ Induced\ Impact$

- The construction activity also has multiplicative impacts on Colorado. Based on the RIMS II multipliers for the construction industry in Colorado, construction of the Auraria Campus Science Building results in a total economic impact of \$251.1 million. The \$145.3 million in indirect and induced impact represents the impact of the spending by the construction employees, supplier companies, and the employees of the

SCIENCE BUILDING IMPACTS

companies that serve as suppliers to the construction activity.

- The total direct, indirect, and induced impacts of the construction activity includes \$104.2 million in payroll for the 995 direct construction person-years and the 1,285 indirect employees supported by the construction activity.
- The direct and indirect construction impacts occur only during the construction period.

| Total Direct and Indirect Economic Impacts of the Science Building Construction in Colorado | | | | |
|--|----------------------|-------------------|--------------------------------------|---------------------|
| (\$ in millions) | | | | |
| | Direct Impact | Multiplier | Indirect & Induced Impact | Total Impact |
| Value of Activity | \$105.8 | 2.3728 | \$145.3 | \$251.1 |
| Payroll | \$50.5 | 2.0645 | \$53.7 | \$104.2 |
| Employment | 995 | 2.2920 | 1,285 | 2,280 |

Calculation Notes: Direct x Multiplier = Total Impact
Total Impact - Direct Impact = Indirect & Induced Impact

SUMMARY

The economic and fiscal impacts of activities associated with the Auraria Campus, including the operations of AHEC, three institutions of higher education, nearly 20 retail and auxiliary use businesses, students, and visitors, extend far beyond the Campus' boundaries.

The direct economic impacts of the Auraria Campus in a typical operating year total nearly \$474.8 million throughout Colorado. In

addition, this direct spending generates over \$2.2 million in sales/use tax revenue for Colorado.

Of this amount, the direct economic impacts in the City and County of Denver alone total \$208.6 million. This direct spending generates about \$2.3 million in tax revenue for the City and County of Denver.

| Annual Direct Economic and Fiscal Impacts of the Auraria Campus | | | |
|--|----------------------|----------------------|----------------------|
| | Total | Colorado | Denver |
| Direct Economic Impacts | | | |
| Auraria Campus Operations | \$339,218,000 | \$309,030,000 | \$174,478,000 |
| Student Spending | \$203,935,000 | \$162,407,000 | \$31,650,000 |
| Visitor Spending | \$3,378,000 | \$3,378,000 | \$2,473,000 |
| Total Direct Economic Impacts | \$546,531,000 | \$474,815,000 | \$208,601,000 |
| Direct Fiscal Impacts | | | |
| Sales/Use Tax Revenue | | \$2,224,000 | \$1,502,000 |
| Property Tax Revenue | | ***** | \$491,000 |
| Occupational Privilege Tax Revenue | | \$0 | \$285,000 |
| Lodging Tax Revenue | | \$0 | \$38,000 |
| Total Direct Fiscal Impacts | | \$2,224,000 | \$2,316,000 |
| Total Direct Economic and Fiscal Impacts | | \$477,039,000 | \$210,917,000 |

**There is no state property tax mill levy; local property tax rates vary by location.*

The spending patterns associated with Auraria Campus have multiplicative impacts on the community. Therefore, multiplier analysis is used to trace the impacts on businesses, organizations, and individuals affected by the direct spending as this impact works its way through the economy.

The \$474.8 million in direct economic impact in Colorado creates \$577.7 million in indirect and

| Annual Direct and Indirect Economic Impacts of the Auraria Campus in Colorado | | | |
|--|----------------------|--------------------------------------|---------------------|
| (\$ in millions) | | | |
| | Direct Impact | Indirect & Induced Impact | Total Impact |
| Auraria Campus Operations | | | |
| Value of Activity | \$309.0 | \$411.7 | \$720.7 |
| Payroll | \$210.5 | \$181.2 | \$391.7 |
| Employment | 3,944 | 2,187 | 6,131 |
| Student Spending | | | |
| Value of Activity | \$162.4 | \$162.2 | \$324.6 |
| Payroll | \$59.1 | \$91.4 | \$150.5 |
| Employment | 3,533 | 4,290 | 7,823 |
| Visitor Spending | | | |
| Value of Activity | \$3.4 | \$3.8 | \$7.2 |
| Payroll | \$1.1 | \$1.1 | \$2.3 |
| Employment | 51 | 33 | 84 |
| Total Economic Impact | | | |
| Value of Activity | \$474.8 | \$577.7 | \$1,052.5 |
| Payroll | \$270.7 | \$273.7 | \$544.4 |
| Employment | 7,528 | 6,510 | 14,038 |

| Annual Direct and Indirect Economic Impacts of the Auraria Campus in the City and County of Denver | | | |
|---|----------------------|--------------------------------------|---------------------|
| (\$ in millions) | | | |
| | Direct Impact | Indirect & Induced Impact | Total Impact |
| Auraria Campus Operations | | | |
| Value of Activity | \$174.5 | \$137.8 | \$312.3 |
| Payroll | \$109.8 | \$40.4 | \$150.2 |
| Employment | 2,086 | 510 | 2,596 |
| Student Spending | | | |
| Value of Activity | \$31.6 | \$32.7 | \$64.3 |
| Payroll | \$11.1 | \$10.2 | \$21.3 |
| Employment | 665 | 383 | 1,048 |
| Visitor Spending | | | |
| Value of Activity | \$2.5 | \$1.5 | \$4.0 |
| Payroll | \$0.3 | \$0.2 | \$0.4 |
| Employment | 13 | 4 | 17 |
| Total Economic Impact | | | |
| Value of Activity | \$208.6 | \$172.0 | \$380.6 |
| Payroll | \$121.2 | \$50.8 | \$172.0 |
| Employment | 2,764 | 897 | 3,661 |

SUMMARY

induced impacts throughout the state. Therefore, ***the total direct and indirect impact of Auraria Campus in Colorado is \$1.05 billion.*** This total impact includes \$544.4 million in payroll for over 14,000 workers.

Focusing specifically on the City and County of Denver, the \$208.6 million in direct economic impact in the city creates \$172 million in indirect and induced impacts. ***The total direct and indirect impact of Auraria Campus in the City and County of Denver is \$380.6 million,*** including \$172 million in payroll for 3,661 direct and indirect workers.

Construction Impacts

In addition to the typical annual impacts from Campus operations and student and visitor spending, Campus construction projects result in occasional, additional impacts on the region. For example, the current \$110 million expansion and renovation of the existing Science Building results in a total direct and indirect economic impact of \$251 million throughout the state, of which about \$41 million is concentrated in the City and County of Denver. Construction impacts are transitory, occurring only during the construction period.

Beyond the Numbers

The spending patterns associated with the Auraria Campus have significant impacts on businesses and organizations throughout Colorado. The magnitude of the Auraria Campus' economic impact on Colorado can be compared to the state's annual investment in the educational institutions to estimate the value of taxpayers' input.

During the 2008-09 fiscal year, AHEC and the three institutions received about \$95.8 million in state appropriations for maintenance operations, state grants, and resident tuition. For every dollar the state invested in the Campus, the direct impact of the Auraria Campus-related expenditures created \$4.96 in statewide spending. When the indirect and induced impacts of Auraria Campus-related spending are included, the total spending impact ratio rises to \$11 for every dollar the state invests.

Similarly, the state's investment in Campus capital improvements also has a large return. For example, the state's contribution to the Science Building totals \$121 million over four years. Based on the direct and indirect economic impacts of construction, businesses and other organizations throughout the state receive \$2.08 for every capital dollar the state invests.

Beyond the dollars generated, the Auraria Campus provides cultural activities and fine arts productions, enhances the skills of the workforce, and provides diversity in the community. The combination of these qualitative benefits with the economic and fiscal impacts of the Auraria Campus highlights the importance of this Downtown Denver asset.

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