JANUARY 27, 2012

ACCELERATING INNOVATION

The Case for a Satellite Patent Office in Colorado

Submitted by

The Coalition For a Colorado Satellite Patent Office

In Response to

The U.S. Patent and Trademark Office's Request for Comments on Additional USPTO Satellite Offices

"We have to do everything we can to encourage the entrepreneurial spirit wherever we find it," said President Barack Obama when he signed the America Invents Act (AIA) into law on Sept. 15, 2011. This Act "cuts away the red tape that slows down our inventors and entrepreneurs."[1]

The President's comments underscore the increasingly vital nature of the work of the U.S. Patent and Trademark Office (USPTO). At stake is our nation's ability to foster the new products and inventions that will lead to the next generation of jobs, investments, and growth.

OPENING MESSAGE

Colorado's Unique Qualifications

Members of the Coalition for a Colorado Satellite Patent Office (Colorado Coalition), a consortium of public and private organizations representing the interests of the state, are well-known supporters of the provisions and spirit of the AIA—particularly Section 23, which mandates the establishment of satellite patent offices. We firmly believe that a USPTO satellite patent office in Colorado, in the metropolitan Denver area, will not only help fulfill the requirements of the AIA; but it will also fuel the USPTO's critical objective to drive innovation and guarantee American competitiveness.

Colorado is uniquely qualified to host a satellite patent office. Its geographic location near the center of the continental United States makes it a gateway to the mountain west, affording the USPTO its first presence in one of the most vital, innovative regions of the country. In addition, a satellite office in the state would provide:

- the opportunity to recruit examiners from Colorado's highly educated technical and scientific communities;
- increased retention prospects, in line with the USPTO's strategic plan, based on the state's high standard of living, reasonable costs, cultural and recreational amenities, educational options, and balanced lifestyle;
- streamlined access to the USPTO by virtue of Denver International Airport (DIA), the fifth busiest airport in the nation and the regional hub to three major carriers;
- an economic impact to the region exceeding $400 million in the first five years of operation according to a study conducted by the University of Colorado Leeds School of Business;[2] and
- a model, in conjunction with the Detroit office, for additional satellite patent offices.

Ongoing Advocacy for Satellite Offices

From the beginning, Colorado has been a lead supporter of establishing satellite patent offices, advocating for the USPTO's Nationwide Workforce Program and convincing stakeholders that satellite offices are crucial to its success.

- In July 2009, leaders of the Intellectual Property (IP) Section of the Colorado Bar Association met with Beth Novak, U.S. deputy chief technology officer, and Cam Kerry and Quentin Palfrey of the U.S. Department of Commerce (DOC) to urge the Obama Administration and the DOC to expand the USPTO's reach by opening a satellite patent office.
- In response to a request from Ms. Novak, the Colorado group prepared and delivered a "Roadmap to a Second Patent Office" in August 2009.
- The same involved Coloradans, on numerous subsequent occasions, advised representatives of the Obama Administration, the Commerce Department, the USPTO (including Director David Kappos and Patent Commissioner Robert Stoll), and the Patent

1. CNN Political Ticker, "Obama Signs Patent Reform Bill," September 16, 2011 (See: http://politicalticker.blogs.cnn.com/2011/09/16/obama-signs-patent-reform-bill/).
2. See Appendix 6, University of Colorado Leeds School of Business study entitled "Economic Impacts on Colorado of a Regional Satellite Office in the Metro Denver Region," January 18, 2012.



Office Professional Association (POPA) to expand the USPTO's hiring reach through satellite offices.[3]

- Colorado provided key, bipartisan legislative support for the USPTO's Nationwide Workforce Program.
  - o In early 2011, U.S. Senators Michael Bennet and Mark Udall of Colorado worked to introduce and pass language that became Section 23 of the Senate version of the AIA, requiring establishment of satellite patent offices.
  - o During House consideration of the legislation, U.S. Representatives Diana DeGette and Mike Coffman of Colorado worked to ensure that the language remained in the version introduced in the House Judiciary Committee.
- As a direct result, Section 23 became part of the AIA that was eventually signed into law.

Continued Commitment

The Colorado Coalition reflects the state's support for a satellite patent office in Colorado and a commitment to its establishment and success. The coalition is a nonpartisan, public/private consortium of leading Coloradans representing a cross section of the state's communities, all of whom have worked on behalf to bring a satellite patent office to Metro Denver[4]:

- **Political** – Colorado congressional delegation, Gov. John Hickenlooper, and the Metro Mayors Caucus, including Denver Mayor Michael B. Hancock.
- **Higher Education** – presidents/chancellors and engineering deans of major research universities, including the Colorado School of Mines, Colorado State University, the University of Denver, and the University of Colorado; and law school deans at the University of Denver and the University of Colorado.
- **Business and Legal** – the private sector, including businesses, law firms, legal and industry associations, the Denver Metro Chamber of Commerce, and state, regional, and local economic development organizations.

Most important, the same level of support will continue after the USPTO's selection of satellite office sites. If Metro Denver is chosen:

- state and local economic development organizations and industry associations stand ready to support the USPTO, however necessary, to ensure an efficient and timely launch of operations;
- the IP Section of the Colorado Bar Association, which represents more than 700 member IP lawyers in Colorado, is prepared to form a committee of senior leaders in the Colorado patent community to work closely and liaise with the USPTO; and
- the IP Section is committed to providing a supportive and inclusive IP community to patent examiners and other employees of the USPTO.

Colorado has a rich history of attracting innovators and risk-takers—from the gold and silver miners who headed west to the mountains to seek fortune in the 19th century to scientific pioneers like Walter Orr Roberts, who came to Colorado in the mid-20th century to found the National Center for Atmospheric Research (NCAR).

That creative spirit survives in the state. Today, Colorado is on the leading edge of sustainable energy research and development, Internet entrepreneurship, premier biosciences, and advanced aerospace technologies. The addition of a USPTO satellite patent office to the welcoming and diverse environment of Colorado would be a significant achievement for the state, the USPTO, and the entire nation.

Respectfully submitted,

The Coalition for a Colorado Satellite Patent Office

3. Colorado's 2½-year effort, including past letters of support and the Roadmap to a Second Patent Office, is set forth in Appendix 1.
4. Letters of Support are attached in Appendix 2.

CONTENTS

EXECUTIVE SUMMARY - COLORADO: IDEAL SITE FOR A USPTO SATELLITE PATENT OFFICE

The Metro Denver area combines cutting-edge innovation with the best of the Rocky Mountain lifestyle and a unique geographic advantage.

Gateway to the Mountain West

- Geographic center of the continental United States
- Distant from USPTO headquarters
- Extended outreach to pivotal regions

Transportation Hub

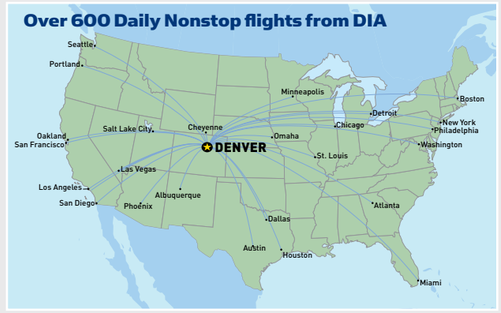
- Denver International Airport within three hours of most states
- Convenient, reasonable airfares for easy regional access
- Local mass transit as final link to satellite office

Regional Economic Impact

- More than $400M in first five years
- Job growth, direct and indirect
- Impetus for long-term technical innovation

Innovation Center

- Second-most highly educated state in the nation
- Among top 10 states for adults with degrees in science or engineering
- Research in the fields of bioscience, aerospace, and renewable energy
- Highly ranked for entrepreneurial activity
- Four major research universities
- 24 federally funded research laboratories



Unique Lifestyle

- Balanced blend of work and personal time
- Moderate climate
- Minutes from year-round Rocky Mountain recreation
- Extensive educational, cultural, and athletic opportunities, with seven professional sports franchises

THE BUSINESS CASE FOR A SATELLITE PATENT OFFICE IN COLORADO

The Vision

The Colorado Coalition envisions a satellite patent office in Metro Denver that is a nimble extension of the Alexandria headquarters: fully integrated, technologically advanced, and easily accessible from points throughout the nation.

Office Logistics

The office would provide:

- a secure workspace, meeting General Services Administration (GSA) security requirements, for examiners;
- customer-interface facilities, including video conferencing capability;
- designated exhibit space; and
- a multitude of education and training facilities.

Features

A combination of facility features and local resources/amenities would make the Metro Denver satellite patent office a uniquely effective site.[5]

- The office's proximity to Denver International Airport (DIA) would ensure convenient access for USPTO employees, patent applicants, and the interested public. Colorado is near the geographic center of the nation, and DIA is within three hours of flight time from a majority of the continental United States.
- The office would be able to tap easily into the region's technical infrastructure, one of the most advanced in the country.
- A concentration of high-tech corporations, federal regional headquarters, and research laboratories (the region includes the largest concentration of federal employees outside metropolitan Washington, D.C.) ensures a highly educated, technically savvy workforce.
- Colorado has one of the most educated populations in the country. More than 36 percent of its metropolitan population aged 25 years or older have a four-year college degree, significantly higher than the 29.5 percent national metropolitan average.[6]
- The office would be a "green" facility, in accordance with the state's number of and expertise in LEED-certified buildings, its conservation and renewable energy development enterprises and the federal government's commitment to reducing energy usage and costs.

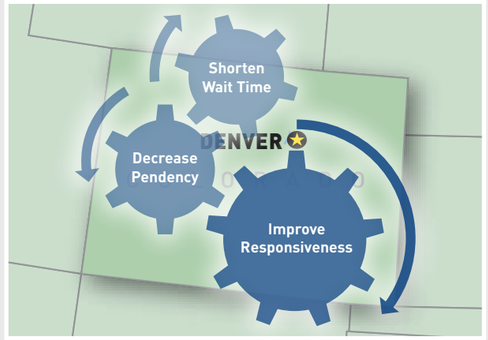
In addition, Metro Denver is a diverse community whose population has been growing consistently for more than half a century. The area is known for its own brand of relaxed but cosmopolitan lifestyle.

- Home to a wide variety of cultural attractions, recreational opportunities, and spectator sports, Denver is a highly attractive location for educated, talented, ambitious professionals—a major factor in recruiting and retaining highly qualified USPTO employees.
- Colorado's sunny, temperate climate is a favorite of year-round outdoor enthusiasts, and its 41 state parks and four national parks offer abundant opportunities for biking, hiking, camping, fishing, and skiing.
- For fans of spectator sports, Denver is one of only five U.S. cities with seven professional sports franchises.
- Metro Denver's numerous museums, theaters, and concert venues—including the naturally stunning Red Rocks Amphitheater—host world-renowned exhibits, musicians, and performances.

5. *See* back insert, Metro Denver/Northern Colorado Economic Profile, 2012.
6. U.S. Census Bureau, American Community Survey, 2010.

Support for Overriding USPTO Objective

Reduce Pendency and Improve Examination Quality



Section 23 of the AIA states that satellite patent offices should "decrease the number of patent applications waiting for examination" and "improve the quality of patent examination."[7] The Colorado Coalition believes that these overarching objectives can best be met by hiring and retaining qualified, motivated examiners who would be available in Colorado.

The specially designed work environment described above would enable talented patent examiners to collaborate with other USPTO offices in providing high-quality, timely examinations, thus reducing the backlog of applications. (Lessons learned in establishing the first satellite patent office in Detroit would be applied to that end.)

Examiners for the Metro Denver office would initially be hired in two ways:

1. Current USPTO examiners, who require no additional training and who choose to voluntarily relocate to Colorado, would constitute the core staff. Included would be hoteling/teleworking examiners who designate the Metro Denver office as their duty station.[8] After basic orientation to the facilities, they could immediately begin examining applications.
2. Former examiners and intellectual-property (IP) professionals would be recruited through the USPTO's targeted hiring program, with the goal of having new hires examining patent applications within weeks, in line with the USPTO perspective.[9]

Once a qualified workforce is in place, the Metro Denver office would implement programs to further develop examiners and to increase the number of experienced examiners as necessary. Specifically, the office would:

1. Offer the USPTO's training program to newly-hired examiners with limited patent experience.[10] Following completion of the "US Patent Training Academy program," graduates could affiliate with any USPTO office and/or, if qualified, work from home under the USPTO Hoteling and Teleworking Programs.[11]
2. Extend the reach of the USPTO's Hoteling Program. Because of its pivotal central location, the Metro Denver office would enable the USPTO to add a duty center, geographically remote from the offices in Alexandria and Detroit, for hoteling examiners. Easy access to DIA would enable examiners to live within a short flight from Denver and travel to the office as needed.
3. Extend the USPTO's Teleworking Program.[12] The nine-county Metro Denver and Northern Colorado region (within 50 miles of the proposed office) is a high-tech corridor, recognized as a leader in information technology.[13] In 2011, Denver ranked fifth on CNBC's list of "America's Most Wired Cities." Local download speed averaged 10.2 Mbps. Metro Denver's wired infrastructure would reinforce the ability of examiners to work at home during the majority of the week and commute to the office only when required.





- Because of the large number of state and federal agencies located in the area and because of its key role as a distribution hub, high-speed Internet connections are a necessity.
- Colorado is ranked 19th in the nation for the number of total business and residential high-speed Internet connections.
- Metro Denver is the headquarters or regional center for a variety of telecommunications and cable companies that offer high-speed connection services, including Comcast, Level 3, Sprint Nextel, and CenturyLink.

Improve Patent Examiner Recruitment

Section 23 of the AIA calls for satellite patent offices to "improve recruitment of patent examiners."[14]That phrase echoes the USPTO's Human Capital Vision, namely to "recruit, develop, and retain a high-performing, highly skilled, diverse workforce necessary for mission success, and to foster the next generation of USPTO employees and leaders."[15] As envisioned, the Colorado office would play a critical role in fulfilling both goals, as well as the USPTO's vision of leading the nation and world in intellectual property protection and policy.

The office in Metro Denver, because of the area's unique combination of workplace excellence and local lifestyles/amenities, would expand the USPTO's ability to hire experienced IP professionals. Colorado's environment for both work and recreation encourages a work-life balance that holds broad appeal. For employers, that means a lower attrition rate and a faster ramp-up time for new hires.

- ✓ Affordable housing, low property taxes
- ✓ Top relocation state for 25- to 34-year-olds
- ✓ 19 school districts in Metro Denver
- ✓ Nation's second-most highly educated workforce
- ✓ Year-round recreation options
- ✓ NFL, NHL, NBA, MLB, and NCAA Teams
- ✓ Diverse cultural activities: music, ballet, opera, theatre, symphony, museums

Recruiting Experienced Candidates

Under the hiring model described above, emphasis will be placed on recruiting candidates with backgrounds as registered patent attorneys, patent agents, former examiners, and skilled technologists with USPTO experience as inventors.[16]

7. Pub. L. 112-29, 125 Stat. 184 (2011).
8. The goal of the Colorado office would be to have at least one relocating supervisory patent examiners (SPE) for every 20 primary or junior examiners expected to relocate or be hired.
9. United States Patent and Trademark Office 2010-2015 Strategic Plan, p. 12 ("recruiting candidates with significant IP experience will lead to a reduced training burden and increased ability to examine applications much sooner than an inexperienced new hire. In addition to being more productive sooner, examiners in higher grades have higher production goals, which results in increased production output.")
10. United States Patent and Trademark Office, Performance and Accountability Report Fiscal Year 2011, pp. 154-156.
11. To address retention issues, participants would commit to a minimum of three years of service to the USPTO following graduation in exchange for acceptance into the US Patent Training Academy.
12. The USPTO has shown how a teleworking program can be run effectively and in fact increase productivity of examiners. As part of this program, USPTO teleworkers require high-speed Internet service provider (ISP) connection through cable or fiber optic service (FiOS) to ensure a sufficient response time.
13. This region would be within 50 miles of the Colorado office.
14. Pub. L. 112-29, 125 Stat. 184 (2011).
15. United States Patent and Trademark Office 2011-2015 Strategic Human Capital Plan, p. 4.
16. United States Patent and Trademark Office 2010-2015 Strategic Plan, p. 12.

Colorado is home to a significant number of qualified candidates. Currently:

- more than 700 registered patent attorneys and patent agents currently reside in Colorado,[17] and
- more than 20,000 Colorado residents filed patent applications between 2007 and 2010.[18]

The Metro Denver office would also recruit experienced IP candidates outside the region. Metro Denver has experienced significant net migration for many years, including an estimated net migration of 17,673 residents in 2011. As a result, the Colorado Coalition anticipates a corresponding increase in the number of potential USPTO job candidates with IP experience in the state.

Additionally, Colorado is a reciprocity state for bar admission, thereby allowing eligible lawyers with IP experience to relocate to Colorado without taking the Colorado Bar Exam.

Using Traditional Sources

The office would also draw candidates from traditional sources such as engineering schools, both within Colorado and in other states, and recruit regional technology professionals without IP experience.

Colorado itself has a large pool of potential candidates.

- The state's four major public universities graduated 2,452 engineering students during the 2009 to 2010 academic year.[19]
- More than 40 percent of the state's population aged 25 and older with bachelors degrees hold degrees in science and engineering, putting Colorado in the top 10 among all states and the District of Columbia.[20]
- More than 13,000 highly skilled workers currently reside in Colorado in the following areas or occupational clusters:

Key Occupations Supporting a U.S. Patent and Trademark Office

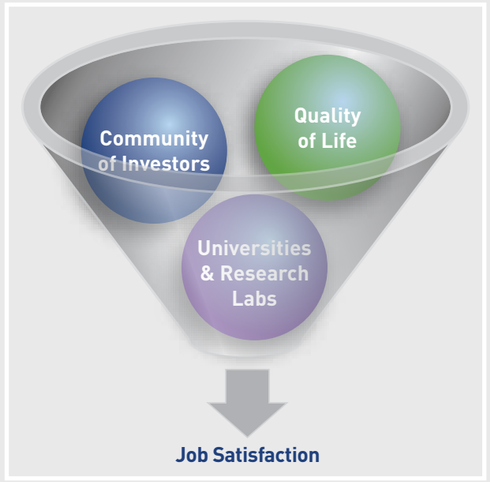
SOC Code	Description	2011 Jobs	Available Labor Pool (5 yrs exp or more)	10th Percentile Hourly Earnings	2011 Avg Hourly Wage	2011 Pct 90 Hourly Earnings
11-3021	Computer and information systems managers	4,959	611	$36.00	$54.64	$95.07
15-1011	Computer and information scientists, research	457	102	$22.97	$41.76	$63.87
15-1021	Computer programmers	6,796	454	$16.81	$34.66	$57.27
15-1031	Computer software engineers, applications	19,021	491	$26.88	$42.80	$62.17
15-1032	Computer software engineers, systems software	17,103	281	$29.22	$45.57	$66.10
15-1041	Computer support specialists	11,713	1,443	$14.71	$24.74	$37.83
15-1051	Computer systems analysts	12,331	495	$20.71	$36.21	$54.44
15-1061	Database administrators	3,288	174	$19.79	$34.85	$52.95
15-1071	Network and computer systems administrators	9,061	618	$21.33	$36.22	$53.09
15-1081	Network systems and data communications analysts	8,042	149	$13.79	$28.93	$47.68
15-1099	Computer specialists, all other	7,189	651	$22.29	$36.09	$52.54
17-2011	Aerospace engineers	2,411	93	$27.59	$44.81	$63.18
17-2031	Biomedical engineers	92	9	$17.85	$31.54	$48.97
17-2051	Civil engineers	7,233	278	$21.58	$35.76	$52.37
17-2061	Computer hardware engineers	3,368	74	$31.50	$51.72	$73.48
17-2071	Electrical engineers	3,548	230	$22.48	$39.19	$57.41
17-2072	Electronics engineers, except computer	4,903	112	$29.28	$45.42	$64.34
17-2081	Environmental engineers	1,216	88	$24.43	$39.41	$54.28
17-2112	Industrial engineers	3,034	119	$25.69	$38.79	$54.33
17-2131	Materials engineers	534	32	$24.16	$41.23	$63.64
17-2141	Mechanical engineers	4,580	242	$25.78	$44.28	$66.57
17-2151	Mining and geological engineers, including mining safety engineers	597	13	$24.72	$39.08	$59.17
17-2171	Petroleum engineers	1,185	16	$37.01	$65.37	$99.82
19-1012	Food scientists and technologists	179	15	$12.63	$23.49	$40.39
19-1021	Biochemists and biophysicists	332	28	$19.93	$39.84	$67.61
19-1041	Epidemiologists	58	1	$15.49	$26.55	$41.18
19-1042	Medical scientists, except epidemiologists	845	29	$17.72	$34.77	$61.11
19-2012	Physicists	513	20	$29.30	$54.57	$87.24
19-2031	Chemists	1,566	84	$22.37	$37.50	$57.73
19-2032	Materials scientists	84	11	$20.42	$36.41	$57.22
19-2042	Geoscientists, except hydrologists and geographers	2,065	44	$21.14	$45.34	$71.91
19-2043	Hydrologists	478	9	$26.11	$42.67	$63.44
23-1011	Lawyers	15,407	164	$19.27	$48.79	$99.55
27-3041	Editors	3,025	196	$14.25	$22.56	$36.32
27-3042	Technical writers	1,120	158	$19.92	$30.62	$43.97
43-1011	First-line supervisors/managers of office and administrative support workers	17,803	1,768	$14.27	$25.00	$38.24
43-6011	Executive secretaries and administrative assistants	28,165	2,982	$14.05	$21.43	$30.92
43-6014	Secretaries, except legal, medical, and executive	44,360	882	$10.43	$15.88	$22.54
	Total	250,297	13,169	$19.04	$32.37	$49.90

Source: EMSI Complete Employment - 2011.4

Finally, the Colorado satellite office would have the ability to recruit engineering graduates and tech workers without IP experience from outside the region. For example, when Boeing and Lockheed Martin formed United Launch Alliance and established its headquarters in Colorado, the new company successfully recruited employees to the state from a pool of 400 former Boeing employees in Huntington Beach, California.

Enhance Patent Examiner Retention

The same quality of life factors that draw experienced and potential patent examiners to Colorado will also help retain them, in line with the Section 23 mandate that satellite patent offices should "enhance patent examiner retention." [21]



Metro Denver is consistently ranked as one of the best places to live in the United States.

- An analysis of American Community Survey data by the Brookings Institution cited reasonable housing costs and quality of life as key factors that ranked Denver as the number one place to live among relocating 25- to 34-year-olds.[22]
- The Gallup-Healthways Well-Being Index gave Colorado a score of 68 in 2010, ranking it number five among the states, well ahead of the eastern seaboard.[23]
- Metro Denver is on the high plains at the base of the Rocky Mountains and consequently serves as a gateway to the mountains. Moderate temperatures, low humidity, and abundant sunshine create an ideal climate for year-round recreation.
- With nearly 300 sunny days a year—more than either San Diego or Miami Beach—the area typically has mild winters with short-lived storms. The climate is semi-arid with average annual precipitation of less than 16 inches.
- The cost of living in Metro Denver is lower than in many other major U.S. cities (particularly large, coastal regions), which is complemented by a high quality of life. [24]

17. USPTO website, https://oedci.uspto.gov/OEDCI.
18. United States Patent and Trademark Office Performance and Accountability Report, Fiscal Year 2011, p. 164.
19. Colorado Department of Higher Education.
20. U.S. Census Bureau, American Community Survey Briefs, Science and Engineering Degrees: 2009.
21. Pub. L. 112-29, 125 Stat. 184 (2011).
22. Colorado moved up to number one from number twelve in the American Community Survey data as the best place to live among 25 to 34 year-olds, according to an analysis of the data by the Brookings Institution, citing reasonable housing costs and quality of life. In addition, Colorado ranked fifth in a Harris survey that asked more than 2,400 U.S. adults where they would most like to live.
23. *See* the Well-Being Index at http://www.well-beingindex.com/snapshot-Findings.asp.
24. According to the ACCRA Cost of Living Index, the cost of living in Metro Denver was 5% percent above the national average in the third quarter of 2011.

- Housing options in the Denver area are diverse and include urban, suburban, and foothills locations for a wide range of tastes and budgets. Home prices are both relatively affordable and stable. The median price for a single family home was $230,300 in October 2011.
- Metro Denver's K-12 education system encompasses 19 public school districts and a number of private and parochial school systems. All of the area's public schools offer open enrollment, allowing students to attend any school with available space.
- Students in Metro Denver are high achievers in nationwide test scores. Colorado high school students taking the SAT in 2010 scored well above the national average.[25]
- While many excellent private schools operate in Metro Denver, the percentage of students who opt for private education was just 8 percent in 2010, lower than in most major cities, a result of the high quality of public schools.

A Metro Denver satellite office would also provide a relocation option for current examiners who may be considering leaving the USPTO. The Colorado Coalition expects that:

- the USPTO would be able to retain some examiners currently employed at the Alexandria office by offering them the option to voluntarily relocate to Colorado; and
- a number of current hoteling employees/teleworkers would likely designate the Colorado office as their new duty center.

Extend Stakeholder Outreach

Section 23 of the AIA states that satellite patent offices should "increase outreach activities to better connect patent filers and innovators with the Office."[26]

The USPTO has implemented a First Action Interview Program to promote examiner interviews as a means to improve efficiency[27] and has encouraged direct interaction between applicant and examiner to reduce the existing backlog.

Accordingly, a major component of the Metro Denver satellite patent office would be a separate customer-interface facility, which would serve a dual purpose: to both increase accessibility for patent applicants across the United States and to decrease the cost of the patent interview process.

- Conference rooms within the facility would be equipped with state-of-the-art video conferencing equipment, enabling face-to-face communication between the applicant and the primary examiner, regardless of the examiner's physical location.
- The facility would be used by applicants in Colorado and across the central and western United States, greatly expanding and streamlining the interview process. Applicants would be spared the cost and time of cross-country travel for an in-person interview.
- Rather than traveling to USPTO headquarters in Alexandria, applicants could make the more convenient trip to the satellite office.

Colorado's central geographic location, with convenient access both by air (DIA is one of the nation's largest airports) and by highway (interstate highways crisscross the region) would present the USPTO with a unique opportunity to extend the services that USPTO provides at the Alexandria headquarters.

For example, to complete an interview at the Colorado facility in a one-day trip, an applicant within the geographic region of the following map would travel by air to DIA in the morning.

Upon arrival at DIA, applicants would reach the Colorado office, either by taxi, direct rail connection, bus or direct SkyRide (express public bus service) and should arrive within 30 minutes. Once business is completed, applicants could return to DIA for a flight that takes them home in the afternoon or early evening.

In addition, being situated in the Mountain time zone puts Colorado-based examiners in position to handle inquiries from European-based patent applicants at the beginning of the workday and shift to Asian-based applicants at the end of the workday.

Expand USPTO Exhibits and Educational Opportunities

The Colorado office would provide space for traveling USPTO exhibits, and perhaps a smaller version of the USPTO's National Inventors Hall of Fame and Museum.[28] An important function of stakeholder outreach is public education and an exhibit space and museum in the satellite office would allow the USPTO to extend Alexandria-based public relations activities to the central and western United States.

- For example, the USPTO's current public exhibit, "The Patents and Trademarks of Steve Jobs: Art and Technology that Changed the World," could be shown at the Colorado office after the Alexandria exhibition.[29]
- The cost of the USPTO's Exhibits and/or Museum could be defrayed, if permitted, by local fund-raising efforts by the IP Section of the Colorado Bar Association or by sponsorship of local companies and law firms or other public-private partnerships.
- The Metro Denver office would also provide educational opportunities for the public. Currently, the USPTO offers training and education exclusively at the Alexandria headquarters. A Denver satellite office would extend the reach of the USPTO programs to the western United States.

In addition, the satellite office would enable live video conferencing of events at the Alexandria headquarters.

- Entrepreneurial communities in the mountain west would have new access to the service and education programs of the USPTO.
- Engineering, science, and entrepreneur programs at nearby universities will likewise benefit from the outreach, as they foster the development of tomorrow's examining corps.

25. In 2010, more than 9,000 Colorado high school students took the SAT and received an average composite score of 1695 compared to a nationwide average of 1509. Average ACT scores of 20.6 tracked slightly lower than the national average since all Colorado students are required to take the test. States in which only college-bound students take the ACT tend to report higher average scores.
26. Pub. L. 112-29, 125 Stat. 184 (2011).
27. United States Patent and Trademark Office Performance and Accountability Report Fiscal Year 2011, p. 16.
28. Examples of other museums, tours, and outreach opportunities in Colorado include, the Federal Reserve Branch Money Museum, NIST tours, UCAR tours.
29. Alternatively, USPTO Exhibits could be exhibited for a short term (e.g., 3 months) at Denver International Airport.

COLORADO: THE RIGHT FIT FOR USPTO

Colorado's central location, transportation infrastructure, and innovative technical/research community combine with myriad supporting factors to make Metro Denver an unbeatable site for a USPTO satellite patent office.

Geographic Diversity

More than 1,000 miles from both USPTO headquarters in Alexandria and the satellite patent office in Detroit, a new office in Metro Denver would "ensure geographic diversity among offices."[30] The area is just 346 miles west of the precise center of the continental United States and is easily accessible by air to people not only in the mountain west, but also across the nation. Moreover, the location facilitates real-time communication around the world.

- The Metro Denver office would create unprecedented access to the USPTO for the technology centers of the central and Rocky Mountain regions.
- Because Denver is in the Mountain time zone, a standard workday would allow for extended same-day communications with the east and west coasts, as well as Europe, the Western Hemisphere, and Asia.
- The region's location on the 105th meridian allows one-bounce uplinks to world networks so real-time connections to six of the seven continents are capable in a single business day.

Metro Denver Population and Growth

Metro Denver encompasses nine counties on the eastern edge of the Rocky Mountains. The area has a population of 2.8 million people, with a growth rate that has consistently outpaced the national average in every decade since the 1930s. The region grew steadily in the past 10 years, even in the midst of recession.[31] Projections call for Metro Denver's population to increase to almost 3.8 million by 2030.

Transportation Infrastructure

With the country's fifth busiest airport and the most extensive public transportation project since Washington D.C.'s subway system, Metro Denver is becoming one of the most accessible of American cities—whether the trip is across town, across the region, across the country, or even across the ocean. A central location, along with affordable airfares, and an abundance of hotel accommodations make the area an ideal location for a USPTO satellite patent office.[32]

Two-thirds of the nation can reach Metro Denver by air within three hours; the area is within a four hour flight from every North American city with a population of one million or more. Once on the ground, travelers have a choice of bus, shuttle, or rental car—and more options are on the way. A direct light rail line to DIA has been approved and is under construction, with federal funding secured.

Regional Air Travel Hub

Denver International Airport is unlike any other American facility. A regional hub for United, Frontier, and Southwest airlines and a stopover point for a large percentage of cross-country air traffic, DIA's distinctive appearance on the Colorado plains welcomes travelers to an efficient, futuristic complex. In 2011, DIA had its busiest year ever, with estimated total passenger traffic of more than 52 million, a one percent increase over 2010.

- Fourteen commercial carriers serve DIA, providing daily, non-stop flights to more than 160 cities. Among its carriers are discount airlines such as Southwest, which provide reasonable fares to points across the nation.
- DIA ranks high in on-time arrivals and departures with 91.5 percent of arrivals landing on-time and 93 percent of departures leaving on-time—a positive comparison with the 83 percent and 88 percent respective national averages.
- Service at the airport will expand in the coming years. A 10-year, $500 million capital-improvement plan involves construction of a seventh runway, a build-out of the south terminal, an addition of light rail service from DIA to downtown Denver, and completion of a 500-room Westin hotel within the airport complex.

Extensive Local Mass Transit

A study released in 2011 by the Brookings Institution ranked Metro Denver sixth in the nation for transit connectivity. Brookings researchers examined the 100 largest American metropolitan areas to determine the percentage of local jobs accessible within a 90-minute commute on public transit. On average, 30 percent of commuters in metro areas can reach their jobs by mass transit. In Metro Denver, the number is significantly higher at 47 percent.

The Regional Transportation District (RTD), funded by a one percent sales tax, operates the public transportation system in Metro Denver. RTD's system encompasses 1,029 buses on 148 fixed routes and 153 light-rail vehicles on 35 miles of track. RTD has 75 Park-N-Ride lots, 37 light-rail stations, and more than 10,140 bus stops. In 2010, the system recorded about 98 million boardings on all mass transit vehicles.

- Current visitors to Metro Denver via DIA can board mass transit (RTD buses, including SkyRide express service) at the airport. Light-rail service linking DIA to downtown Denver is scheduled for completion by 2016.
- FasTracks is RTD's plan for the design and construction of high-quality transit facilities in Metro Denver. The project will provide 122 miles of new light rail and commuter rail, 18 miles of bus rapid transit service, and more than 21,000 new parking spaces at rail and bus stations.
- When complete, FasTracks will redirect bus service to better connect Metro Denver communities and will add 57 new transit stations throughout the region.[33]

Colorado Industry Clusters and Innovation

The state has strong and diverse industry clusters, especially in the areas of aerospace, aviation, bioscience, broadcasting and telecommunications, energy (fossil and cleantech), information technology, and software. To ensure the continued expansion of innovative industries in the region, the Metro Denver Economic Development Corporation identifies growing industry clusters and

30. Pub. L. 112-29, 125 Stat. 184 (2011).
31. A large portion of Metro Denver's population growth is due to in-migration of highly educated workers from other states. The region's net migration averaged about 30,600 people each year during the 1990s. Metro Denver is estimated to have net-migration of 17,673 residents in 2011.
32. *See* Appendix 3 for detailed information on transportation.
33. *See* Appendix 3 for maps on FasTracks.

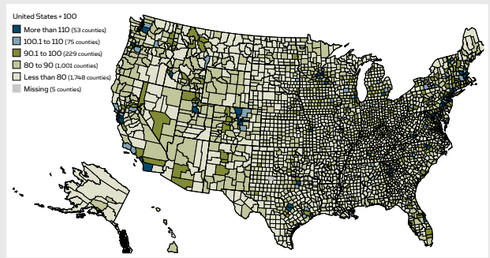
actively recruits innovative companies within them as potential sources of high-skilled primary jobs in Colorado.

Cultivating industry clusters and innovation are a key factors in creating new jobs and growing a more competitive, dynamic and resilient American economy. In Colorado, the diverse culture and welcoming environment support and encourage innovation, helping to boost competitiveness at all levels.[34]

Consistently High Index Rankings

- Colorado ranks number five in the United States in the Ewing Marion Kauffman Foundation's Entrepreneurial Activity Index, a key measure of innovation.
- Venture capital investments are often highest in states with a strong culture of innovation and entrepreneurship. With 83 completed deals in 2010, venture capital investment in Colorado was about $483 million, the third highest in the country. In 2011, venture capital investment in Colorado increased 28 percent to $619 million.[35]
- The state ranks number three in Small Business Innovation Research (SBIR) grants from the Small Business Administration (SBA) and has historically ranked among the most successful states for high-dollar value of SBIR grants per worker.
- Colorado is recognized in third-party research as one of the strongest U.S. regions in foundational innovation factors, such as human capital, economic dynamics, productivity and employment, and economic well-being.

The following map illustrates an innovation index of U.S. counties determined by the factors listed above. The central Colorado corridor is demonstrably above average.[36]

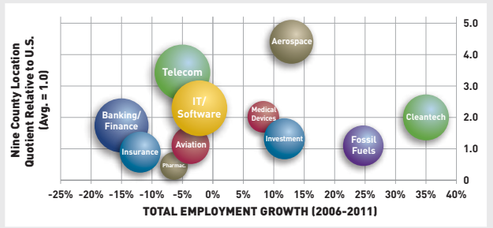


Colorado has thriving public-private partnerships that fuel innovation and commercialization within the state. With 24 federal laboratories and four major research universities, Colorado boasts innovation clusters in Denver, Boulder, Fort Collins, and Colorado Springs.

Among these clusters are startup business incubators, an aerospace and energy business accelerator to commercialize existing NASA technologies, industry associations, commercialization organizations housed within research universities, the Collaboratory for renewable energy, and a privately-funded state alliance: the Colorado Innovation Network (COIN). COIN will leverage and coordinate already robust resources within the state and add momentum and visibility to existing work.

- The nine-county region that comprises Metro Denver is home to numerous public and private bioscience research assets, including:
  - the University of Colorado Anschutz Medical Campus;
  - National Jewish Health;
  - the Colorado Clinical and Translational Sciences Institute;
  - the Barbara Davis Center for Childhood Diabetes;
  - the Eleanor Roosevelt Institute;
  - the Webb-Waring Institute for Cancer, Aging, and Antioxidant Research;
  - the Centers for Disease Control and Prevention's National Center for Zoonotic, Vector-Borne, and Enteric Diseases; and
  - the Colorado State University Seed Laboratory and Animal Reproduction and Biotechnology Laboratory.

- The Colorado Renewable Energy Collaboratory is a research partnership among the Colorado School of Mines, the University of Colorado Boulder, Colorado State University, and the National Renewable Energy Laboratory (NREL). The Collaboratory combines resources from each of the institutions and works with members of industry to perform research, develop renewable energy technologies, and commercialize these technologies.
- Colorado has the nation's second-largest aerospace economy and is home to four military commands, eight major space contractors, and more than 400 aerospace companies and suppliers.
- Colorado's research institutions and federal laboratories offer their world-renowned excellence in innovative space technologies to the aerospace industry. Colorado's 24 federally funded research labs include NREL, the National Oceanic and Atmospheric Administration (NOAA), National Institute of Standards and Technology (NIST), and National Center for Atmospheric Research (NCAR).



Highly Educated, Technical Workforce

Of Colorado's adult population, 36 percent have completed a bachelor's or higher-level degree, making Colorado the second-most highly educated state in the nation, behind only Massachusetts. Nationally, Colorado ranks fifth per capita for workers with science or engineering degrees, and second per 1,000 workers with the highest number of patents.[37]

Colorado is home to four major research universities: Colorado School of Mines, Colorado State University, University of Denver, and the four campuses of the University of Colorado. All the institutions have outstanding science and engineering programs and provide a consistent source of high-quality technology workers.

- The state's four major Colorado public universities graduated 2,452 engineering students for the 2009-2010 academic year, and its two law schools reported 560 graduates for the same period.

Growing Pool of Potential Employees

NREL recently announced voluntary separation for up to 150 workers in response to federal budget cuts. A Metro Denver satellite patent office could attract some of those qualified technical personnel for a second career, helping to meet the USPTO objective of recruiting top-quality examiners.

Additionally, a local USPTO satellite office could tap into Colorado's pool of retired and former military personnel.[38] Given the state's large military presence, the winding down of overseas military operations in Iraq and Afghanistan, and the probable reduction in U.S. military forces will mean an influx of technically trained individuals.

- The University of Colorado Denver and the Denver Metro Chamber of Commerce are partnering in a multi-faceted "Boots to Suits" program that will include training and mentoring new military retirees and connecting them with career opportunities in the public and private sectors.
- A Colorado satellite patent office would be an ideal site from which to support the USPTO's effort to hire veterans, which was launched on November 10, 2011.[39]

34. *See* Appendix 4 for detailed information on industry clusters and innovation.
35. *Colorado Firms got $619 Million in Venture Capital in 2011*, Denver Post (Jan. 20, 2012).
36. Indiana Business Research Center. "County-Level Innovation Index for the United States." 2010
37. *See* Appendix 5 for competitive staffing analysis and educational achievement.42. Colorado is home to six major U.S. military installations, Buckley Air Force Base, the U.S. Air Force Academy, the Peterson Complex, Fort Carson, Cheyenne Mountain, and Schriever Air Force Base.
38. Colorado is home to six major U.S. military installations, Buckley Air Force Base, the U.S. Air Force Academy, the Peterson Complex, Fort Carson, Cheyenne Mountain, and Schriever Air Force Base.
39. *See* USPTO Press Release, 11-66.



Economic Impact

The addition of a USPTO satellite patent office in Metro Denver would significantly strengthen Colorado's economy. Projections show that the new office would generate more than $400 million in economic activity over the first five years. Among the contributing elements would be new jobs, an influx of facility and visitor spending, economic development opportunities, and a valuable new innovation asset for the state: the office itself.

Projected Financial Benefits

A recent study by the University of Colorado Leeds School of Business quantified the potential financial ramifications of a local satellite patent office.[40] For purposes of the study, the Alexandria, Virginia, USPTO headquarters served as a proxy for office expenditures on salary, rents, travel, supplies, materials, maintenance, training, and other costs. Lease rates, construction costs, and tenant improvements were estimated from market data for the Metro Denver region.

- For the Alexandria office, patent direct costs are estimated in excess of $240,000 per employee. Colorado expenditures are estimated at $157,600 per employee in year one.
- Over five years, a satellite office in Metro Denver is estimated to account for $261 million in direct facility expenditures, most of which would remain within the state and the Metro Denver region.

The study estimated the impacts of a satellite office with an initial complement of 200 patent examiners and 30 support staff, growing to 500 examiners and 75 support staff over five years.

- With compensation commensurate with training and expertise, patent examiners would earn higher-than-average wages for Colorado—initially estimated at $90,000 per year—plus benefits.
- Support staff, including IT and administration, would earn average wages in excess of $70,850 plus benefits.
- These employees will be Colorado-based, and nine in 10 of them will likely live in the Metro Denver area.

Over the first five years, the satellite office would lead to economic activity totaling $439 million (direct, indirect, and induced), of which $389.2 million would occur in the Metro Denver area. The employment impacts reach well beyond the 230 examiners and support workers.

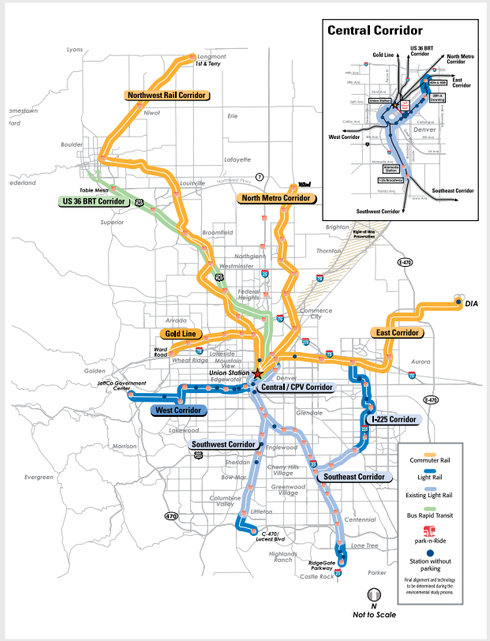
- Total facility employment would be 440 workers in year one, growing to 958 in year five, including employment resulting from indirect purchases and household spending.
- Given that examiners' wages exceed average Colorado salaries, their disposable incomes will have a greater economic effect than those of employees in many other industries.

In short, while Colorado can offer the USPTO critical assets for a satellite patent office, a USPTO office in Metro Denver would enhance the state's economy, both directly and indirectly, further solidifying Colorado's long-term position as a national leader in innovation and entrepreneurship.

Satellite Office Building/Operations

Reasonable Local Options

The Colorado Coalition envisions a Metro Denver satellite patent office near DIA. Preferably, it would be situated along the FasTracks rail line to facilitate quick, low-cost transport for patent applicants visiting the site.



Some potential satellite office locations, including the Anschutz Medical Campus, the Stapleton area, downtown Denver, the Denver Federal Center, and the Denver Technology Center.[41]

The average cost for Class A building space in the Metro Denver area is $23.92 per square foot. If possible, the office would be located in a building that is scalable for future expansion.

Energy and Environmental Considerations

Colorado is North America's cleantech epicenter. Its technically skilled workforce, federal laboratories, research universities, compatible energy policy, and abundant natural resources collectively amount to an unmatched center for energy innovation—just an airplane ride away from major global cleantech markets. The state is home to cleantech industry leaders like Vestas, SMA Solar Technology, REpower USA, GE (PrimeStar Solar), and RES-Americas.

The state's renewable energy standard—the required percentage of power generated from renewable sources—is the result of a vote of the people. Through legislation, the standard has been raised and is now the second highest in the nation. By 2020, 30 percent of power must come from renewable energy sources.

- The state's largest power distributor, Xcel Energy, is on track to comply with the mandated standard well ahead of schedule.
- Xcel is a leader in smart grid technology and offers rebates and incentives to commercial and residential customers to implement energy efficiencies in existing buildings and new construction.

40. *See* Appendix 6, University of Colorado Leeds School of Business study entitled "Economic Impacts on Colorado of a Regional Satellite Office in the Metro Denver Region," January 18, 2012.
41. *See* Appendix 7, Suggested Sample Properties



In line with Colorado's commitment to energy efficiency and to comply with federal mandates, the "green" Metro Denver satellite patent office would educate employees on the benefits of energy sustainability. The office would provide its staff with a modern workplace that is not only energy efficient but also safe, secure, and attractive.

Work-life Balance Considerations

Balancing work and personal life is an important issue for Colorado workers. Employees universally appreciate the state's healthy, balanced lifestyle options, along with the relatively low cost of living and abundant educational opportunities.

- Data from the U.S. Census Bureau and the Internal Revenue Service show that Denver is the number one city for 25- to 34-year-olds. Denver jumped to number one from number 12 in the American Community Survey data.
- The city has the largest public parks system of any U.S. city.
- Colorado's Rocky Mountains, featuring world-class ski resorts and eye-popping scenery, are only minutes away.
- The state boasts the lowest obesity rate in the nation.
- Residents can cheer for seven professional sports teams.
- The renowned Denver Performing Arts Complex is the largest such facility in the country under one roof.

Metro Denver has all the attractions one can expect in a major city: from modern museums and an expansive convention center to the country's newest sports stadiums and a state-of-the-art zoological center.

In accordance with the USPTO Strategic Human Capital Plan goal of providing employees with the resources they need to have a complete, well-balanced personal and professional life, the Colorado office would provide resources that include on-site child care, an Employee Assistance Program, LifeCare, a fitness center, health units, and a transportation subsidy.[42]

Performance Measures

The Metro Denver satellite patent office would maintain annual performance measures, including:

- number of experienced hires;
- office attrition rate at office;
- office production levels; and
- cost comparison between the satellite office and headquarters.[43]

Additionally, the Metro Denver office would measure the annual increase in participation in the USPTO's Telework and First Action Interview Programs.[44]

42. United States Patent and Trademark Office 2011-2015 Strategic Human Capital Plan, p. 9.
43. United States Patent and Trademark Office 2010-2015 Strategic Plan, p. 46.
44. United States Patent and Trademark Office 2011-2015 Strategic Human Capital Plan, p. 15.

ADDITIONAL FACTORS

Potential USPTO Data Center Site

Colorado's climate, geography, relatively low power and network costs, and its educated workforce make it a prime candidate for a data center.

- The area's cool, dry climate makes it possible to maintain cool inside temperatures in an energy- and a cost-efficient way for most of the year.
- Because of its location in the middle of the continent, the state is at low risk for most natural disasters, such as hurricanes, earthquakes, and tornadoes.
- Power costs are relatively low and inexpensive, reliable fiber and network infrastructure is available from multiple providers.

Several companies currently operate data centers in Colorado; among them are Oracle, IBM, Honda, Comcast, ViaWest, Hosting.com, and Latisys.

Colorado Support of Commerce Department Objectives

In October 2011, during his first official visit as the new U.S. Secretary of Commerce, John Bryson came to Colorado, where he toured the manufacturing facilities of several companies.[45] More recently, he stated that advanced manufacturing is the "biggest source of innovation in our economy."[46]

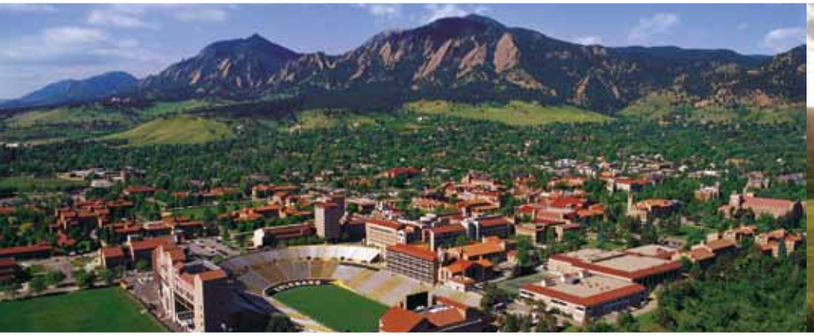
- Colorado boasts one of the top advanced manufacturing communities in the nation, with strong capabilities and capacities in electronics, precision manufacturing, metal fabrication, medical devices, robotics, communications, aerospace, and clean energy.
- Manufacturing employs nearly 130,000 people in Colorado with more than 5,000 manufacturers. At least 37 percent of those companies employ 20 or more people.
- The state actively supports the Commerce Department's "Help American Businesses Build it Here and Sell it Everywhere" initiative.

Following the launch of its Michigan office in September 2010, the U.S. Department of Commerce (DOC) announced (February 2011) that it was expanding its CommerceConnect program into Denver.[47]

The State of Colorado's Office of Economic Development and International Trade (OEDIT) works closely with the DOC on the following issues and efforts:

- On a daily basis, OEDIT and representatives of the DOC's U.S. Export Assistance Center (USEAC) jointly make customer calls on Colorado exporters and counsel them on export-related matters
- OEDIT and USEAC personnel plan export-related promotional events, such as training seminars and trade missions, and jointly host federal government officials from Washington D.C. when they visit Colorado. The groups also organize company visits and programs and hold quarterly staff meetings with

45. Denver Business Journal, November 9, 2011, "Denver a 'strong candidate' for a patent office, new Commerce secretary says."
46. Commerce Secretary John Bryson, "Remarks at the US Chamber of Commerce with Bryson's Vision for Job Creation: Build It Here. Sell it Everywhere," December 15, 2011.
47. U.S. Department of Commerce Press Release, February 2011, "U.S. Commerce Department's CommerceConnect Expands into Denver."



USEAC and International Division staff to stay up-to-date on trade opportunities.

- OEDIT also partners with the DOC's U.S. Commercial Service overseas to run trade missions and other in-market events such as trade shows and the coordination of incoming buyer delegations to Colorado. OEDIT refers many of its clients to services provided by the U.S. Commercial Services in-market.
- OEDIT was awarded a DOC Market Development Cooperator Partnership (MDCP) Grant, which provides funding for three years (began January 2010). Funding of approximately $360,000 allowed OEDIT to create the Colorado Export of Innovative and Sustainable Technologies (CO-Exist) program, which promotes Colorado clean-tech exports to China and Mexico.

Colorado Support of Other USPTO Objectives

The IP Section of the Colorado Bar Association offers monthly continuing education programs. Featured guests have included Robert Stoll, Sharon Barner, Lynne Beresford, former Chief Judge Paul Michel, Judge Robert K. Rogers of the International Trade Commission, Q. Todd Dickenson, and Marybeth Peters—all within the last two years.

- In February 2012, the IP Section will host the USPTO Road Show at the University of Denver Law School.
- The IP Section is working with the USPTO to launch a pro bono IP services program in Colorado. The USPTO will act as an information conduit for independent inventors through both the USPTO Web site and outreach events. Scheduled to launch in June 2012, the program will be the second pilot program in the nation to assist individuals and small businesses with certain financial needs to protect their valuable inventions and innovations.
- This pro bono program, in conjunction with the USPTO's OID, will offer education and guidance to new and financially needy inventors. Independent inventors can work directly with experts to get assistance in filing a new application or improving their existing applications.
- The IP Section has also worked closely with the Colorado IP Inn of Court, established by Judge Linn of the United States Court of Appeals for the Federal Circuit, which features monthly educational opportunities specifically designed to give young practitioners the opportunity to hone their legal skills.
- Each June, the IP Section co-sponsors the Rocky Mountain IP Institute, which draws 250-300 IP practitioners from across the country to participate both as speakers and attendees.
- In October 2012, the IP Section will welcome the Federal Circuit Court of Appeals to sit and hear arguments in Denver.
- The IP Section works closely with the two major law schools in the area, the University of Colorado School of Law and the University of Denver Law School, to develop young attorneys who will form the backbone of our future practice.

These IP-focused opportunities are made possible by the IP Section's 700+ members, who are actively engaged in the practice of intellectual property law, including, but not limited to, those licensed to practice before the USPTO.[48]

Community Supported Educational Opportunities for Examiners

The University of Colorado Law School embodies the spirit of entrepreneurship by strongly supporting and incentivizing public and private innovation.

- Experiential opportunities at the University of Colorado Law School include the Technology Law and Policy Clinic, which teaches students to provide analytical support to regulatory entities, courts, legislatures, and standard-setting bodies on new technology issues, and the Entrepreneurial Law Clinic (ELC), a legal clinic for third-year law students that both trains student attorneys through practical transactional experience and offers valuable legal services to the local entrepreneurial community.
- The University of Colorado Law School offers many intellectual property courses, including: patent law, patent litigation, IP counseling and prosecution, introduction to intellectual property, copyright law, trademark law, computer crime and Internet law, media law, and information privacy law.
- As indicated in Dean Phil Weiser's letter of support for a Metro Denver USPTO satellite patent office, the law school would be "delighted" to, wherever possible, open up such courses—or individual lectures—to USPTO employees.[49]

The Sturm College of Law at the University of Denver is the region's largest law school, with nearly 1,000 law students at any one time, including about 250 daytime students per class and 50 evening students per class. The College of Law has full-time faculty members who specialize in patent, copyright, trademark, and Internet law.

- The Sturm College of Law offers a wide range intellectual property courses, including patent law, advanced patent law, patent litigation, introduction to intellectual property, copyright law, trademark law, advanced trademark law, computer and Internet law, media law, and cyber law.
- As indicated in Dean Martin Katz' letter of support for a satellite patent office in Metro Denver, the University of Denver provides a diverse array of opportunities for its students and is well-positioned to further the educational goals of the USPTO and its examiners.[50]
- Additionally, the Sturm College of Law offers the only evening program for law students in the state of Colorado. The program is particularly well-suited for educating patent examiners who work during the day. Students in the four-year program take 11 credits per semester. After the first year of study, students have access to cross-registration between day and evening classes. Part-time evening students at Denver Law are taught by full-time, tenured faculty and have full access to all student activities, externships, clinics, and journals.

Educational options are also available in the engineering field. A number of local engineering programs offer the USPTO and its examiners the opportunity to take graduate-level engineering and science courses.

- The University of Colorado, Colorado State University, University of Denver, and the Colorado School of Mines all offer distance learning opportunities that would be available online to examiners.

48. *See* letter of support from Nina Wang, the Chair of the IP Section, attached at Appendix 2.
49. *See* Letter of Support from the University of Colorado Law School Dean Phil Weiser at Appendix 2.
50. *See* Letter of Support from the Sturm College of Law at the University of Denver at Appendix 2.

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Appendices Index

Appendix 1 – Roadmap to a Second Patent Office

Highlights of Colorado's 2 1/2 Year Effort to Support the USPTO's Nationwide Workforce Program

Roadmap to a Second Patent Office

Highlights of Colorado's 2 1/2 Year Effort to Push the USPTO's Nationwide Workforce Program

1. In July 2009, leaders of the IP Section meet with Beth Novak (former United States Deputy Chief Technology Officer), Cam Kerry (General Counsel – Commerce Department) and Quentin Palfrey (Assistant General Counsel – Commerce Department) in Washington DC to discuss the concept of satellite patent offices. Per Ms. Novak's Request, IP Section drafts and delivers the "Road Map" to Ms. Novak, Mr. Kerry and Mr. Palfrey in August 2009 (Attachment A).

2. In July 2009, IP Section leaders meet with POPA leaders Robert Budens and Randy Meyers in Washington DC to introduce and discuss the concept of a satellite patent office.

3. In September 2009, IP Section leaders meet with Director Kappos at USPTO to discuss the concept of a satellite patent office and justification for locating an office in Colorado.

4. In October 2009, the Governor of Colorado and the Mayor of Denver provide letters of support to Director Kappos (Attachment B).

5. In December 2009, IP Section leaders meet with PTO COO Steve Smith and CIO John Owen at USPTO. Michael Locatis, CIO for the State of Colorado, also participates in the meeting at which the participants discuss the USPTO's logistical and technical challenges for a remote office and Colorado's offer of support and assistance.

6. In March 2010, the entire Colorado Congressional delegation provides a letter of support to Director Kappos (Attachment C).

7. In April 2010, IP Section leaders meet with Deputy Director Sharon Barner, Toni Hickey, and others at USPTO to discuss the satellite patent office concept.

8. In June 2010, IP Section holds reception at Colorado Governor's Residence to honor Ms. Barner and Ms. Hickey. The reception is attended by over 40 federal, state, and local political, academic and community leaders. Ms. Barner and Ms. Hickey also meet with representatives of the City of Denver and the State of Colorado to discuss Denver's and Colorado's support of a satellite office. During this same trip, Ms. Barner presents to over 250 members of the IP Section of the Colorado Bar Association.

9. In August 2010, the City of Denver provides a letter to Ms. Hickey providing information requested by Ms. Barner and Ms. Hickey (Attachment D).

10. In October 2010, the IP Section hosts Patent Commissioner Robert Stoll for a presentation before over 100 members of IP Section of the Colorado Bar Association.

11. In October 2010, the respective Presidents/Chancellors of four major academic institutions with engineering programs in Colorado, Colorado School of Mines, Colorado State University, University of Denver and University of Colorado provide letters of support to Director Kappos (Attachment E).

12. In November 2010, the entire Colorado Congressional delegation provides a letter of support to Commerce Secretary Gary Locke (Attachment F).

13. In January 2011, Colorado Senators Udall and Bennet send a letter to President Obama requesting funding for satellite patent offices be included in the fiscal budget (Attachment G).

14. In February 2011, Colorado Senators Michael Bennet and Mark Udall work to introduce and pass language requiring establishment of satellite patent offices to the Senate version of the America Invents Act. This Amendment eventually becomes Section 23 of the AIA.

15. In May 2011, Colorado Representatives Diana DeGette and Mike Coffman work to ensure that the Satellite Patent Office Amendment language remains in the version of the AIA introduced in the House Judiciary Committee.

ATTACHMENT A

Roadmap to a Second Patent Office

Executive Summary

The U.S. Patent and Trademark Office ("PTO") is in crisis. In the past ten years, the number of pending applications has increased five-fold, and the time from filing to first action has more than doubled. Meanwhile, practitioners lament that examination quality has substantially decreased. We strongly believe the only long term fix to these issues is to develop a second Patent Office ("SPO") to facilitate the recruitment and retention of the highly skilled work force needed for the Examining Corps.

Although it has been over 150 years since there was a second patent office in the U.S.[1], pulling from a wider applicant pool is necessary to hire and retain the skilled examiners needed for the complex array of emerging technologies of the 21st century. Europe uses four distributed patent offices as a recruitment tool[2] and is known for the ability to attract and retain highly qualified examiners. In 1991, the UK Patent Office relocated from London to South Wales and experienced a ten-fold reduction in attrition.[3] Both examples validate the premise that a SPO will significantly improve the Examining Corps.

There is no law limiting the PTO to one office, or requiring that it be in or near Washington DC. In fact, businesses of similar size have, on average, thirty geographically distributed offices.[4] Currently, 6,200 examiners and 13,000 total employees work in Alexandria in office space for designed for 4,500 examiners. While the PTO's hoteling program has tried to address the immediate space issue, it does not solve the recruitment and retention issues.[5]

The solution is a SPO centrally located in the U.S. in a city with a reasonable cost of living, a strong high-tech work force and a high-perceived quality of life. The following provides a roadmap on what needs to be done.

1. Obtain Buy-In from PTO Leadership

An SPO starts with the leadership of the PTO, the Commerce Department, and the Administration. In order to be successful, PTO reform must include growing the Examining Corps outside the beltway to best provide a stable platform for excellence in examination. Kevin Rivette, chairperson of the PTO's advisory committee, observed the PTO needs to attract "the

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[1]In the 19th century, there were two patent offices in America. One was in Washington, DC and a second patent office was run for the Confederate States of America in Richmond, Virginia. The Confederate Patent Office was destroyed during the evacuation of Richmond in 1865.

[2]At its web site, the EPO recruits examiners to its "attractive locations" in Munich, The Hague, Vienna and Berlin (http://www.epo.org/about-us/jobs/why/locations.html).

[3] The UK Patent Office immediately saved very large sums in rent, and its turnover was reduced to about one tenth of the original figure. Virtually all the staff who moved to south Wales have stayed there; indeed, many of those who are now retired have stayed in the area. It has been a huge success story.
(http://www.publications.parliament.uk/pa/cm200304/cmhansrd/vo040607/debtext/40607-12.htm (linking to pg. 2).

[4]Holmes, T. J. (2005). The location of sales offices and the attraction of cities. Journal of Political Economy, Vol. 113, pp. 551-581. Retrieved on June 23, 2009 from http://www.econ.umn.edu/~holmes/papers/sales_offices.pdf, citing to 1997 Economic Census (U.S. Bureau of the Census (2001)).

[5]According to POPA leadership, approximately 1,700 examiners currently participate in the hoteling program and all but 50-60 reside within fifty miles of Alexandria.

highest educated workforce in government, but trying to hire 1,200 masters and PhDs a year in DC doesn't make sense to anyone in the committee."[6]

We believe that a SPO should be critical part of any larger innovation agenda in the Administration.

2. Obtain Support from POPA

The Patent Office Professional Association ("POPA") is an excellent proxy for engaging the Examining Corps. In July, we met with POPA president Robert Budens and POPA Secretary Randy Meyers on the possibility of a SPO. While concerned about logistical difficulties, POPA leadership was very receptive to ideas that would enhance hoteling and/or provide a permanent presence that includes substantial video conferencing, remote training and space to conduct inventor interviews. Mr. Budens noted that "everyone is looking for a way to do a national patent office workforce."

Since our meeting last month, we have provided updates to POPA leadership on our interactions with various stakeholders, and will continue to consult with Mr. Burdens and Mr. Meyers to ensure POPA is an integral part of shaping an SPO.

3. Obtain Consensus from Practitioners, Applicants & Inventors - Key Stakeholders

Other stakeholders in the patent community should be solicited to provide support for a SPO, including the American Intellectual Property Lawyers Association ("AIPLA") and the Intellectual Property Owners Association ("IPO") - major constituencies representing thousands of corporations and individuals whose fees fully fund all operations of the PTO.

The AIPLA is the largest single representation of customers of the PO. We have conferred with Q. Todd Dickenson, the AIPLA's Executive Director, on several occasions about a SPO, and he supports the SPO concept. We will continue to confer with patent community stakeholders to obtain their input and support.

4. Define the Broad Parameters of a SPO

We strongly believe that a SPO should be a "bricks & mortar" site that could also provide a duty-station option for examiners desiring to "hotel." Additionally, we suggest that the PTO should: (i) grow the SPO organically, *i.e.*, as a result of the PTO's normal hiring and attrition patterns; (ii) avoid requiring examiners to move to the SPO, which would alleviate a concern expressed by POPA; (iii) invite supervisory patent examiners and more seasoned examiners to move to the SPO, which we believe will result in significant migration because of cost of living and quality of life advantages; and (iv) develop a strong remote training facility at the SPO.

5. Develop Site Selection Criteria

The PTO currently occupies six buildings in Alexandria in a campus environment. We believe that the SPO site should be an existing location that provides a campus environment and is

[6] EE Times, Feb. 9, 2009, (http://www.eetimes.com/showArticle.jhtml?articleID=212902081).

sufficiently compact and interconnected to promote efficient operations. The proposed site should also be scalable to add office space to accommodate future growth. Additionally, the site should include: (i) security and work environment similar to the Alexandria site, a suggestion of POPA; (ii) uninterrupted broadband data excess to PTO's data storage location and the Alexandria location; and (iii) capacity to video link to the Alexandria site to facilitate remote training and supervision of examiners, another suggestion of POPA.

6. Develop Cost Estimate for a SPO

A definitive lease cost estimate for a SPO will not be available until the parameters of a SPO are defined and the site selection criteria developed. However, a rough estimate is possible with certain assumptions. For example, the SPO could be located in an existing building that is redeveloped to meet the PTO's site selection criteria. If organic growth is employed, the initial phase of the project could initially develop 50,000 sq. ft. of office space to accommodate 300 examiners and support staff at a yearly lease cost of approximately $1.2 million maximum.[7] Additional start up costs will be incurred to staff and furnish the SPO, but should not exceed the incremental cost to add staff if they were in Alexandria.

We are actively working with Colorado Governor Bill Ritter's Office and the Denver Metro Chamber of Commerce to identify possible sites in the Denver metro area and expect to have specific proposals ready in September.

7. Develop a Plan to Navigate Congressional Oversight

Establishing a SPO would involve PTO oversight (Senate Judiciary Committee) and appropriations oversight (committees in the House and the Senate), and may involve office space acquisition oversight. As to the latter, the PTO will need to consider The Public Buildings Act of 1959 (as amended), which would require the PTO, if the value of the lease is more than $2.66 million,[8] to work with the GSA to submit a prospectus to the Office of Management and Budget, the Senate Committee on Environment and Public Works, and the House Committee on Transportation and Infrastructure.

Denver is the Right Choice for a SPO

We would be remiss not to promote the Denver area as an ideal location for a SPO because it provides a moderate cost of living, has a significant number of technology workers, is perceived as a very desirable location to live, and is centrally located within the U.S.

[7]Presumes $25/sq.ft. Prevailing rates for class B office space in Denver is approximately $20-25/sq.ft. compared to $15-$19/sq.ft. for the suburban markets. Steven J. Billigmeier, Cushman & Wakefield, Inc.

[8]Threshold for FY2009. Congressional Research Service, Report RS22287, General Services Administration Prospectus Thresholds for Owned and Leased Federal Facilities.

ATTACHMENT B

STATE OF COLORADO

OFFICE OF THE GOVERNOR
136 State Capitol Building
Denver, Colorado 80203
(303) 866 - 2471
(303) 866 - 2003 fax

Bill Ritter, Jr.
Governor

David Kappos
Under Secretary of Intellectual Property and
Director of the U.S. Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

The State of Colorado wishes to extend its warmest congratulations on your appointment and Senate confirmation to serve as Under Secretary of Intellectual Property and Director of the US Patent and Trademark Office (USPTO). In your short time in office, I have heard that you already made significant progress addressing the issues facing the USPTO. An efficient and productive Patent Office is critical to Colorado companies. The State of Colorado stands ready to support your efforts in anyway it can, including your initiative to develop a work force for the USPTO outside the Beltway.

I'm writing to you to formally express the State of Colorado's support for a second Patent Office in Denver, Colorado. I understand that you will be meeting with representatives from Senator Michael Bennet's office, and will also receive a similar letter of support from Denver Mayor John Hickenlooper. The State of Colorado, in close coordination with Colorado's Congressional Delegation and the City of Denver, is ready to fiscally support a second Patent Office in Denver beginning in 2010.

There are many objective reasons for choosing Colorado. First, opening an office in Colorado will permit USPTO to recruit and hire from some of the best candidates the US has to offer. Colorado is home to a great number of technology workers who would serve as great patent examiners in an office located in Colorado. The technology workforce in Colorado is consistently ranked in the top-10 in the US in many important categories. According to a report by Pew Research, Colorado is ranked: 3rd for percent of workers with a Bachelor's Degree or more; 5th for number of workers with Science and Engineering Degrees per capita; 5th for number of Scientists and Engineers as a percent of the labor force; and 2nd for number of patents per 1,000 workers. Additionally, other federal government agencies have found Colorado to be a great place to locate an office. Outside the Beltway, Denver has the highest number of federal employees per capita.

Because Colorado is a very desirable place to live, locating a second Patent Office in Colorado would allow the USPTO to dramatically improve its ability to recruit and retain its most valuable employees. Again, according to the report by Pew Research, Colorado is ranked 1st for percent of U.S. workers who say they want to live in Denver; and 6th for the percentage of

sunny days (Colorado annually has more than 300 days of sun). Colorado is also well known for its reasonable cost of living, especially in comparison to cities located on the East and West Coasts, and Chicago. According to the ACCRA Cost of Living Index, in the 2nd Quarter of 2009, Denver's index of 101.9 was comparable to the national average (100) and far lower than, for example, San Francisco (164.9), San Jose (158.5) and Washington, DC (138.4).

Finally, Colorado is centrally located in the US and easily accessible to the entire country. Colorado's location in the middle of the country provides convenient access for the technology centers of the West, Midwest, and Rocky Mountain regions. We are also very proud of our airport. Denver International Airport, which is the largest airport in the United States, is consistently voted one the best airports in the world, and is a major hub for United, Frontier and Southwest Airlines. Certainly, locating a second Patent Office in Denver would be an ideal choice to support the USPTO's examiner hoteling program to give them a second location to check into.

The State of Colorado is ready and prepared to enter into a long-standing partnership with the USPTO. For 2010 and beyond, the State of Colorado is ready to discuss with you our offer to work closely with the USPTO on site selection, and substantially subsidize, the costs associated with operating a second Patent Office in Colorado.

I look forward to meeting you at the appropriate time to further explore locating a second Patent Office in Colorado. In the meantime, please do not hesitate to contact the Executive Director of my Economic Development and International Trade Office, Don Marostica, at 303-892-3840, if you have any questions or if we help facilitate your decision in any way.

Sincerely,

Bill Ritter, Jr.
Governor

John W. Hickenlooper
MAYOR

City and County of Denver
OFFICE OF THE MAYOR
CITY AND COUNTY BUILDING
DENVER, COLORADO • 80202-5390
TELEPHONE: 720-865-9000 • FAX: 720-865-9040
TTY/TTD: 720-865-9010

October 7, 2009

Mr. David J. Kappos
Under Secretary of Intellectual Property and
Director of the U.S. Patent and Trademark Office
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

On behalf of the citizens of the City and County of Denver, I would like to extend my congratulations on your appointment and Senate confirmation to serve as Under Secretary of Intellectual Property and Director of the US Patent and Trademark Office ("USPTO").

Today, I'm writing to you to formally express my support for the establishment of a second Patent Office in Denver, Colorado. I understand that you will be meeting with representatives from Senator Michael Bennet's office. The City and County of Denver, in partnership with the State of Colorado, and in close coordination with Colorado's Congressional Delegation, stands ready to support establishment of a second Patent Office in Denver beginning in 2010. André Pettigrew, my Economic Development Executive Director, will work with your staff on my behalf to ensure this project moves forward.

Denver is an ideal location for a second Patent Office. Our community is one of the key centers for innovation and market applications in renewable energy, advanced materials, and many other future industries. Long a center of new ideas in computers and advanced technologies, Denver and Colorado are also the gateway to the Rocky Mountain region, the southwest, and part of the west coast economies. Denver International Airport is a primary linkage to these markets of innovation, with exceptional access and growth opportunities.

Beyond being a logical operational location, Denver is a great place current and future Patent Office staff to live and work. As Mayor, my focus has been on sustaining the vibrancy of Denver's business environment and community life. Denver remains a city where the quality of place – here at the foothills of the beautiful Rocky Mountains – is matched by the quality of life. In a recent poll by Pew Research Center, Denver was ranked first among the most desirable places to live. The reasons are numerous, including the facts that Denver annually has over 300 days of sun, and is an ideal gateway to the beautiful Rocky Mountains.

Denver is a very forward-looking city, reinvesting in our community and region in a continuous manner. This reinvestment is currently demonstrated by the $500+ million dollar Better Denver Bond project, a comprehensive effort to invest in the enhancement of many city facilities that touch our lives such as the Denver Art Museum expansion, expansion of the Denver Convention Center and Denver International Airport, as well as the construction of new city facilities, including three major sports venues, and a $7.9 billion dollar region-wide mass transit expansion. These reinvestments are just one approach we take to ensure that Denver, and Colorado, remain a favorable location with reasonably cost for businesses and residents.

In partnership with the State of Colorado, the City of Denver is ready and prepared to enter into a long standing partnership with the USPTO. For 2010 and beyond, the City of Denver is ready to work closely with you and your staff on site selection and associated considerations involved with operating a second Patent Office in Colorado.

I look forward to meeting you at the appropriate time to further explore locating a second Patent Office in Denver.

Sincerely,

John W. Hickenlooper
Mayor

ATTACHMENT C

Congress of the United States
Washington, DC 20515

March 16, 2010

The Honorable David Kappos
Under Secretary of Intellectual Property and
Director of the U.S. Patent and Trademark Office
Madison Building
600 Dulany Street
Alexandria, VA 22314

Dear Director Kappos:

With innovation and new jobs at risk, action is needed to address the crisis in the U.S. Patent and Trademark Office ("PTO"). We, the members of the Congressional Delegation for the State of Colorado, stand ready to support your ongoing efforts to reform the PTO.

We all believe that an efficient and productive Patent Office is critical to encouraging innovation across the US, including Colorado, and the jobs that will be created as a result. We have watched closely your efforts to reform the PTO and have been working closely with leaders of the IP Section of the Colorado Bar Association to understand ways we can support your efforts. We understand that in late January, you stated that if given the funds to hire new examiners, the USPTO would expand the work force nationwide, and that you hoped to have a satellite office "far away from D.C." as a pilot program soon.

We are writing to you to formally express our unanimous support for a satellite office in Colorado. There are many objective reasons for choosing Colorado. First, opening an office in Colorado will permit PTO to recruit and hire from a pool of the best candidates the US has to offer. Colorado is home to a great number of technology workers that would be excellent long-term patent examiners for an office located in Colorado. The technology workforce in Colorado is consistently ranked in the top-10 in the U.S. in many important categories. According to a report by Pew Research, Colorado is ranked: (i) 3rd for percent with of workers with a Bachelor's Degree or more; (ii) 5th for number of workers with Science and Engineering Degrees per capita; (iii) 5th for number of Scientists and Engineers as a percent of the labor force; and (iv) 2nd for number of Patents per 1,000 workers. Additionally, other federal agencies have found Colorado to be a great place to locate an office. Outside of the Washington Metro Area, Denver has the highest number of federal employees per capita.

Because Colorado is a very desirable place to live, locating a satellite office in Colorado would allow the PTO to dramatically improve its ability to recruit and retain its most valuable employees. Again, according to the report by Pew Research, Colorado is ranked 1st for percent of U.S. workers who say they want to live in Denver; and 6th for the percentage of sunny days (Colorado annually has over 300 days of sun). Colorado is also well known for its reasonable cost of living, especially in comparison to cities located on the East and West Coasts, and Chicago. According to the ACCRA Cost of Living Index, in the 2nd Quarter of 2009, Denver's

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index of 101.9 was comparable to the national average (100) and far lower than, for example, San Francisco (164.9), San Jose (158.5) and Washington, DC (138.4).

Finally, Colorado is centrally located in the U.S. and easily accessible to the entire country. Colorado's location in the middle of the country provides convenient access for the technology centers of the West, Midwest, and Rocky Mountain regions. We are also very proud of our airport. The Denver International Airport, which is the largest airport in the United States, is consistently voted one the best airports in the world, and is a major hub for United, Frontier and Southwest Airlines. Certainly, locating a satellite office in Colorado would be an ideal choice to support the USPTO's examiner hoteling program to give them a second location to check into for training, inventor interviews and supervision. Due to Colorado's ideal location and lower cost of living than other locations such as California, hosting the hotel program would save the PTO additional monies which could be used for other essential services.

In summary, we strongly believe that a satellite office located in Colorado would meet the PTO's objectives of "improve recruiting," "enhance employee retention," "potentially reduce real estate costs," and accomplish "stakeholder outreach," as stated by PTO Chief Administrative Officer Steve Smith last fall. We look forward to meeting you and your team at the appropriate time to explore locating a satellite office in Colorado and discussing other ways to support reform in the PTO.

Sincerely,

Senator Michael F. Bennet

Senator Mark Udall

Representative Diana DeGette

Representative John Salazar

Representative Ed Perlmutter

Representative Doug Lamborn

Representative Jared Polis

Representative Betsy Markey

Representative Mike Coffman

ATTACHMENT D

DENVER
THE MILE HIGH CITY

GROWDENVER
The Office of Economic Development

Business and Housing Services
201 W. Colfax Ave., Dept. 204
Denver, CO 80202
P: 720.913.1999
F: 720-913-1610
www.milehigh.com

September 2, 2010

Ms. Toni Hickey
Deputy Chief of Staff
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sent via E-Mail

Dear Ms. Hickey:

On behalf of the City and County of Denver, the Office of Economic Development (OED) is excited to work with you and the U.S. Patent and Trademark Office as you consider a potential satellite location in our community.

Denver and the metro area is a widely recognized location where "future" technology and innovation are a reality today, with a continuous commitment to research and education. Colorado's Front Range is home to over 20 federal laboratories, six research and teaching universities and a number of community colleges that focus on advanced research, technical skill development and training, and moving ideas through technology translation from the labs and classroom to the market. A number of private sector firms have located research and innovative manufacturing facilities focused on future industries. Equally important, Denver was recently noted in a Pew national survey as the top city where Americans would most like to live.

Our community offers many aspects that attract private and public ventures to the Metro Denver area. Denver is a very forward-looking community that continuously reinvests in its community and region. Current examples of this reinvestment include the $500+ million dollar Better Denver Bond project, a continued investment of over $400 million in the Denver Public School system infrastructure, a $7.9 billion dollar regional mass transit expansion, and a number of expanded and improved public facilities – the Denver Convention Center, the Denver Art Museum, Denver International Airport, and all three major sports venues.

The following is a summary of information that you requested:

Available space in buildings already under lease by a Federal agency
In Colorado, GSA owns 89 federal buildings totaling 6.79 million rental square feet (RSF) and it leases approximately 4.08 million RSF in 157 buildings for a total of 10.877 million RSF of workspace, the majority of which is office and warehouse space. Attachment A lists significant GSA-owned and managed buildings in Denver. Information on currently available space has been requested from GSA's point of contact for Denver facilities, Ms. Kristin Grit: (303) 236-8000 ext 2294.

Number of patents filed by the Colorado based universities and research labs
Colorado ranks #10 for per capita patents issued by states. In addition, more than 20 federally

funded research labs in Colorado develop intellectual property ultimately patented and licensed (but not necessarily with Colorado being named the originating state). Attachment B shows per capita patents issued by Western States and a list of major federal labs and research centers.

Air fares out of Denver International Airport (DIA)
The Bureau of Transportation Statistics ranked Denver International Airport 8th among the 25 largest U.S. airports for the average of domestic itinerary fares for the first quarter of 2010. With an average of $290.52, air fairs are 13% lower than the overall average domestic air fares and between 16-20% lower than those of Los Angeles and San Francisco, CA. At DIA, 17 commercial carriers provide nonstop service to more than 160 domestic and international destinations. (Attachment C)

Info on the universities providing a steady supply of potential new examiners
Colorado's workforce is one of the nation's most educated. Higher educational resources encompass a variety of undergraduate, graduate and professional programs at 12 public and private four-year colleges and universities, including world-class research institutions like the University of Colorado, Colorado School of Mines, Colorado State University, and the University of Denver. In 2009, 2112 individuals received a degree in an engineering science program from a Colorado university. (Attachment D)

Info on the night program at DU Law School
The University of Denver, Sturm College of Law, offers an evening program requiring four years of part-time study leading to the degree of Juris Doctor (J.D.). Approximately 320 students enter the J.D. program each year and of this total, about 90 students enter the evening division. Classes are held Monday – Friday from 5:30 p.m. to 10:00 p.m. and sometimes on Saturday. First year evening division classes meet two or three times a week and range from 50 minutes to 100 minutes long. Tuition for two semesters, based on 22 credit hours, amounts to $26,752. (Attachment E)

Unemployment numbers on individuals that may be examiner candidates
In May 2010, unemployment statistics for the MetroDenver area show an unemployment rate of 3.7 percent or 3,131individuals in Life, physical, and social science, computer and mathematical science occupations. (See attachment F)

Number of patent attorneys in Colorado and ratio of patent attorneys to patent applications filed
The USPTO's website indicates that 688 lawyers/patent agents licensed to practice in front of the US Patent Office are located in Colorado. It is difficult to obtain an accurate number of patent applications filed in 2009 or the number of patent issued in 2009 involving the Colorado based lawyers/patent agents. With this caveat, our search of the US Patent Office records indicates the following information: (i) 973 patents issued in 2009 to assignees located in Colorado; (ii) 2,462 patents issued in 2009 for at least one inventor located in Colorado; (iii) 1,051 applications were filed in 2007 identifying an assignee from Colorado; and (iv) 3,763 applications were filed in 2007 identifying at least one inventor from Colorado.

We welcome the opportunity to answers any questions you may have. Please feel free to contact me by email or by phone (720-913-1526) at your convenience.

Respectfully,

Jeff Romine
Director, Business and Housing Services
Office of Economic Development

Attachment A - Colorado Federal Buildings

In Colorado, GSA owns 89 federal buildings totaling 6.79 million rental square feet (RSF) and it leases approximately 4.08 million RSF in 157 buildings for a total of 10.877 million RSF of workspace, the majority of which is office and warehouse space. The primary tenants include:

- U.S. Geological Survey
- Bureau of Reclamation
- National Oceanic and Atmospheric Administration
- Environmental Protection Agency
- Bureau of Land Management

POC at GSA for agencies interested in leasing space from GSA in Denver:
Kristin Grit: (303) 236-8000 ext 2294

Significant GSA-owned and managed buildings in Denver:

Alfred A. Arraj United States Courthouse
901 19th Street
Denver, CO 80294-2500

Byron Rogers Federal Building
1961 Stout Street
Denver, CO 80294-1961

Byron White United States Courthouse
1823 Stout Street
Denver, CO 80202-2505

Cesar E Chavez Memorial Building
1244 Speer Boulevard
Denver, CO 80204-3518

EPA Regional Headquarters Building
1595 Wynkoop Street
Denver, CO 80202

Federal Garage Building
2106 California Street
Denver, CO 80205-2822

Federal Garage Building
2101 Welton Street
Denver, CO 80205-2808

U.S. Custom House
721 19th Street
Denver, CO 80202-2500

Attachment B - Patent Activity

Colorado ranks #10 for per capita patents issued by states. In addition, more than a dozen federally funded research labs in Colorado develop intellectual property ultimately patented and licensed but not necessarily Colorado named originating state.

State	Per Capita Patents issued in 2009	2009 rank
Arizona	266.7	19
Colorado	**391.7**	**10**
Kansas	180.6	27
Nebraska	125.8	36
New Mexico	163.7	29
Utah	307.0	16
Wyoming	117.6	39

Source: U.S. patent and Trademark Office, Electronic Information Products Division

Major federal labs and research centers

- National Oceanic and Atmospheric Administration (NOAA) - the federal government's top agency for monitoring our climate, the space environment, and ocean resources (Boulder)
- National Renewable Energy Laboratory (NREL) - the nation's primary laboratory for renewable energy and energy efficiency R&D (Golden)
- National Institute of Standards and Technology (NIST) - promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology (Boulder)
- University Corporation for Atmospheric Research (UCAR) - dedicated to exploring and studying our atmosphere and its interaction with the sun, oceans, biosphere, and society (Boulder)
- National Center of Atmospheric Research (NCAR) - managed by UCAR, is a National Science Foundation R&D Center (Boulder)
- Cooperative Institute for Research in the Atmosphere (CIRA) - directs research in the atmospheric sciences into practical applications in weather and climate (Fort Collins)
- Cooperative Institute for Research in Environmental Sciences (CIRES) - dedicated to research targeted at all aspects of Earth System Science and communicating its findings to the global scientific community (Boulder)
- U.S. Geological Survey (USGS) - multi-disciplinary science organization that focuses on biology, geography, geology, geospatial information, and water (Denver)

Attachment C - Information on the low cost airfares to other U.S. markets

The table is in a separate attachment.

Attachment D - Info on the universities providing a steady supply of potential new examiners

Degree recipients – Statewide Public Higher Education- Full year 2009

Degree Discipline	Student Count
Aerospace Engineering	95
Chemical & Biochemical Engineering	174
Civil Engineering	318
Engineering/ Mechanical Engineering	735
Engineering Physics	72
Engineering and Technology Management	60
Engineering Systems/ Architectural	62
Engineering / Environmental Science	54
Geological/Geophysical Engineering	54
Materials Engineering	49
Mining / Petroleum Engineering	145
Electrical & Computer Engineering	294

Source: Colorado department of Higher Education

Highlights:

- The **Colorado School of Mines (CSM)** in Golden, one the few universities in the world to offer education from baccalaureate through doctorate levels in all key fields related to energy, is regarded internationally for its research institutes.
- **Colorado State University** is at the forefront of research and technology transfer in agricultural sciences, biomedical sciences, engineering, the environment, information technology, nutrition, and human health.
- **University of Colorado** has a myriad of institutes, centers, and laboratories in space sciences, bioscience, physical sciences/engineering, and natural sciences. Researchers at the University of Colorado Denver, Colorado's largest research and professional education university, are conducting ground-breaking research at its Anschutz Medical Campus.

Attachment E - Evening JD program at DU Law School

The University of Denver Sturm College of Law offers a evening program, requiring four years of part-time study leading to the degree of Juris Doctor (J.D.).

History

The University of Denver Sturm College of Law was established in 1892 and separate day and evening divisions were organized in 1895. The evening division was designed for students engaged in outside employment, family, and other obligations necessitating part-time study. The part-time evening division is also designed for those wanting to ease into law school while taking a lessened credit load.

Units

Approximately 320 students enter the J.D. program each year and of this total about 240 students enter the full-time day division. The day division is divided into three units with approximately 80 students each. The evening division is its own unit with 80-90 students. Each unit has the same class schedule and attends classes together for the first year.

Units are divided into even smaller sections for the Lawyering Process Class, which gives first-year students early, hands-on exposure to the crucial skills of research, writing, negotiation, and persuasion. The same professors who teach the full-time day division classes also teach the evening classes.

Class Times

Classes in the evening division are held Monday – Friday from 5:30 p.m. to 10:00 p.m. and sometimes on Saturday. First year evening division classes meet two or three times a week and range from 50 minutes to 100 minutes long.

Required Core Courses - Evening Division

First Year Fall	First Year Spring	Second Year Fall	Second Year Spring or Later
Civil Procedure Lawyering Process	Lawyering Process	Perspective Elective Constitutional Law	
One of the following 4 credit courses: Contracts, Criminal Law, Property, Torts	*Two* of the following 4 credit courses: Contracts, Criminal Law, Property, Torts	*One* of the following 4 credit courses: Contracts, Criminal Law, Property, Torts	Evidence, Administrative Law, Prof. Responsibility

Cost of Attendance*	Evening – Two semesters, based on 22 credit hours of tuition
Tuition ($1,216 per credit hour)	$26,752

*These are 9-month figures based on the 2010/2011 academic year, as determined by the University of Denver's Financial Aid Director.

Attachment F - Unemployment numbers on individuals that may be examiner candidates

Region: Denver-Aurora-Boulder MSA

Description: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson counties

Unemployment Summary May 2010

SOC Code	Description	2010 Jobs	May Unempl.	% Total Jobs	State %	National %
19-0000	Life, physical, and social science occupations	18,591	1,021	5.5%	5.8%	5.1%
15-0000	Computer and mathematical science occupations	65,559	2,110	3.2%	3.4%	6.7%
	Total	84,149	3,131	3.7%	4.0%	6.2%

Source: ESMI

ATTACHMENT E

COLORADOSCHOOLOFMINES
EARTH • ENERGY • ENVIRONMENT

M. W. Scoggins, Ph.D.
President

October 21, 2010

The Honorable David Kappos
Director of the U.S. Patent and Trademark Office
Madison Building
600 Dulaney Street
Alexandria, Virginia 22314

Dear Director Kappos:

We would like to express our strong support for a satellite office for the United States Patent and Trademark Office (USPTO) in Colorado. As you know, intellectual property is becoming increasingly important as we prepare our students for the challenges of the knowledge-based economy. With leading-edge research being conducted at our universities on a daily basis, we certainly appreciate the important role of intellectual property in our society and are reliant on patent protection to provide incentive for commercialization.

Given Colorado's central location and continued recognition as a highly-desirable place to live, we have been able to not only recruit the best and brightest from around the country, but also have been able to ensure that the region retains the skills we've developed as many of our graduates remain to begin their working careers. Currently, our universities are generating some of the best trained engineers and scientists in the country, with the fifth highest concentration of workers with a science or engineering degree. A local USPTO satellite office would only amplify this positive environment and provide a catalyst to the science and techonology ecosystem in Colorado in ways that would serve both the needs of our students, prior graduates and the USPTO.

Clearly, the placement of a USPTO satellite office in Colorado would greatly benefit the Colorado universities through increased employment and partership opportunities. Similarly, we believe the Colorado higher education community would equally benefit the USPTO by ensuring the ability to recruit and retain a qualified workforce. We thank you for your consideration and look forward to welcoming a satellite USPTO office to Colorado soon.

Sincerely,

M. W. Scoggins

1500 Illinois Street Golden, CO 80401

MINES.EDU
T 303-273-3280
F 303-273-3285

COLORADO STATE UNIVERSITY SYSTEM
Colorado State University • Colorado State University-Pueblo • CSU Global Campus

JOSEPH B. BLAKE, Chancellor

October 14, 2010

The Honorable David Kappos
Director of the U.S. Patent and Trademark Office
Madison Building
600 Dulaney Street
Alexandria, Virginia 22314

Dear Director Kappos:

On behalf of Colorado State University System I would like to express our strong support for a satellite office for the United States Patent and Trademark Office (USPTO) in Colorado. As you know, intellectual property is becoming increasingly important as we prepare our students for the challenges of the knowledge-based economy. With leading-edge research being conducted at our universities on a daily basis, we certainly appreciate the important role of intellectual property in our society and are reliant on patent protection to provide incentive for commercialization.

Given Colorado's central location and continued recognition as a highly-desirable place to live, we have been able to not only recruit the best and brightest from around the country, but also have been able to ensure that the region retains the skills we've developed as many of our graduates remain to begin their working careers. Currently, our universities are generating some of the best trained engineers and scientists in the country, with the fifth highest concentration of workers with a science or engineering degree. A local USPTO satellite office would only amplify this positive environment and provide a catalyst to the science and techonology ecosystem in Colorado in ways that would serve both the needs of our students, prior graduates and the USPTO.

Clearly, the placement of a USPTO satellite office in Colorado would greatly benefit Colorado universities through increased employment and partership opportunities. Similarly, we believe the Colorado higher education community would equally benefit the USPTO by ensuring the ability to recruit and retain a qualified workforce. We thank you for your consideration and look forward to welcoming a satellite USPTO office to Colorado soon.

Best regards,

Joseph B. Blake
Chancellor Colorado State University System

410 Seventeenth Street, Suite 2440 • Denver, Colorado 80202
Phone: (303) 376-2625 • E-mail: joe.blake@colostate.edu

UNIVERSITY OF
DENVER

Chancellor

October 21, 2010

The Honorable David Kappos
Director of the U.S. Patent and Trademark Office
Madison Building
600 Dulaney Street
Alexandria, Virginia 22314

Dear Director Kappos:

I would like to express my strong support for a satellite office for the United States Patent and Trademark Office (USPTO) in Colorado. As you know, intellectual property is becoming increasingly important as we prepare our students for the challenges of the knowledge-based economy. With leading-edge research being conducted at our university on a daily basis, I certainly appreciate the important role of intellectual property in our society and am reliant on patent protection to provide incentive for commercialization.

Given Colorado's central location and continued recognition as a highly-desirable place to live, we have been able to not only recruit the best and brightest from around the country, but also have been able to ensure that the region retains the skills we've developed as many of our graduates remain to begin their working careers. Currently, the universities in Colorado are generating some of the best trained engineers and scientists in the country, with the fifth highest concentration of workers with a science or engineering degree. A local USPTO satellite office would only amplify this positive environment and provide a catalyst to the science and techonology ecosystem in Colorado in ways that would serve both the needs of our students, prior graduates and the USPTO.

Clearly, the placement of a USPTO satellite office in Colorado would greatly benefit the Colorado universities through increased employment and partership opportunities. Similarly, I believe the Colorado higher education community would equally benefit the USPTO by ensuring the ability to recruit and retain a qualified workforce. I thank you for your consideration and look forward to welcoming a satellite USPTO office to Colorado soon.

Sincerely,

Robert D. Coombe

Mary Reed Building | 2199 S. University Blvd. | Denver, CO 80208 | 303.871.2111 | Fax 303.871.4101 | www.du.edu

University of Colorado
Boulder • Colorado Springs • Denver • Anschutz Medical Campus

Bruce D. Benson
President

1800 Grant Street, Suite 800
35 UCA
Denver, Colorado 80203-1187
Phone (303) 860-5600 Fax (303) 860-5660

October 21, 2010

The Honorable David Kappos
Director of the U.S. Patent and Trademark Office
Madison Building
600 Dulaney Street
Alexandria, Virginia 22314

Dear Director Kappos:

I would like to express our strong support for a satellite office for the United States Patent and Trademark Office (USPTO) in Colorado. As you know, intellectual property is becoming increasingly important as we prepare our students for the challenges of the knowledge-based economy. With leading-edge research being conducted at the Unviersity of Colorado on a daily basis, we certainly appreciate the important role of intellectual property in our society and are reliant on patent protection to provide an incentive for commercialization.

Our Technology Transfer Office operates on all three campuses of CU. In the past seven years, we have reeived 1,503 invention disclosures from our faculty, filed 1029 US patent applications; been awarded 180 US patents; executed 250 exclusive licenses and options; secured $128M in licensing revenue and related fees, and spent $24.5M on operations. Over the last seven years, we have licensed our intellecutal property to 69 start-up companies, 57 of which are still active with 52 having operations in Colorado. In 1994, the University of Colorado created and continues to manage a technology maturation (Proof of Concept) program which to date has involved 141 projects and nearly $11.1M of cumulative spending, placing the program among the most extensive in the U.S.

Colorado universities are generating some of the best trained engineers and scientists in the country, with the fifth highest concentration of workers with a science or engineering degree. Here at CU, we receive more funding from NASA then any other public University in the country. A local USPTO satellite office would provide a catalyst to the science and techonology ecosystem in Colorado in ways that would serve both the needs of our scientests, students, graduates and the USPTO.

The placement of a USPTO satellite office in Colorado would greatly benefit the Colorado universities through increased employment and partership opportunities. Similarly, we believe the Colorado higher education community would equally benefit the USPTO by ensuring the ability to recruit and retain a qualified workforce. We thank you for your consideration and look forward to welcoming a satellite USPTO office to Colorado soon.

Sincerely,

Bruce D. Benson
President

ATTACHMENT F

Congress of the United States
Washington, DC 20515

November 23, 2010

The Honorable Gary Locke
Secretary
Department of Commerce
1401 Constitution Ave., NW
Washington, D.C. 20230

Dear Secretary Locke:

With innovation and new jobs at risk, action is needed to address the crisis in the U.S. Patent and Trademark Office (PTO). We all believe that an efficient and productive PTO is critical to encouraging innovation across the U.S., including Colorado, and believe that such an effort will create good jobs. As members of the Congressional Delegation for the State of Colorado, we have watched with admiration PTO Director David Kappos' efforts to reform PTO by establishing satellite offices across the country. In March 2010, we formally expressed our support to Director Kappos in a letter signed by each of us.

We are writing to you to formally express our unanimous support for a satellite office in Colorado. Colorado has the strongest case for a second PTO office. First, opening an office in Colorado will permit the PTO to recruit and hire from a pool of the best candidates the U.S. has to offer. Colorado is home to a great number of technology workers that would be excellent long-term patent examiners for an office located in Colorado. The technology workforce in Colorado is consistently ranked in the top-10 in the U.S. in many important categories. According to a report by Pew Research, Colorado is ranked: (i) 3rd for percentage of workers with a Bachelor's Degree or more; (ii) 5th for number of workers with Science and Engineering Degrees per capita; (iii) 5th for number of Scientists and Engineers as a percent of the labor force; and (iv) 2nd for number of patents per 1,000 workers. Additionally, other federal agencies have found Colorado to be a great place to locate an office.

Because Colorado is a very desirable place to live, locating a satellite office in Colorado would allow PTO to dramatically improve its ability to recruit and retain the most skilled employees. Again according to the report by Pew Research, Colorado is ranked 1st for percent of U.S. workers who say they want to live in Denver; and 6th for the percentage of sunny days (Colorado annually has over 300 days of sun). Colorado is also well known for its reasonable cost of living, especially in comparison to cities located on the East and West Coasts, and Chicago. According to the ACCRA Cost of Living Index, in the 2nd Quarter of 2009, Denver's index of 101.9 was comparable to the national average (100) and far lower than, for example, San Francisco (164.9), San Jose (158.5) and Washington, DC (138.4).

Finally, Colorado is centrally located in the U.S. and easily accessible to the entire

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country. Colorado's location in the middle of the country provides convenient access for the technology centers of the West, Midwest, and Rocky Mountain regions. Our airport is unparalleled. The Denver International Airport, which is the largest airport in the United States, is consistently voted one of the best airports in the world, and is a major hub for United, Frontier and Southwest Airlines. Locating a satellite office in Colorado would be an ideal choice to support the USPTO's examiner hoteling program, providing a second location to check into for training, inventor interviews and supervision. Due to Colorado's ideal location and lower cost of living than other locations such as California, hosting the hotel program would save PTO additional monies which could be used for other essential services.

In summary, we strongly believe that a satellite office located in Colorado would meet PTO's objectives of improved recruiting, enhanced employee retention, reduced real estate costs, and accomplish stakeholder outreach.

Sincerely,

Senator Michael F. Bennet

Senator Mark Udall

Representative Diana DeGette

Representative John Salazar

Representative Ed Perlmutter

Representative Doug Lamborn

Representative Jared Polis

Representative Betsy Markey

Representative Mike Coffman

ATTACHMENT G

United States Senate

WASHINGTON, DC 20510

February 1, 2011

The Honorable Barack H. Obama
President of the United States
The White House
Washington, DC 20500

Dear Mr. President:

We are writing to request that the Administration consider adding funds to its budget to establish multiple satellite offices for the United States Patent and Trademark Office (PTO). On December 13, 2010, the PTO briefed the Colorado Congressional Delegation on its decision to select Detroit as the first satellite PTO office. We were informed that several cities, including Denver for which we had been advocating, were considered for satellite offices.

While we are disappointed that Denver was not chosen as the site for the initial satellite office, we applaud Director Kappos for his leadership in establishing this first satellite office. We strongly support the concept of multiple satellite offices and will closely monitor the success of the Detroit satellite. Moving forward, we believe a Western satellite site is the best way the PTO can promote economic growth.

The PTO plays a critical role in creating jobs and encouraging innovation across the country. Unfortunately, the persistent backlogs and staffing issues at the PTO have threatened the ability of small businesses and start-ups to innovate. A systemic change in the PTO's hiring and retention practices is necessary to improve the efficiency and productivity of our patent system. The establishment of regional satellite offices by the PTO will go a long way toward improving the recruitment efforts of this office by broadening the pool of qualified patent examiners.

Europe's use of four patent offices places our economy at a competitive disadvantage. We need to provide multiple offices to ensure the PTO is fully accessible and able to maintain a diversified workforce that is responsive to economic demands. It is essential, therefore, that we establish satellite offices in locations that will connect innovators and businesses across the country. Colorado is perfectly situated to ensure a qualified workforce for and promote the accessibility of the PTO.

Our hope is that, after the success of its pilot satellite in Detroit, the PTO will move quickly toward further expanding this effort. It is incumbent that the PTO has the resources to succeed in Detroit and that future budgets reflect the need to expand to multiple locations.

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We request that the Administration's budget promote the establishment of additional PTO satellite offices for next year.

Sincerely,

Mark Udall
United States Senator

Michael F. Bennet
United States Senator

Appendix 2 – Letters of Support

Public Sector

Higher Education Institutions

Business Sector

- State Industry Associations
- Economic Development Organizations
- Legal Community
- Local Chambers and Economic Development Organizations
- Other

Congress of the United States
Washington, DC 20515

January 27, 2012

The Honorable David Kappos
Under Secretary of Intellectual Property and
Director of the U.S. Patent and Trademark Office
Madison Building
600 Dulany Street
Alexandria, VA 22314

Dear Director Kappos:

We are writing in response to the Federal Register Notice for a Request for Comments on Additional USPTO Satellite Offices for the Nationwide Workforce Program (Docket No. PTO-C-2011-0066). We would like to once again formally express our unanimous support for a satellite office in Colorado.

As you are well aware, we support USPTO efforts to establish new satellite offices in strategically placed locations that can provide a meaningful boost to our economy. Regional offices can help connect inventors with patent examiners, and enhance the USPTO's ability to recruit and retain qualified examiners. This is why the Colorado Congressional delegation was instrumental in pushing a provision in the America Invents Act authorizing the creation of three satellite offices that builds upon the Office's work to establish an initial satellite office in Detroit.

Our state is a prime location for a new satellite office. Colorado's Front Range possesses a successful public-private entrepreneurship corridor all within a two-hour drive from the capital city of Denver. The corridor is highlighted by major research universities and federal laboratories that allow for collaboration with private companies unmatched anywhere else in the country.

Colorado's central location will enhance customer service at USPTO. The state's location in the Rocky Mountain West offers a number of strategic advantages. An office in Colorado would lower the cost of doing business with USPTO for firms and inventors. Denver International Airport offers over 600 daily non-stop flights, allowing for day trips for investors, executives, and applicants in the region to support the patent review process. Additionally, the Mountain Time Zone enables better communication with entities in the European Union, Asia, and across the United States.

As we have mentioned in previous correspondence, Colorado offers an affordable cost of living to help recruit and retain patent examiners. Colorado cities in the Denver-metro area are consistently listed in the "Best Places to Live" ranking by numerous outlets. This has helped our state attract professionals in high-tech and innovation-based industries who want to live in Colorado for the long term.

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Finally, a USPTO satellite office in Colorado would have a significant long-term economic impact on our state. It would keep more companies in Colorado when they are acquired by national and international firms. It would also help stabilize the real estate industry that has been hard hit by the economic recession. A satellite office would spur opportunities for a diverse, highly qualified and educated population to enter science, technology, engineering, and mathematics fields. And again, the state's central location would allow for convenient outreach to educate innovators across the West, Midwest, and Rocky Mountain regions.

We urge the USPTO to consider Colorado for a satellite office. We strongly believe that a Colorado satellite office would offer countless benefits to the USPTO, inventors, executives, and investors.

Sincerely,

Michael F. Bennet
United States Senator

Mark Udall
United States Senator

Diana DeGette
Member of Congress

Doug Lamborn
Member of Congress

Ed Perlmutter
Member of Congress

Mike Coffman
Member of Congress

Jared Polis
Member of Congress

Cory Gardner
Member of Congress

Scott Tipton
Member of Congress

STATE OF COLORADO

OFFICE OF THE GOVERNOR

136 State Capitol
Denver, Colorado 80203
Phone (303) 866-2471
Fax (303) 866-2003

John W. Hickenlooper
Governor

Wednesday, January 18, 2012

Mr. David J. Kappos
Under Secretary of Intellectual Property and
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos,

If you take one thing away from this letter it should be this: Denver is the center. We do not just mean geographically, but economically and academically as well.

I write today to express my support for the establishment of a second Patent Office in the Denver metro area. The Governor's office is working in close coordination with our Office of Economic Development and International Trade (OEDIT), the Denver Mayor's Office, and the Metro Denver Economic Development Corporation to make sure that Denver demonstrates its suitability for a new satellite patent office. Denver has four key advantages as the site of a patent office: a central location, a strong retention environment, a commitment to innovation and education, and strong partnerships with our federal labs and educational institutions.

Denver's central location lowers the cost of doing business with the US Patent and Trademark Office (USPTO) for firms and inventors. Our geographic position facilitates day trips for investors, executives and applicants in the region that support the Patent Examiners' review process, saving time and money for both the businesses and the USPTO. Denver's Mountain Time Zone location also enables easier communication with Europe in the morning, the US all the time, and Asia in the afternoon. Denver is also a hub for domestic and international air travel with 14 carriers that provide daily non-stop flights to over 160 cities, with a number of Asian cities being the target of future routes.

As with any business, retention of employees is crucial for the USPTO. Denver provides an ideal location for retention because it has an affordable cost of living and cities in the Denver Metro Area consistently top the lists in the "Best Places to Live," and it's no fluke. Our neighborhoods feature strong schools, both public and private, and a decidedly Western friendliness. We also have burgeoning cultural institutions that promote strong and open communities, and an outdoor experience that surpasses most other states. All of these features attract professionals for the

long-term and they are important to our strategy of fostering a positive "people environment" to complement our strong business environment.

Our state government and our federal delegation remain committed to fostering a culture of innovation in Colorado, as demonstrated by the large scale efforts to analyze our current state innovation and draw a roadmap to our future state through the Colorado Blueprint and Coloradans for an Innovation Economy initiatives, both of which led to my establishment of the Colorado Innovation Network (COIN). Through COIN, leaders from industry, nonprofits, foundations, government and academia will convene and commit to achieving the common goal of increased economic competitiveness. The alignment of these resources will act as a catalyst for businesses and entrepreneurs across the state.

Colorado understands the importance of federal investment and involvement when it comes to entrepreneurship. We have a successful public-private entrepreneurship corridor within a two hour drive from Denver: Fort Collins, Louisville, Longmont, Boulder, Broomfield, Golden, Centennial, Aurora, and Colorado Springs. Institutions along this corridor include the National for Renewable Energy Laboratory (NREL), the National Institute of Standards and Technology (NIST), and the National Oceanic and Atmospheric Administration (NOAA). Each of these organizations has strong connections to our research universities and businesses that provide ideal conduits for technology transfer.

Take for example, the case of Primestar. Primestar began as a thin-film photovoltaic company that was spun out of NREL, located in Golden, CO. It subsequently began developing record-setting efficiency for cadmium telluride technology, and just this past year it was acquired by General Electric, who decided to move the company to Aurora to build the largest solar panel plant in the U.S, which will create over 1000 jobs in the coming years.

The USPTO Satellite Office would also have a significant long-term impact to Colorado. It would enable us to keep more companies when they are acquired by other national and international firms because the Patent Office would act as business anchor for our community. It would also create incentives for our diverse population to enter Science, Technology, Engineering and Math fields to respond to the continued growth in the technology sector in Colorado. The overall benefit to our economic ecosystem is immense and we urge you to choose Denver as the next site for a satellite Patent Office.

Sincerely,

John Hickenlooper
Governor

DENVER BUSINESS JOURNAL

Legislature pushes for satellite U.S. patent office

Colorado legislators unanimously approved a resolution Wednesday asking the U.S. Patent and Trade Office (PTO) to set up a satellite office in the Denver metro area.

The resolution will be included with an application packet for the satellite office that the state must submit to the federal government by Jan. 30.

Bipartisan sponsors of the resolution in the House and Senate said this could show the level of state support for landing one of what is expected to be three satellite offices the PTO is expected to open across the country.

"We know resolutions are typically letters to Santa Claus. Hopefully, Santa will read this one," said Senate Minority Leader Bill Cadman, R-Colorado Springs, who co-sponsored the resolution.

The PTO already has chosen Detroit as an initial location for a satellite office, and a number of cities are lobbying to land one of the others. U.S. Sen. Michael Bennet, D-Colo., and Denver Mayor Michael Hancock also worked on the resolution and recruiting efforts.

Senate Joint Resolution 8 notes that Colorado ranks among the states with the highest degree of college-educated workers, has an international airport with direct flights to 160 cities and is home to research universities seeking patents for inventions. It also states that the Denver metro region is home to the highest number of federal employees per capita in any major U.S. city other than Washington, D.C., which should enable the federal government to find office space it can share to set up the new patent office.

"This is in line with the theme for our session of job creation, economic development and supporting innovators and entrepreneurs here in our state," said Senate President Brandon Shaffer, D-Longmont.

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SENATE JOINT RESOLUTION 12-008

BY SENATOR(S) Shaffer B. and Cadman, ;
also REPRESENTATIVE(S) Summers and Kagan, Ferrandino.

CONCERNING THE STATE OF COLORADO'S SUPPORT FOR LOCATING A PATENT OFFICE IN THE DENVER METRO AREA.

WHEREAS, The United States Patent and Trademark Office (USPTO) is currently gathering information on potential locations for future USPTO satellite offices, which the USPTO has been directed to establish under Section 23 of the "Leahy-Smith America Invents Act"; and

WHEREAS, An initial satellite office is slated to open in Detroit, Michigan, and, subject to available resources, the USPTO will establish at least two more satellite patent and trademark offices in other U.S. cities; and

WHEREAS, The USPTO is seeking to locate future offices in an area of the country that offers a highly educated workforce, access to universities with strong engineering programs, public transportation infrastructure and major airport access, quality of life and reasonable cost-of-living expenses, and the ability to share facilities with other established governmental operations, among other factors; and

WHEREAS, Colorado meets these criteria and offers many additional amenities that should appeal to the USPTO; and

WHEREAS, The State of Colorado fully supports and encourages the location of a satellite patent office in our fine state; and

WHEREAS, There are many reasons for choosing Colorado, first of which is that opening an office in Colorado will permit the USPTO to

recruit and hire from some of the best candidates the U.S. has to offer; and

WHEREAS, Colorado is home to a large number of technology workers, and the technology workforce in Colorado is consistently ranked in the Top 10 in the U.S. in a number of important categories; and

WHEREAS, Colorado is ranked 2nd in the nation for percentage of workers with a Bachelor's Degree or higher, 6th for number of workers with Science and Engineering degrees per capita, and 11th for number of patents per 1,000,000 residents; and

WHEREAS, Colorado also offers access to many research universities with strong and highly rated engineering and computer science programs, including the Colorado School of Mines, University of Colorado, University of Denver, and Colorado State University; and

WHEREAS, Colorado is a key center for innovation and market applications in renewable energy, advanced materials, and the responsible development of clean-burning natural gas; and

WHEREAS, The Denver metro region is home to the highest number of federal employees per capita outside of Washington, D.C., and, because of this, the region offers a unique ability to share facilities with other established governmental offices; and

WHEREAS, Denver International Airport, which is the largest airport in the U.S., has 14 carriers providing daily nonstop flights to over 160 cities, and the Regional Transportation District services the front range of Colorado with excellent public transportation, including bus and light rail service, that is part of a recent $7.9 billion region-wide mass transit expansion; and

WHEREAS, Colorado is an extremely desirable place to live, and locating a patent office in Colorado would allow the USPTO to dramatically improve its ability to recruit and retain valuable employees; and

WHEREAS, Colorado's cities and towns appear frequently in national rankings of the best places to live and work as well as being among the

most attractive venues in the nation for business development; and

WHEREAS, An unparalleled combination of spectacular scenery, recreational opportunities, moderate climate (annually, Colorado has more than 300 days of sunshine per year), excellent facilities for arts and culture, and world-class health care and public school systems make Colorado an ideal place to call home; and

WHEREAS, In addition, access to an efficient and productive patent office is critical to Colorado companies and to the economy of our state; and

WHEREAS, Colorado is eager and excited at the prospect of welcoming a satellite patent and trademark office to our state; now, therefore,

Be It Resolved by the Senate of the Sixty-eighth General Assembly of the State of Colorado, the House of Representatives concurring herein:

That we, the members of the General Assembly, formally express the State of Colorado's and the State Legislature's support for the location of a patent satellite office in our state, and encourage the USPTO to carefully consider all of the factors that make Colorado and the Denver metro area the ideal location for a new office.

Be It Further Resolved, That a copy of this Joint Resolution be sent to USPTO Director David Kappos.

Brandon C. Shaffer PRESIDENT OF THE SENATE	Frank McNulty SPEAKER OF THE HOUSE OF REPRESENTATIVES
Cindi Markwell SECRETARY OF THE SENATE	Marilyn Eddins CHIEF CLERK OF THE HOUSE OF REPRESENTATIVES

Colorado
Office of Economic Development and International Trade

John W. Hickenlooper, Governor
Kenneth W. Lund, Executive Director

Friday, January 20, 2012

Mr. David J. Kappos
Under Secretary of Intellectual Property and
Director of the U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

We write to you today to express our sincere support for the establishment of a satellite Patent office in Denver, CO. The Office of Economic Development and International Trade (OEDIT), the Office of Information Technology (OIT), and the Colorado Office of Innovation Network (COIN) have been working in close coordination with the Governor's Office, the Colorado Federal Congressional Delegation, the Denver Mayor's Office, and the Metro Denver Economic Development Corporation (MDEDC) to demonstrate Denver Metro Area's suitability as the location for the next patent office.

Colorado already has a strong relationship with the federal government, with 37,000 federal civilian employees currently working in the state. According to the Federal Laboratory Consortium we have14 federal labs, ranking 5th in the country (and first in federal workers per capita outside of the DC area). Colorado also ranks 10th in the US in patents, with 5.67 patents per 100,000 inhabitants, according to the Beacon Hill Institute State Competitiveness Index 2011.

The OEDIT stands ready to assist and provide whatever support necessary to guarantee that the Patent office has the highest quality examiners to ensure that the United States remains the leader in innovation, whether in manufacturing or information technology. In fact, we are currently working on developing our manufacturing cluster to deliver on Secretary John Bryson's commitment to "build it here, sell everywhere." To that end, OEDIT is also focusing on doubling Colorado exports by 2014. We continue to develop our pipeline of successful companies that have moved to or expanded in Colorado, such as Arrow Electronics ($20billion/year in revenue), GE/Primestar ($300 million investment in the largest solar panel plant in the country), and Level3 (who merged with Global Crossing to become a $6.26billion/year revenue company).

We also know that innovation does not just come from large companies. Colorado ranks third in Small Business Innovative Research (SBIR) grants, third in venture capital investments per $1,000 for State GDP, and fourth in number of new companies per 1,000 employees.

That success will only continue as the newly created Colorado Office of Innovation Network develops Colorado's innovation ecosystem by partnering with the private sector, academia, nonprofits, foundations and government. We already have a great foundation to build upon. Colorado is the No. 5 "Best State For Business" in 2011, ranking as the No. 1 state for labor

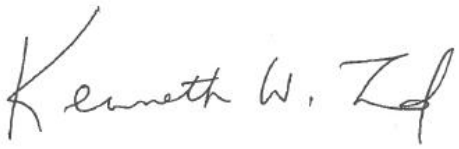
supply, No. 8 for growth prospects, and No. 10 for economic climate and quality of life according to Forbes magazine.

The Office of Information Technology (OIT) is also strongly committed to supporting Colorado's competitiveness in technology and broadband deployment with the goal of making Colorado the "Silicon Mountain" of the United States. To bolster our efforts, Colorado already has the third highest concentration of scientists and engineers in the nation according to the Milken Institute (2010) and ranks third in high-tech employment per 1,000 workers (TechAmerica).

There are a myriad of objective reasons that Denver is an ideal candidate for the next Patent Office, but perhaps the most important is our ability to help the Patent Office retain employees. With the beautiful Rocky Mountains to the west, and fresh agriculture production to the east, Denver can satisfy the most avid mountain biker or the most voracious foodie. We have something for everyone, and it's one of the reasons that Denver was rated the number one city where people most wanted to live (2009).

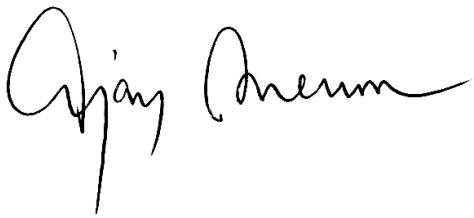
Denver is the complete package, and we hope you feel the same way. Please do not hesitate to contact us with any questions.

Sincerely,



Ken Lund
Executive Director
OEDIT

Kristin Russell
Secretary of Technology
OIT



Ajay Menon
Chief Innovation Officer
COIN

Kelly Quann
Executive Director
COIN

METRO MAYORS CAUCUS
WORKING TOGETHER FOR A BETTER REGION

Rick Pilgrim
Mayor, Town of Bow Mar
Chair

Jim Gunning
Mayor, City of Lone Tree
Co-Vice Chair

Sue Horn
Mayor, Town of Bennett
Co-Vice Chair

January 19, 2012

Secretary Gary Locke
U.S. Department of Commerce
1401 Constitution Ave., NW
Washington, D.C. 20230

Director David Kappos
US Patent & Trade Office
PO Box 1450
Alexandria, Virginia 22313-1405l

Dear Sirs:

The Metro Mayors Caucus (MMC), a regional organization of 40 mayors from the Denver metropolitan region, respectfully requests your consideration of our region as a satellite location for a US Patent & Trademark office.

The USPTO plays a critical role in job creation by supporting innovation. In our recovering economy, relieving backlogs and reducing delays in the patent and trademarking process is critical to supporting growth, particularly for small and start up businesses.

There are multiple reasons why metropolitan Denver is the best location for a new USPTO satellite. With our rich concentration of federal laboratories and research universities, metro Denver is already a critical hub for technology transfer to commercially viable private sector products. Metro Denver is easily and affordably accessible. Denver International Airport is the nation's 5th busiest airport and offers fares 10% or more below the national average. We offer a high quality of life for a reasonable cost of living. National surveys confirm that with 300 sunny days per year, four major sports teams and the Rocky Mountains in our backyard, metro Denver is a place where people want to live. We have a growing workforce of collaborators, innovators and entrepreneurs. The highly skilled workers who comprise our aerospace, energy, bioscience, telecommunications and other high-tech industry clusters offer a large pool of potential employees that can be drawn upon by the USPTO for filling the long-term patent examiner positions.

Our nation's economic recovery will depend in large part on our ability to innovate and speed new technologies to the international marketplace. Addressing the backlog of patent requests and supporting innovation in the technology rich western and southwestern US will be a critical factor in our nation's long-term success. As you consider your options for the next satellite office location, please remember the support of our 40 mayor members and that metro Denver offers an unparalleled combination of quality of life and innovation supporting resources that make it an ideal location for a new satellite USPTO.

Sincerely,

Rick Pilgrim
Mayor of Bow Mar, Colorado
Chair, Metro Mayors Caucus

Colorado State University

Office of the President
102 Administration Building
0100 Campus Delivery
Fort Collins, CO 80523-0100
(970) 491-6211
FAX: (970) 491-0501
www.colostate.edu

January 20, 2012

Mr. David Kappos, Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

Colorado State University is pleased to offer its strong support to the proposal by Senators Bennet and Udall to bring a regional U.S. Patent and Trademark Office to Colorado.

As one of the nation's most productive research universities, Colorado State is committed to supporting innovation and entrepreneurship through successful public-private collaborations. Since 2007, CSU has licensed 136 technologies to Colorado businesses, and CSU researchers have disclosed 515 new technologies over that same timeframe. In the past five years alone, CSU has seeded 23 start-up companies in the state—companies that have raised approximately $700 million in private equity/debt, procured nearly $100 million in government/NGO funding, and created approximately 1,300 peak new jobs. We've helped engineer this success through a first-of-its-kind Supercluster model to speed commercialization of critical new technologies related to clean energy, cancer, and infectious disease.

As a state, Colorado is well-served by the Front Range research university corridor and the presence of three top-tier research institutions: CSU, the University of Colorado, and the Colorado School of Mines. All have a strong track record of supporting research and technology transfer to address complex societal needs – and an equally strong record of working together in support of common research interests and goals.

In addition to lending its support for the concept, Colorado State offers a nimble continuing education and professional development program and is prepared to cooperate in exploring how we might customize offerings specifically for the USPTO.

A USPTO satellite office in Colorado makes great sense, given the strength of our University system, and would capitalize on the wealth of existing resources and the significant network of federal research partners already located here. Fort Collins itself stands out nationally as one of the best places to have a business and career, one of the best places to live and launch a business, and the place with the highest number of patents per capita in the U.S.

We would be happy to host you and your colleagues for a visit at any time if you are interested in discussing this proposal and CSU's support in greater detail.

Sincerely,

Dr. Tony Frank
President

University of Colorado
Boulder | Colorado Springs | Denver | Anschutz Medical Campus

Bruce D. Benson
President

January 25, 2012

Mr. David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

I am writing in support of the Denver metropolitan area as a site for a United States Patent Office satellite office. The Denver metropolitan area and the University of Colorado offer considerable benefits that would be beneficial to the USPO.

As president of the University of Colorado, I can assure you our campuses stand ready to support a successful USPO satellite office. We provide a highly skilled workforce, have existing partnerships between our university and federal laboratories (NCAR, LASP, NIST, NOAA, and several others), foster a culture of innovation and invention, and maintain close ties with the business community. We have particularly strong programs in engineering, law, business and the sciences, which would support your workforce needs.

The University of Colorado attracted nearly $800 million in mostly federal research funding in the past fiscal year, a demonstration of our focus on discovery. We have productive and engaged faculty members who continually look beyond the walls of the university to create public-private partnerships that benefit our state, region and nation.

While there are several sites in the metro Denver area that would meet your needs, I would point out one that particularly stands out. The University of Colorado's Anschutz Medical Campus in Aurora (Denver's neighbor to the east) is one of the nation's most dynamic health-care campuses, where teaching, research and clinical work happen on one site. It is the largest economic development project in the Rocky Mountain West, with an investment of more than $3 billion over the past decade. It may be the most successful example of an army base recommissioning in the United States (before our campus moved there a decade ago, it was the site of the US Army Medical Garrison, also known as Fitzsimons).

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It is now home to a thriving research community, educational facilities and clinical enterprises. The campus is within 20 minutes of Denver International Airport and will soon be a major light-rail hub, with lines to the metro area and airport. The adjacent Fitzsimons Redevelopment Authority site, home to a growing biosciences park, would be an ideal location for a USPO satellite office.

Colorado is a dynamic place to live and work. It offers a temperate climate, abundant natural beauty, high quality of life and a population with energy and a can-do attitude. The University of Colorado is an integral part of what Colorado offers, and we would enthusiastically provide our full support to a satellite office of the USPO. I would be happy to answer any questions you may have.

Sincerely,

Bruce D. Benson
President

The Denver Metro Area

When considering the ideal location for a new satellite Patent and Trademark Office, Denver has many benefits. Denver has one of the youngest and healthiest metro areas in the country, with a resilient business climate that is poised to grow with the new energy economy. Commutes are easy with an extensive network of bicycle trails and an ever-expanding light rail and bus system.

While skiing in Colorado is world-renowned, many newcomers are surprised by the mild winters in Denver. With more than 300 days of sunshine, city snows don't stick around for long. Denver boasts a multitude of cultural events and experiences. Annual events include the National Western Stock Show, Cherry Creek Arts Festival, the Denver Film Festival and the nation's largest Cinco de Mayo celebration. There are several museums and a large number of theaters, shopping, dining and a vibrant downtown night life. Sports teams include the Denver Broncos, Denver Nuggets and Denver Avalanche.

Central Location Enhances Customer Service:

As a central location, doing business in Denver will lower the cost of doing business with the USPTO for firms and inventors. Investors, executives and applicants in the region can go on day trips to Denver to support the Patent Examiner's review process. The Mountain Time Zone enables better communication within the Unites States, Europe and Asia.

The Denver International Airport is a regional hub for domestic and international air travel. With 14 carriers providing daily non-stop flights to over 160 cities, Denver is an easy to reach location for visitors.

USPTO Recruiting and Job Retention

Patent examiners will find that Denver offers an affordable cost of living. Professionals are attracted to living in Colorado for the long term.

Regional Entrepreneurship with Federal Investment

There is a successful public-private entrepreneurship corridor within two hours' drive from Denver: Fort Collins, Louisville, Longmont, Boulder, Broomfield, Golden, Centennial, Aurora and Colorado Springs.

Colorado ranks eighth in the nation in science and engineering doctorate holders as a percent of the workforce, according to the National Science Foundation. This high amount leads to new discoveries and brings additional funding to the Patent Trademark Office.

The University of Colorado (CU)

CU is a highly ranked university composed of three campuses – Boulder, Colorado Springs and the Denver and Anschutz Medical Campus that offers many degree and certificate programs to its students. Altogether, there is a combined enrollment of more than 56,000 students. In addition to graduate as well as undergraduate programs that offer Bachelor's, Master's and Doctoral degrees in scores of disciplines, the University offers opportunities to study abroad, engage in public service, and conduct research.

- CU Awards the most graduate degrees in the state and is ranked No. 34 on Forbes Magazine's public colleges list.
- CU has the state's only professional schools for medicine, pharmacy and architecture.
- CU attracts the most research funding in the state, allowing for the use of innovative solutions such as powering the Auraria campus with wind energy.
- According to a recent analysis published in Science, CU ranks among the top 25 universities in the nation with respect to research publication productivity, and CU Boulder ranks #8 with respect to the number of citations of the work produced by its scholars and scientists.
- All of our campuses have access to many companies here in Colorado and we like to foster these collaborations between companies and our investigators.

Executive MBA Program

CU's Executive MBA program draws on the best of the business faculty from all three campuses. It features a collaborative learning environment, dynamic students holding management and executive-level positions, and real-world, case-based curriculum. The cohort-based degree covers four semesters, and is designed for minimal career disruption with classes on alternating Fridays and Saturdays.

The University of Colorado Boulder (CU-Boulder)

As the flagship university of the state of Colorado, CU-Boulder is a dynamic community of scholars and learners situated on one of the most spectacular college campuses in the country. As one of 34 U.S. public institutions belonging to the prestigious Association of American Universities (AAU) – and the only member in the Rocky Mountain region – we have a proud tradition of academic excellence, with four Nobel laureates and more than 50 members of prestigious academic academies.

The Division of Continuing Education

- In partnership with all of CU Boulder's schools and colleges, Continuing Education provides a wide array of continuing professional education programs designed for working professionals. U.S. Patent and Trademark Office (PTO) employees could enroll in certificate and master's degree programs that are available on campus and online, in a wide range of STEM, business and continuing legal education fields. Some of the topic areas include embedded systems; power electronics; software engineering; entrepreneurship; astrodynamics and satellite navigation systems; computer and network security; energy communication networks; network architecture; wireless networks and technologies; and telecommunication policy. In some cases, working professionals are looking for an intensive, noncredit short course on a particular content area. In other cases, they're interested in pursuing a full degree program. CU Boulder Continuing Education provides a one-stop shop to help professionals find the academic program that is right for them. See http://conted.colorado.edu/
- In addition to serving the professional development needs of the patent examiners and other senior staff, CU Boulder Continuing Education can serve the educational needs of the PTO *support* staff. In some cases, support staff may be interested in advanced coursework. In other cases, they may be interested in completing a bachelor's degree. CU Boulder Continuing Education offers a degree completion program called CU Complete that enables former students to assess options for completing their degrees, including options for finishing their degree at CU Denver, Colorado Springs or the Boulder campuses. See http://conted.colorado.edu/programs/cu-complete/cu-complete-service/
- The families of PTO staff may be looking for K-12 and/or high school opportunities available through our campuses. CU Boulder Continuing Education partners with STEM departments to offer a wide range of after school and summer programs for K-12 students. See http://conted.colorado.edu/programs/science-discovery/ Some of these programs are in partnership with CU Denver and are held on the Denver campus. High school students are also eligible to enroll in college coursework on the Denver, Colorado Springs and Boulder campuses.
    - ➢ See http://conted.colorado.edu/programs/high-school-concurrent/ for an example of the high school concurrent program at Boulder.
- PTO employees and their families may be interested in accessing the wide array of arts, culture and other educational outreach programs that highlight the breadth of resources of the CU's faculty, staff and students. See http://outreach.colorado.edu/ for an example of outreach programs available statewide through CU Boulder.
- CAETE (see http://cuengineeringonline.colorado.edu/), which offers distance education in specific programs.

- The Interdisciplinary Telecommunication Program and the Engineering Management Program, both of which offer graduate degrees and a number of certificates

College of Engineering and Applied Science

- The College of Engineering and Applied Science is the **top-ranked engineering school in the Mountain Time Zone**. *U.S. News & World Report* ranks the college 32nd overall and 18th among public institutions at the undergraduate level; 36th overall and 21st among public institutions at the graduate level among nearly 200 comprehensive U.S. engineering programs. **Four graduate programs (aerospace, chemical, civil, and mechanical engineering) are ranked among the top 15 overall by the National Research Council.** The engineering faculty has been distinguished with numerous honors and awards. The faculty include 38 National Science Foundation CAREER Awardees, 18 National or Presidential Young Investigators and Faculty Fellows, 11 members of the National Academy of Engineering, 2 Packard Fellows, and 1 Howard Hughes Medical (Investigator).
- Faculty research activity places the college among the top public institutions, with nearly $67 million in research awards in 2010-11. This record amount represents more than 50 percent growth in two years. **The primary focus is on interdisciplinary research, in which engineering faculty work with colleagues in such fields as biology, chemistry, physics, and medicine. The college hosts 18 interdisciplinary research centers working in the areas of bioengineering, energy and environment, materials science, information technology, and space sciences.**
- Quality measures of the fall 2010 entering first-year class include **29/36 average composite ACT score and 1285/1600 average combined SAT score.** The first-year class also includes more than **24 percent women and 12 percent underrepresented minorities.** The college successfully pioneered a hands-on, collaborative approach to undergraduate education with the opening of the Integrated Teaching and Learning (ITL) Laboratory in 1997. The Mortenson Center in Engineering for Developing Communities offers another program unique to CU-Boulder, in which students help to develop sustainable solutions to engineering challenges faced by the developing world. The program is affiliated with Engineers Without Borders-USA, a non-profit organization founded by CU Engineering Professor Bernard Amadei. Recognizing the need to attract a larger and more diverse set of students into the engineering profession, **the college also has become a leader in K-12 engineering outreach**, focusing on students in both urban and rural areas who are underrepresented in engineering. The college reaches thousands of children each year through after-school and summer programs, engineering students teaching in local schools, and an online library of age-appropriate engineering lessons and experiments.

Law School

- Traditional **Course Offerings**[1] at the University of Colorado Law School focused on patent and trademark law and policy. Some available courses include Introduction to Intellectual Property Law, Patent Law, Patent Litigation, Trademark and Unfair Competition, Intellectual Property Counseling and Prosecution, and IP and Technology Contracting. In addition to numerous opportunities to learn the theory of intellectual property law, students can obtain practical experience in technology policy and the development of successful businesses around innovative technologies. Experiential opportunities include the **Technology Law and Policy Clinic**,[2] which teaches students to provide analytical support to regulatory entities, courts, legislatures and standard setting bodies on new technology issues, and the **Entrepreneurial Law Clinic** (ELC),[3] a legal clinic for third year law students that both trains student attorneys through practical transactional experience and offers valuable legal services to the local entrepreneurial community. Each year the ELC provides free legal advice and services to 12-14 early stage companies in the Boulder-Denver area. Because these graduate students, professors, local entrepreneurs, and start-up companies do not otherwise have access to capital, the services would not be available to them if not for the ELC. The clinic's students provide additional community outreach by teaching at least four general legal business classes a year to address the legal needs of small business owners. These opportunities not only educate the patent lawyers of tomorrow, but also aid the community in developing successful platforms for their innovative and patentable technologies.
- The **Silicon Flatirons Center**[4] is a research and policy center dedicated to elevating the debate around technology policy issues, facilitating the development of "human capital" and the promotion of entrepreneurship in the Colorado technology community, and inspiring student interest in technology law and entrepreneurship. For over ten years, SFC has provided a forum for the local and national community to address and resolve legal and regulatory issues raised by innovative technologies. Each year SFC hosts nine seminars, an annual conference, and numerous roundtable discussions involving academics, regulators, and industry leaders focusing on these issues. Recent roundtable discussions have focused on bringing angel investors to Colorado, as well as the state of the private equity and venture capital industries. SFC also hosts monthly New Technology meetups that consistently bring hundreds of technologists together, an Entrepreneurs Unplugged series, and an educational Crash Courses for Entrepreneurs series. These opportunities allow innovators to connect and collaborate to improve their products and increase their chances of success. The Center's many initiatives provide educational and professional develop opportunities for patent professionals, as well as helping to build and develop the innovative community in Colorado.

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[1] *Course Descriptions*, COLORADO LAW, http://lawweb.colorado.edu/courses/courses.jsp (last visited Jan. 13, 2012).

[2] *Samuelson-Glushko Technology Law & Policy Clinic*, COLORADO LAW, http://www.colorado.edu/law/clinics/tech/ (last visited Jan. 13, 2012).

[3] *Entrepreneurial Law Clinic*, COLORADO LAW, http://www.colorado.edu/law/clinics/entre/ (last visited Jan. 13, 2012).

[4] *About Us*, Silicon Flatirons Center, http://www.silicon-flatirons.org/aboutUs.php (last visited Jan. 13, 2012).

- The **Energy Innovation Series**[5] is a collaboration between Colorado Law, the Renewable and Sustainable Energy Institute (RASEI), and Silicon Flatirons Center focused on innovative efforts in transitioning to a sustainable low-carbon energy system. The series helps balance the discussion and education on new technologies to include sustainable energy. Although in its inaugural year, the series has brought leaders from government, law, finance, industry, and academia to discuss both key aspects of the energy challenge, as well as some of the innovative approaches and solutions being fashioned across a range of sectors. Speakers so far have included former Colorado Governor Bill Ritter, National Economic Council Advisor Jason Bordoff, and Dr. Daniel Yergin, Chairman of IHS Cambridge Energy Research Associates.
- **Startup Colorado**[6] is a regional initiative affiliated with the Startup America Partnership intended to spur new company creation by increasing the breadth and depth of the entrepreneurial ecosystem across Colorado's Front Range. By supporting entrepreneurial education, facilitating discussion among entrepreneurs, bringing students to startups, assessing barriers to innovation, and broadly engaging the community, Startup Colorado will help develop new businesses and improve the economic base in the state. Not only will this initiative help retain educated and innovative individuals in Colorado, it will continue to develop the patent-filing community. So far the initiative has succeeded in building collaborative community gatherings (called "meetups") in Colorado Springs and Denver, getting larger Denver companies to make commitments to help startups (such as providing data center access), and garnering the support of over 40 companies for a summer entrepreneurial program offering internships and education to young entrepreneurs. It is off to a great start!
- The **CU New Venture Challenge**[7] is a cross-campus business plan competition offering intensive business planning and development workshops and mentorship opportunities for University of Colorado students and the surrounding community. This cross-campus initiative brings together students from the Law School, the Interdisciplinary Telecommunications Program, the Computer Science program, the Journalism school, the Business School, the Alliance for Technology, Learning and Society Institute (ATLAS), other departments, and the broader community. With this program in place, innovators will have the framework they need to build high growth companies around valuable intellectual property.

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[5] ENERGY INNOVATION, http://www.energy-innovation.org/ (last visited Jan. 13, 2012).
[6] STARTUP COLORADO, http://co.startupamericapartnership.org/ (last visited Jan. 13, 2012).
[7] *About Us*, NVC, http://cunvc.org/about/ (last visited Jan. 13, 2012).

The University of Colorado Colorado Springs (UCCS)

UCCS is located on approximately 521 acres in northeast Colorado Springs, at the foot of Austin Bluffs, a rugged natural cliff formation. UCCS is one of the fastest growing universities in the state of Colorado and the nation. Graduation rates here for ethnic minority groups exceed peer university average. US News & World Report lists UCCS as one of Americas Best Colleges. UCCS is tenth among Western regional public universities and is ranked eleventh nationally for public undergraduate engineering. The graduate programs for nursing and public affairs are top-ranked. UCCS is military friendly. The American Association of State Colleges and Universities (AASCU) named UCCS one of the two national leaders in community engagement efforts.

The Bachelor of Innovation Program

The Bachelor of Innovation™ (B.I.) is a family of degrees—a unique, international interdisciplinary undergraduate program delivered through collaboration between the College of Engineering and Applied Science (EAS) and the College of Business (COB), both at UCCS. The program was launched in 2007 and delivered its first graduating class in 2011. The B.I. is structured as a degree family, much like a Bachelor of Science (B.S.) or a Bachelor of Arts (B.A.), in which particular majors are defined. Degrees in the B.I. family include B.I. in Business Administration, B.I. in Computer Science, B.I. in Computer Science Security, B.I. in Electrical Engineering, and B.I. in Game Design and Development. Each degree in the program incorporates an emphasis major, the innovation core, and a student selected cross-discipline core. One of the fundamental principles of the Bachelor of Innovation™ program is that "innovation is a team sport™," and like any sport, it requires practice. A Bachelor of Innovation ™ graduate emerges with a unique set of experientially obtained skills that go beyond the technical depth already expected of any UCCS student. The program includes a multiyear, multidiscipline team experience working on real problems with local companies; an understanding and experience in the innovation process to transform ideas into a sustainable benefit to society; an understanding of the basics of entrepreneurship, business law, and intellectual property; and a deep exploration of globalization issues, creative communication, and technology impact on business through a cross-discipline approach. The program benefits both business and science/engineering students as they learn to work together to solve real customer problems.

The benefits of a PTO satellite office in Colorado would flow both ways from the point of view of the Bachelor of Innovation. The PTO might have projects that BI teams could help with and the BI students would benefit greatly from being able to visit and talk with patent examiners.

The University of Colorado Denver (UCD)

The University of Colorado Denver has one campus downtown and another at the Anschutz Medical Campus (AMC). The Denver campus holds classes on the Auraia Campus (shared with two other colleges) and in high-rise buildings along Lawrence Street in Denver's Theater District. Health profession students learn and practice in state-of-the-art facilities at the AMC in Aurora including two new hospitals; University of Colorado Hospital and The Children's Hospital.

Business School

- Located in Denver's vibrant downtown, the CU Denver's Business School's extensive range of degree programs and innovative industry specializations keep pace with the needs of students and businesses. The Business School is the largest AACSB-accredited graduate Business School in the Rocky Mountain region, with over 1,400 undergraduate students and 1,200 graduate students.
- The Bard Center takes entrepreneurship from the classroom to the real world and provides hands-on learning opportunities. The Bard Center's entrepreneurship curriculum incorporates instruction, mentoring, and support from outstanding Business School faculty, as well as from outside professionals with expertise in new business development. Bard Center courses explore legal issues, social sector initiatives, new venture design, finance structuring, strategic web development, leadership, new product development and business plan creation. Students learn from case studies, classroom instruction, and guest lectures featuring successful entrepreneurs and renowned business leaders. For more information, visit http://www.ucdenver.edu/academics/colleges/business/about/Centers/bard/Pages/BardCenter
- The Business School is also home to several industry-leading programs, developed in partnership with businesses to meet the changing demands in key industries.
    - The Global Energy Management Program (GEM), launched in 2008, is a groundbreaking hybrid-online MS program that prepares graduates for top positions in the energy field. Developed in partnership with Encana, Excel Energy, and other leaders in the field of energy, this program provides both degree and non-degree programs for professionals in the energy sector. For more information, please visit www.business.ucdenver.edu/gem
    - The Risk Management and Insurance Program (RMI) is the first of its kind in the Rocky Mountain region. The Program is designed to produce a new generation of professionals with the critical thinking skills, specialized knowledge and managerial acumen that insurance companies seek in their leaders. For more information, please visit www.business.ucdenver.edu/rmi
- The new Center for Commodities will be opening in Spring 2012. It will be the first center of its kind, focused on a broad range of commodities, including energy, mining, and agriculture.

For more information about the wide range of programs and partnership opportunities at the Business School, please visit www.business.ucdenver.edu.

Anschutz Medical Campus

The Veterans Administration is building a new hospital and outpatient facilities on AMC. AMC also has great proximity to Buckley Air Force Base and formal affiliations with Denver Health and National Jewish Health. There are five professional schools offering professional degrees (Medicine, Dental Medicine, Pharmacy, Public Health and Nursing) as well as Allied Health Science degree programs.

CU is very collaborative with its education programs and research programs, and at AMC, translational science is a specific emphasis and focus. Clinicians and basic scientists collaborate on many projects and with industry for the long term good of the patient.

A growing Biotech Park is located literally right next door to AMC with easy access to basic science and clinical investigators. The companies at the Biotech Park and those around the state of Colorado can have use of all the facilities at the university.

The move of the Anschutz medical campus to the old Fitzsimons Army Base has produced an economic boom for the entire area of Aurora and for the state of Colorado and the city of Denver. This boom continues both for the medical center and the state.

The University of Colorado Technology Transfer Office (TTO)

The research university and National Labs technology transfer currently in place in Colorado has been turning ideas into discoveries and making medical breakthroughs with significant worldwide impact. Several companies across a variety of industries have gotten their start as a result of tech transfer activities at area universities.

CU has a very active Tech Transfer Division which assists investigators in establishing incubator companies, arranging for patents and intellection property. The TTO at CU turns university research into patentable intellectual property and marketable business opportunities.

CU Technology Transfer Office U.S. Patent Activity

In (calendar year) 2011, there were 259 U.S. patent applications filed in the name of the University of Colorado – this figure includes both new Provisional Patent Applications and regular U.S. applications.

In 2011, CU received 39 new U.S. patents.

Over the past ten years almost 1400 CU assigned US patents have been filed and nearly 250 U.S. patents have issued. The number of total CU assigned U.S. patents in force as of today is 335, with 347 U.S. patents currently in prosecution.

CU Technology Commercialization Clinic

In October 2011 the University of Colorado Technology Transfer Office launched its Technology Commercialization Clinic, a pilot program designed to enhance the technology commercialization process at CU. The Clinic consists of 25 graduate students and post-doctoral fellows from a diverse set of research labs at CU-Boulder and the CU Anschutz Medical Campus, each paired with a volunteer patent attorney mentor and a technology licensing manager. Clinic participants attend a monthly series of presentations and interactive discussions, where they learn about intellectual property protection, technology assessment, commercial opportunity and technology road mapping. The goal of the Clinic is two-fold: on the one hand, the quality of invention disclosures and the overall impact of technologies is expected to increase as students and research associates are able to identify new inventions. On the other hand, graduate students and post-doctoral fellows will obtain a better educational experience by acquiring important skills in intellectual property and technology transfer, which has become essential in both academic and non-academic science careers.

COLORADO LAW

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UNIVERSITY OF COLORADO LAW SCHOOL

January 18, 2012

David Kappos
Director
United States Patent and Trademark Office
Mail Stop Office of the Under Secretary and Director
P.O. Box 1450
Alexandria, VA 22313-1450

Re: Request for Comments on Additional USPTO Satellite Offices for the Nationwide Workforce Program, Docket No. PTO-C-2011-0066

Dear Director Kappos:

The America Invents Act takes a positive step toward patent reform by expanding the USPTO through the establishment of satellite offices that make it more accessible, efficient, and timely. Locating an office in Colorado serves the key USPTO goal of achieving better outreach and improving engagement with the patent community. It will also enable the USPTO to attract and retain highly qualified patent examiners, thereby promoting the twin USPTO objectives of reducing application pendency and improving patent quality.

My perspective on this opportunity is not merely based on my deep engagement in the Colorado innovation ecosystem and my work here at the University of Colorado, but also is rooted in my work on innovation policy at a national level, most recently at the National Economic Council. It is not an accident that my time in Boulder has deepened my understanding of innovation policy. Boulder is one of the nation's most active innovation centers in the United States, with the highest number of software engineers per capita in the nation.[1] Strong innovation ecosystems also exist across the region in Denver, Ft. Collins, and Colorado Springs—making the entire "Front Range" a force in innovation. By placing a USPTO satellite office in Colorado, where other government institutions (including NREL, NIST, and NOAA, to name a few) are already located, the federal government can tap into and further advance this impressive and important innovation ecosystem.

The placement of a satellite office here in Colorado will serve the USPTO well by enabling the office to attract and retain high quality and dedicated employees. In my experience, validated by a range of companies in our innovation ecosystem, Colorado develops and attracts employees who are very talented (thus the designation by Forbes and others for Boulder as the smartest city in the U.S.), hard working, and loyal. For the patent office to succeed in implementing the goals of the America

1 Vivek Wadhwa, *Why Boulder is America's Best Town for Startups*, Business Week, Apr. 22, 2010, http://www.businessweek.com/smallbiz/content/apr2010/sb20100421_531161.htm

Invents Act, attracting such employees to the Patent Office's patent examiner ranks is essential. Locating a satellite office where such employees are in plentiful supply is a great step in this effort.

In terms of the University of Colorado Law School, I can affirm—and our track record backs this up—how we will be work in partnership with such an office and provide continuing educational and professional development opportunities for USPTO officials. As Dean of the University of Colorado Law School and Executive Director of the Silicon Flatirons Center, I am proud of how our law school has become a hub to facilitate connections amongst faculty, students, entrepreneurs and innovators in Colorado. We are already a thought leader in this space with few universities able to match what we have going on. With the Technology Journal hosted at the Law School, a LLM program in Technology and Entrepreneurship, clinics in Technology Law and Entrepreneurship, and world-class conferences, we bring together a range of participants from the ecosystem in a number of important ways. This foundation will integrate well with a USPTO satellite office based in Colorado, creating interesting opportunities for collaboration, ranging from providing meaningful education and engagement opportunities for Patent Office employees to professors and community members interested in partnering in research and support for the mission of the office. Let me elaborate.

I. The University of Colorado Law School, located in the heart of one of the largest entrepreneurial ecosystems in the United States, embodies the spirit of entrepreneurship by strongly encouraging innovation. With so many entrepreneurs drawn to the educational and collaborative Colorado environment, a USPTO office will have access to a large and diverse community of patent filers and be apart of a vibrant ecosystem.

Numerous popular press articles have highlighted Colorado as a top location for technology and entrepreneurship. This status can be attributed, in part, to the educational excellence provided by Colorado's higher education institutions, including the University of Colorado Law School, which is dedicated to innovation and entrepreneurship. Colorado Law and its research centers are committed to furthering innovation and entrepreneurship through education and public and private collaboration. Some of the many entrepreneurial initiatives supported or spearheaded by the University of Colorado Law School include:

- Traditional **Course Offerings**[2] at the University of Colorado Law School focused on patent and trademark law and policy. Some available courses include Introduction to Intellectual Property Law, Patent Law, Patent Litigation, Trademark and Unfair Competition, Intellectual Property Counseling and Prosecution, and IP and Technology Contracting. In addition to numerous opportunities to learn the theory of intellectual property law, students can obtain practical experience in technology policy and the development of successful businesses around innovative technologies. Experiential opportunities include the **Technology Law and Policy Clinic**,[3] which teaches students to provide analytical support to regulatory entities,

2 *Course Descriptions*, COLORADO LAW, http://lawweb.colorado.edu/courses/courses.jsp (last visited Jan. 13, 2012).
3 *Samuelson-Glushko Technology Law & Policy Clinic*, COLORADO LAW, http://www.colorado.edu/law/clinics/tech/ (last visited Jan. 13, 2012).

courts, legislatures and standard setting bodies on new technology issues, and the **Entrepreneurial Law Clinic** (ELC),[4] a legal clinic for third year law students that both trains student attorneys through practical transactional experience and offers valuable legal services to the local entrepreneurial community. Each year the ELC provides free legal advice and services to 12-14 early stage companies in the Boulder-Denver area. Because these graduate students, professors, local entrepreneurs, and start-up companies do not otherwise have access to capital, the services would not be available to them if not for the ELC. The clinic's students provide additional community outreach by teaching at least four general legal business classes a year to address the legal needs of small business owners. These opportunities not only educate the patent lawyers of tomorrow, but also aid the community in developing successful platforms for their innovative and patentable technologies. ***We would be delighted to, wherever possible, open up such courses—or even just individual lectures—to USPTO employees.***

- The **Silicon Flatirons Center**[5] is a research and policy center dedicated to elevating the debate around technology policy issues, facilitating the development of "human capital" and the promotion of entrepreneurship in the Colorado technology community, and inspiring student interest in technology law and entrepreneurship. For over ten years, SFC has provided a forum for the local and national community to address and resolve legal and regulatory issues raised by innovative technologies. Each year SFC hosts nine seminars, an annual conference, and numerous roundtable discussions involving academics, regulators, and industry leaders focusing on these issues. Recent roundtable discussions have focused on bringing angel investors to Colorado, as well as the state of the private equity and venture capital industries. SFC also hosts monthly New Technology meetups that consistently bring hundreds of technologists together, an Entrepreneurs Unplugged series, and an educational Crash Courses for Entrepreneurs series. These opportunities allow innovators to connect and collaborate to improve their products and increase their chances of success. The Center's many initiatives provide educational and professional develop opportunities for patent professionals, as well as helping to build and develop the innovative community in Colorado. Indeed, this spring, we look forward to you joining us to speak at a patent policy conference, joining a long list of government officials to join us.[6] ***We traditionally extend free admission for all of our events to government employees and that would cover USPTO employees, who would have access to top-notch enrichment opportunities as a result.***

- The **Energy Innovation Series**[7] is a collaboration between Colorado Law, the Renewable and Sustainable Energy Institute (RASEI), and Silicon Flatirons Center focused on innovative efforts in transitioning to a sustainable low-carbon energy system. The series helps balance the discussion and education on new technologies to include sustainable

4 *Entrepreneurial Law Clinic*, COLORADO LAW, http://www.colorado.edu/law/clinics/entre/ (last visited Jan. 13, 2012).
5 *About Us*, Silicon Flatirons Center, http://www.silicon-flatirons.org/aboutUs.php (last visited Jan. 13, 2012).
6 *See* http://www.silicon-flatirons.org/events.php?id=1060.
7 ENERGY INNOVATION, http://www.energy-innovation.org/ (last visited Jan. 13, 2012).

energy. Although in its inaugural year, the series has brought leaders from government, law, finance, industry, and academia to discuss both key aspects of the energy challenge, as well as some of the innovative approaches and solutions being fashioned across a range of sectors. Speakers so far have included former Colorado Governor Bill Ritter, National Economic Council Advisor Jason Bordoff, and Dr. Daniel Yergin, Chairman of IHS Cambridge Energy Research Associates.

- **Startup Colorado**[8] is a regional initiative affiliated with the Startup America Partnership intended to spur new company creation by increasing the breadth and depth of the entrepreneurial ecosystem across Colorado's Front Range. By supporting entrepreneurial education, facilitating discussion among entrepreneurs, bringing students to startups, assessing barriers to innovation, and broadly engaging the community, Startup Colorado will help develop new businesses and improve the economic base in the state. Not only will this initiative help retain educated and innovative individuals in Colorado, it will continue to develop the patent-filing community. So far the initiative has succeeded in building collaborative community gatherings (called "meetups") in Colorado Springs and Denver, getting larger Denver companies to make commitments to help startups (such as providing data center access), and garnering the support of over 40 companies for a summer entrepreneurial program offering internships and education to young entrepreneurs.

- The **CU New Venture Challenge**[9] is a cross-campus business plan competition offering intensive business planning and development workshops and mentorship opportunities for University of Colorado students and the surrounding community. This cross-campus initiative brings together students from the Law School, the Interdisciplinary Telecommunications Program, the Computer Science program, the Journalism school, the Business School, the Alliance for Technology, Learning and Society Institute (ATLAS), other departments, and the broader community. With this program in place, innovators will have the framework they need to build high growth companies around valuable intellectual property.

In short, a USPTO satellite office located in Colorado will benefit from engaging with the intensely eager and innovative entrepreneurial community, and learning from the many educational opportunities made available by the University of Colorado Law School.

II. In addition to educational and professional opportunities for USPTO employees, a Colorado satellite office will allow the USPTO to better connect and communicate with patent filers and innovators, which will reduce application pendency and improve the quality of applications filed.

More and more entrepreneurs recognize the value of the community, talent, energy, and active lifestyle offered by Colorado. A USPTO satellite located in the heart of a growing and vibrant Colorado entrepreneurial community will allow it to better connect with patent filers, innovators, and

8 STARTUP COLORADO, http://co.startupamericapartnership.org/ (last visited Jan. 13, 2012).
9 *About Us*, NVC, http://cunvc.org/about/ (last visited Jan. 13, 2012).

investors through increased communication and community involvement. As a result, application pendency will decrease as quality improves.

The proximity of the office to patent filers greatly affects communication, which impacts the quality of the application and speed of the application process. As part of the local Colorado community, USPTO officials can attend continuing legal education and professional development events with innovators and patent filers to hone their trade while building a professional rapport. These relationships will enable faster and more efficient communication between the patent office and community, thereby increasing the quality of the applications filed. USPTO officials will also have the opportunity to educate the community on the office's internal processes by providing insight and suggestions to increase application accuracy and diminish pendency. The level of cooperative spirit in the community—and the researchers at the University of Colorado—also promise to provide new thinking and experimentation opportunities to improve our system of patent administration. Finally, because Colorado has a base of strong technical talent and employees with a high degree of loyalty, the strength of the USPTO's patent examination team will be greatly enhanced by opening up such an office.

Finally, a central national location will not only support Colorado innovators, but those throughout the United States through the benefit of a central time zone and shorter travel time for in-person meetings. Although time zone differences are a fact of life, they do often cause process delays and miscommunications. The Mountain Time Zone gives those on the west coast additional time each day to contact the USPTO with questions or to address concerns about an application. Further, when applicants must appear at a USPTO location, they will find it easier and more cost effective to travel to a central location like Colorado than to travel to the east coast.

III. The University of Colorado Law School has and will continue to provide customized continuing legal education and professional development programs for the patent community, including USPTO officials and employees.

During my first few months as Dean of Colorado Law, I committed to increasing the number of continuing legal education and professional development opportunities available to alumni and the broader legal community. I believe deeply in the value of training and re-training the legal profession to hone skills and build networks among those in the industry. In doing so, the profession maintains its integrity, increases product quality, and remains intellectually honest.

The area of patent law and policy is of special interest to myself and my colleagues. Working with the Law School and Silicon Flatirons, the Colorado legal community has established an IP Inn of Court. We also have regular events focused on the issue and that will only increase as the USPTO implements the America Invents Act and your bold and important vision for patent reform. If you have any questions about Colorado's interest in this office, and why I am firmly convinced it is a natural choice, please feel free to be in touch

Sincerely,

Philip J. Weiser

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January 17, 2012

David Kappos
Director, U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 2231-1450

Re: Request for Comments on Additional USPTO Satellite Offices

Dear Director Kappos:

On behalf of the University of Denver Sturm College of Law, we would like to add our voices to those who call for the United States Patent Office to open one of its new satellite offices in Colorado. No doubt you have heard about the Denver metro region's reasonable cost of living, central location, and high quality of life, including its easy access to outdoor recreation. Those descriptions are all accurate, but others are better suited to providing you with the specific details of why so many professionals from around the country consistently choose to move to and stay in Colorado. We direct our comments here to the educational opportunities that the University of Denver can offer both future and current examiners.

The University of Denver is the largest private university in the Rocky Mountain region and is located only a few miles south of downtown Denver. The Sturm College of Law at the University of Denver is also the region's largest law school. We have nearly a thousand law students at any one time, including approximately 250 daytime students per class and 50 evening students per class. This means that the University of Denver provides a diverse array of opportunities for its students and is well-positioned to further the educational goals of the United States Patent and Trademark Office and its examiners.

The Sturm College of Law has the only evening program for law students in the state of Colorado, and that program is particularly well-suited for educating patent examiners who work during the day. It is a four-year program; evening students take 11 credits per semester. After the first year of study, students have access to cross registration between day and evening classes. Part-time evening students at Denver Law are taught by our full-time tenured faculty and have full access to all student activities, externships, clinics, and journals.

The College of Law has three full-time faculty members who specialize in patent, copyright, trademark, and internet law. In addition, our central location gives us easy access to experienced Denver area attorneys who often serve as adjuncts. Consequently, our law school offers a wide range intellectual property courses, including patent law, advanced patent law, patent litigation, introduction to intellectual property, copyright law, trademark law, advanced trademark law, computer and internet law, media law, and cyberlaw. We have attached the current course descriptions for each of these classes. Because many of our evening students are working engineers and scientists, these courses

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are regularly scheduled during the evening. Should the need arise, we also have the flexibility to add courses taught by adjuncts. Moreover, if the demand stays high, we can hire additional full-time faculty who teach and write in the intellectual property field.

If the USPTO were to open a satellite office in the Denver metro region, we envision working with the USPTO to determine what additional educational opportunities would be beneficial. For example, the law school could allow students to specialize in intellectual property. We already do so in corporate and commercial law and environmental law. In addition to a J.D., those students receive a specialty certificate. In addition, or alternatively, we could provide a one-year degree that focuses on intellectual property. The point is -- the University of Denver would be happy to work with the USPTO to tailor the law school's offerings to the USPTO's needs.

If you would like any additional information about the law school or the university, or if you wish to discuss the role that the University of Denver could play in establishing a satellite patent and trademark office in Colorado and in furthering the educational opportunities for patent examiners, please do not hesitate to contact the dean of the law school, Martin Katz, or any of the law school's full-time intellectual property faculty. Contact information is provided below.

Thank you very much for your consideration of Colorado as a location for a satellite office. We have no doubt that Denver metro region would be an ideal location.

Very truly yours,

Chancellor Robert Coombe
Dean Martin Katz
Bernard Chao, Assistant Professor of Law
Viva Moffat, Associate Professor of Law
John Soma, Professor of Law

Contact Information:

Dean Martin Katz, mkatz@law.du.edu
Prof. Bernard Chao, bchao@law.du.edu
Prof. Viva Moffat, vmoffat@law.du.edu
Prof. John Soma, jsoma@law.du.edu

Cyber Law | L4196

This course will explore how various legal regimes are being stressed, and may need to be re-evaluated and/or adapted, as they are being applied to human interactions on the Internet. Specifically, we will examine how the collection and transmission of information over the Internet does and should affect the application of various legal doctrines (personal jurisdiction, contracts, libel, privacy, obscenity, anonymous speech, copyright and trademark).

Prerequisites: None
Credit Hours: 3

Computers and Internet Law | L4145

Computers and Internet Law is designed to consider the areas in which computer technology and the legal environment intersect. This includes legal protection of computer software; contracting for computer services; computer data banks and privacy; the check-less society; and the relationships between Federal Communications Commission policies and computers.

Prerequisites: None
Credit Hours: 3

Copyright Law | L4214

This course covers the major copyright law doctrines. Topics include the subject matter of copyright, the scope of protection, rights conferred, infringement doctrines, defenses, remedies, and attention to particular industries and recent developments in the law.

Prerequisites: None (but Intro to IP strongly recommended).
Credit Hours: 3

Intro to Intellectual Property | L4310

This survey course covers the basics of United States intellectual property law, including patents, copyrights, trademarks, and trade secrets. The course addresses the policies underlying the protection of intellectual property and compares the different ways organizations and individuals can use intellectual property to protect their interests. This course is intended both for students who want an introduction to intellectual property and for those who intend to pursue a career in intellectual property law.

Prerequisites: None
Credit Hours: 3

Patent Law | L4471

This course reviews the major patent law doctrines. Topics include patentability requirements under 35 U.S.C. §§ 101, 102, 103, and 112, claim construction, various infringement doctrines, affirmative defenses and remedies.

Prerequisites: None
Credit Hours: 3

Patent Law (Advanced) | L4474

This course explores more than a dozen advanced topics in patent law. These issues include claim drafting; international patent applications; opinion letters; remedies in patent cases; security interests; patent ability of software; and patent ability of genetic sequences. While Patent Law is not a formal prerequisite for this course, students who have not taken Patent Law should be prepared to do extra reading in the first few weeks of the semester to familiarize themselves with the basic concepts of patent law.

Prerequisites: None
Credit Hours: 3

Patent Litigation | L4483

This is an in-depth study of law, strategies and tactics of patent litigation. Topics include legal principles, procedures and strategies associated with patent claim construction, infringement, invalidity and unenforceability. Also, students cover patent trial practice with a focus on both the knowledge and practical skills necessary to litigate patent cases.

Prerequisites: None
Credit Hours: 3

Trademark Law | L4115

This course covers the major trademark law doctrines. Topics include the acquisition and preservation of trademark rights, false advertising claims, infringement doctrines, defenses, and remedies, with attention to internet issues and recent developments in the law.

Prerequisites: Intro to IP recommended
Credit Hours: 3

Trademark Law (Advanced) | L4112

This seminar will focus on complex practical and legal issues confronted by today's trademark practitioners, ranging from brand protection strategies to litigating equitable relief claims for trademark infringement. The course will also cover how trademark principles are being applied to the internet and e-commerce. The course will focus on U.S. trademark law, but will include exposure to the aspects of international trademark law that are most frequently encountered by U.S. trademark practitioners. The course will call for students to participate in hands-on exercises, such as developing a new brand and arguing a preliminary injunction motion. The course requires a basic familiarity with trademark law, but the specific Trademark Law class is not a prerequisite.

Prerequisites: Introduction to Intellectual Property survey course or its equivalent
Credit Hours: 2

Media Law | L4433

This course addresses the First Amendment, statutory, and common law regimes under which the news media operate in the United States, ranging from the seminal New York Times v. Sullivan

to the recent decisions on anonymity for online bloggers. Because a media lawyer's tasks involve intense amounts of writing, the course will have four to five practical writing exercises, ranging from the drafting of a complaint to a motion to quash a subpoena, and the like.

Prerequisites: None
Credit Hours: 3

Colorado BioScience ASSOCIATION

January 13, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

The Colorado Bioscience Association, the state's trade association representing over 350 pharmaceutical, biotech, medical device, diagnostics, and ag-bio companies respectfully requests the U.S. Patent Trade Office select Colorado for its next satellite office.

Colorado is the center of bioscience for the Rocky Mountain Region and in the last five years, the bioscience industry in Colorado employed over 20,000, outpacing the nation in job growth by 8.15% in the medical device and 2.9% in the biotech/pharma sectors. Colorado's talented workforce has the best and brightest in the bioscience industry and is ranked 14th nationally in numbers of scientists and engineers per 1,000. Annually, the state churns out over 3,000 Graduate degrees in bioscience alone.

Innovation is engrained in Colorado's culture making it an ideal place for a patent office. Our companies understand the importance of patents and protected intellectual property for the advancement of the U.S. bioscience industry in a global economy. Examples of Colorado's innovative environment include:

- Over the last five years, Colorado companies have been issued over 1500 bioscience related patents, not including patents that are in the pipeline.

- Venture Capital Investments in Colorado bioscience companies alone, ranked 11th in the country with $1.46 billion invested from 2004-09.

- In addition to the 600 bioscience companies located here, a major source of the state's innovation occurs within its academic medical research and development institutions. The University of Colorado, Colorado State

University and the Colorado School of Mines spin out on average 25 bioscience companies per year, not to mention our Research Hospitals such as National Jewish, Children's Hospital and Poudre Valley Hospital.

- According to a study in 2010 by Battelle, the Colorado Bioscience Industry and its research universities ranked 9th nationally with over $437 million in R&D expenditures and received over $375 million in NIH Funding.

- Colorado consistently ranks third nationally as a leader in the Milken Institute's Science and Technology Index report and ranked second in technology concentration.

Colorado has made large infrastructure investments to support the growth of the bioscience industry. To name a few:

- The State Legislature and the Governor or Colorado has also shown their strong commitment to the Bioscience industry by committing over $56 million in grant funding to support early stage companies and proof of concept research developed out of our research institutions. Already in the first three years of the program, over 21 companies and 560 jobs and $64 million in leveraged investment have spun out of the first $19 million awarded.

- One of the State's crown jewels is the newly constructed 578 acre Fitzsimons Life Science District that houses the University of Colorado's, $1.5 billion Anschutz Medical Campus and the 184 acre Colorado Science and Technology Park. The Medical campus offers 15 pre-built labs, access to over 80 core laboratories, and approximately 18 million square feet of health and science related facilities.

- Led by Nobel Laureate, Dr. Tom Cech, the University of Colorado BioFrontiers Institute recently raised $300 million for a new $250,000 sq. ft. facility that will bridge traditional academic silos and encourage collaboration between scientists. Today, BioFrontiers is attracting talented researchers and students by providing an environment that encourages and rewards innovative thinking and collaborative research.

- Many of Colorado's early-stage companies stem from the region's incubators and accelerators, including the 37,000sf accelerator expansion being added to the Incubator at the Fitzsimons Redevelopment Authority, the Center for Drug, Device, Diagnostics and Development (CID4), CSU's Research Innovation Center capable of manufacturing clinical-grade vaccines and biologics, the Rocky Mountain Innosphere Incubator supporting bioscience, clean tech and technology companies, and the Boulder Innovation Center

with over 900 business advisors are just a few examples of the strong support system that exists for entrepreneurial companies.

- Located on CSU's Foothills Campus, the Judson m. Harper Research Complex houses the Infectious Disease Center, Rocky Mountain Regional Biocontainment Laboratory, Arthropod-borne and Infectious Diseases Laboratory (AIDL), the Centers for Disease Control and Prevention's National Center for Zoonotic, Vector-borne and Enteric Diseases, the USDA- APHIS National Wildlife Research Center, and the newly completed $53 million Research Innovation Center to research and develop new bioscience products.

- Colorado State University's nationally recognized Animal Cancer Center for its veterinary oncology and cancer research is investing $7.5 million in campus improvements.

- The nine-county region is also home to numerous public and private bioscience research assets including the Colorado Clinical and Translational Sciences Institute, the Barbara Davis Center for Childhood Diabetes, the Eleanor Roosevelt Institute, the Webb-Waring Institute for Cancer, Aging and Antioxidant Research, CSU's Animal Reproduction and Biotechnology Laboratory and home of USDA's Seed Laboratory.

Colorado is a center of innovation for the Rocky Mountain region and in fact we frequently collaborate and invite other states to participate, such as Montana, New Mexico, Arizona, Utah and Oklahoma in our BioWest and Rocky Mountain Life Science Investor Conferences. In an economy with increasing global competition and diminishing resources, Colorado plays an important central role for our region and is a great strategic location for a USPTO satellite office.

We thank you for your consideration. Please feel free to contact me with any further questions at 303-592-4072.

Sincerely,

Holli Riebel
President and CEO
Colorado Bioscience Association

Steve Orndorff
Chair, CBSA
President
Ariel Pharmaceuticals, Inc.

Kerry Ingalls
V.P. of Colorado Operations
Amgen

Tim Rodell
CEO
GlobeImmune

David Mitchell
Executive Director, Plant Manager
Merck, a-Boulder

Mark Spiecker
CEO
Sharklet Technologies, Inc.

Tom Cycyota
President and CEO
AlloSource

William Hiatt
President & Chief Executive Officer
CPC Clinical Research

Len Pagliaro
CEO
Siva Therapeutics Inc

Charles Eggert
President and CEO
OPX Biotechnologies, Inc

John Brackney
President and CEO
South Metro Denver Chamber

Greg Baldwin
President and CEO
Baxa Corporation

William Vaughan
Director, Technology Transfer
Colorado School of Mines

Dan Stinchcomb
CEO
InViragen, Inc.

Michael R. Bristow
President & CEO
ARCA Biopharma

Joe Guiles
VP of Development & General Manager
Cedarburg Hauser

Denise Brown
President
Fitzsimons Redevelopment Authority

Scott Deeter
President and CEO
Ventria Bioscience

Len Pagliaro
CEO
Siva Therapeutics Inc

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January 20, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

The Colorado Energy Coalition is pleased to provide this letter of support for the development of a U.S. Patent and Trade satellite office in Colorado.

The Colorado Energy Coalition is an initiative of the Metro Denver Economic Development Corporation. The Energy Coalition's 90-plus members include companies from all sectors within the energy cluster – fossil fuels and cleantech – as well as representatives from government, law, finance, education, trade associations, economic development, and the public workforce system.

Colorado's culture of innovation is among its strongest assets. We understand the importance of patents and protected intellectual property in developing an energy industry that strengthens and secures the United States' leadership position in the global energy economy. For example:

- Of the 2,135 patents issued to Colorado inventors in 2010, 301 patents were for energy-related inventions (utility patents).

- Venture capital investments in Colorado in 2010 included 83 deals for a total investment of $483 million.

- Colorado ranked fifth among the 50 states on the Clean Edge, Inc. *Clean Energy Leadership Index* in 2011.

- According to Dun & Bradstreet, Inc., Colorado ranked 10th out of the 50 states for fossil fuels employment concentration in 2011, directly employing 37,700 people. Average annual direct employment growth (2006-2011) in fossil fuels was 3.1 percent compared to the national average of 2.8 percent.

- According to Dun & Bradstreet, Inc., Colorado ranked fourth out of the 50 states for cleantech employment concentration in 2011, directly employing 21,000 people. Average annual direct employment growth (2006-2011) in cleantech was 6.6 percent compared to the national average of 2.1 percent.

- The National Renewable Energy Laboratory (NREL) is the only U.S. Department of Energy laboratory dedicated to the research, development, commercialization, and deployment of renewable energy and energy efficiency technologies. NREL's Technology Transfer Office works with private- and public-sector organizations to successfully transfer technologies into commercially viable products and businesses. For example, Abound Solar Manufacturing, LLC, of Longmont, with the help of NREL, has developed a method to make cadmium telluride solar cell modules in less than two hours – the fastest in the industry. Abound was part of NREL's PV Technology Incubator, and its workforce has grown from 33 to 330 employees. NREL makes a significant contribution to Colorado's economy. In fiscal year 2011, NREL:

    - Generated an $831.3 million economic impact.
    - Directly employed 3,198 people, and supported 1,046 indirect jobs and 2,038 induced jobs.
    - Employed a high-level science, technology, engineering, and math (STEM) workforce of which 30.6 percent held doctorates/PhDs, 32.4 percent held masters' degrees, and 32.4 percent held bachelors' degrees. More than 69 percent of workers contribute to core research and development at NREL.
    - Hosted 11,324 visitors from around the world with a total economic impact of almost $1 million, *in addition to* visitors engaged in research partnerships.

- Colorado is a recognized leader in energy for the Rocky Mountain region. The NREL annual Industry Growth Forum is held in Denver, bringing together entrepreneurs and venture capitalists from around the world. Hundreds of start-up companies apply each year for an opportunity to present their technologies to a panel of venture capitalists and business advisors, and to learn from these experts how to strengthen their business plans. In 2011, 30 companies were selected to participate in the 24th Annual Industry Growth Forum, from a pool of 350 applicants. The forum also includes a speed networking event that provides entrepreneurs with direct access to venture capitalists and advisors through one-on-one meetings. In addition, Colorado hosts annual conferences for a variety of national and regional audiences, such as the Global New Energy Summit, The World Renewable Energy Summit, the Sustainable Opportunities Summit, and the Colorado Oil and Gas Association's Energy Epicenter conference.

Innovation in Colorado is fueled by collaboration at all levels:

- The Colorado Renewable Energy Collaboratory is a research partnership among NREL and Colorado's top research universities—the Colorado School of Mines, Colorado State University, and the University of Colorado Boulder. The Collaboratory was formed to develop renewable energy products and technologies for rapid commercialization. To develop cutting-edge technologies in solar, wind, biofuels, carbon management, and energy efficiency, the Collaboratory unites world-class researchers and industry leaders in six research centers. For example, the Solar Technology Acceleration Center is the largest test facility for solar technologies in the United States. It provides a unique venue for research partnerships among companies such as Xcel Energy, SunEdison, Abengoa Solar, and the Electric Power Research Institute.

- The Engines and Energy Conversion Lab, a research laboratory within the Department of Mechanical Engineering at Colorado State University, engages students and researchers in developing technologies and products to meet global energy challenges and opportunities. The

lab's research focuses on engines, biofuels, energy for development, and renewable and distributed power. It is a world-class laboratory with global field resources to test and refine applications and ideas worldwide. The lab's sponsors include the Oak Ridge National Laboratory, the Colorado Renewable Energy Collaboratory, Woodward, EnCana, Anadarko Petroleum Corporation, Bosch, Hewlett Packard, John Deere, and Caterpillar, among others. Research conducted at the Engines and Energy Conversion Lab has led to the creation of companies such as Solix Biofuels (biofuels from algae), Spirae (large-scale grid integration), EnviroFit (pollution-reducing technologies for the developing world), and VanDyne Super Turbo (piston- and turbine-engine hybrids).

- The Colorado Clean Energy Cluster is an economic development organization dedicated to creating primary jobs in the clean energy sector through formal partnerships among clean energy companies, the public sector, and higher education. It fosters market transformation through actionable projects and initiatives that directly benefit Colorado's clean energy companies. Its FortZED initiative is creating an energy district that generates more energy than it uses on an annual basis. FortZED encompasses downtown Fort Collins, Colorado and the campus of Colorado State University, making it the largest active net-zero district in the world. FortZED provides a strong competitive advantage for the many cleantech companies in Colorado participating in its signature project, the Renewable and Distributed Systems Integration (RDSI) project. Funded through a $14 million grant from the U.S. Department of Energy, and matching contribution funds, RDSI provides a venue for clean energy companies to showcase their talents, from renewable energy and demand response technologies to grid communication strategies. FortZED is projected to create between 200 and 300 high-paying primary jobs in the region.

Colorado's well-established energy ecosystem brings together partners from private industry, research universities, federal laboratories, investors, and lawyers. Colorado is a strong tactical location for a USPTO satellite office.

We hope you will give Colorado's application all due consideration. Please let us know what additional information or assistance we can provide to the selection committee.

Sincerely,

Tim Heaton, Vice President
Coolerado Corporation, and
Co-Chair, Colorado Energy Coalition
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Lee Boughey, Senior Manager
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COLORADO SPACE COALITION
A MILE CLOSER TO SPACE

January 20, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

I am writing on behalf of the Colorado Space Coalition (CSC) to convey our strong support for the development of a new U.S. Patent and Trademark Office (USPTO) satellite office in Colorado.

The CSC's membership represents more than 40 aerospace industry stakeholders in Colorado, including the region's major aerospace and defense companies: Ball Aerospace, Boeing Company, ITT Exelis, Lockheed Martin Space Systems, Northrop Grumman, Raytheon Company, Sierra Nevada Corporation and United Launch Alliance. Together with the CSC's small and mid-size company members, these partners represent the full supply chain in the military, civil, and commercial space markets. The CSC's goal is to build on Colorado's diverse company base to further grow the state's aerospace industry, and increase recognition of Colorado as the best place for aerospace companies to locate and thrive.

Colorado has the second largest private sector space economy in the nation, with 150 aerospace companies, and in total more than 400 businesses providing space-related products and services. Innovation is a major driver of Colorado's dynamic aerospace industry, and the ability to identify, develop, and bring new solutions and technologies to market is of critical importance to the industry. The location of a USPTO satellite office in Colorado would be a valuable asset for the many companies working here to support programs and missions of national importance. Colorado's aerospace activity provides critical support to national security programs and the communications infrastructure necessary for economic prosperity. Colorado drives global climate monitoring and weather warning systems, and is a leader in developing technologies for the nation's future space exploration program. Colorado is also a strategic hub for geospatial technologies, with two of the country's leading geospatial companies – DigitalGlobe and GeoEye – monitoring the planet from their Colorado facilities.

Colorado is a hub for space-related entrepreneurism, innovation and research and development. The state is the third highest recipient of Small Business Innovation Research Grants, which are a major driver of technology development in the aerospace sector. Colorado ranks fourth for NASA Prime Contract Awards, and also has an abundance of high-tech companies developing viable, cutting-edge technologies in fields such as renewable energy and cyber, providing a fertile environment for innovation opportunities in aerospace with these cross-supporting sectors. Several partnerships and developments in recent years

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have further cemented Colorado's position as a leader of innovative and entrepreneurial aerospace activity:

- In 2010, the Colorado Association for Manufacturing and Technology and NASA signed the Space Act Agreement, creating the Technology Acceleration Program to shorten the time between development and production of aerospace and clean energy technologies by allowing established companies and startups to leverage existing NASA and National Renewable Energy Laboratory resources, engage in joint development projects, and help grow the region's workforce in these industries.
- eSpace: The Center for Space Entrepreneurship is a not-for-profit organization based in Louisville that supports the creation and development of entrepreneurial space companies, the commercialization of the technologies they create, and the workforce to fuel their growth.
- The 8th Continent Project, housed at the Colorado School of Mines' Center for Space Resources, includes a chamber of commerce, business incubator, funding network, and research center. The Project is organizing "Space 2.0" – the emerging generation of entrepreneurial space-related business ventures.
- To address the current and future challenges of commercial space transportation, in 2010 the Federal Aviation Administration established a Center of Excellence for Commercial Space Transportation, of which the University of Colorado at Boulder is a core member. The Center brings together government, industry, and academic institutions to focus on commercial human space flight, space commerce, space launch operations and traffic management, and launch vehicle systems.

Aerospace companies in Colorado benefit from one of the country's most educated workforces, which would also provide an excellent source of long-term patent examiners. Colorado's universities and research centers are leading the charge to educate the next generation of aerospace workers, and the state's high quality of life ensures that the retention rate of highly skilled employees is consistently high. When Boeing and Lockheed Martin formed the United Launch Alliance and established its headquarters in Colorado, the new company successfully attracted and retained approximately 400 former Boeing employees from Huntington Beach in California.

Colorado's aerospace companies benefit from many extensive and wide-ranging partnerships with Colorado's higher education institutions, including: research sponsorships, participation on university engineering committees, technical exchanges between engineers and faculty and students, summer internships, and work share arrangements. In 2011 Sierra Nevada Corporation (SNC) received $80 million from NASA's Commercial Crew Development Program to fund the continued development of its Dream Chaser spacecraft to carry crew and cargo to and from low Earth orbit. SNC has partnered with aerospace engineering students at the University of Colorado Boulder in the development of the spacecraft's "human rating" and cockpit design.

Colorado's strong concentration of high tech R&D is also supported by the extensive federal funding directed toward leading research at Colorado's research institutes and federal laboratories:

- The National Oceanic and Atmospheric Administration (NOAA), the University Corporation for Atmospheric Research, and the National Center for Atmospheric Research, located in Boulder, conduct research in atmospheric and related sciences, including exploring and monitoring worldwide weather, climate, the space environment, and ocean resources.
- A proven training ground for future space scientists and engineers, the Laboratory for Atmospheric and Space Physics at CU-Boulder is the only university-based institution in the world to have designed and built space instruments for NASA that have been launched to every planet in the solar system.

- Colorado State University's Cooperative Institute for Research in the Atmosphere partners with NOAA to provide global climate research, satellite observations, and air quality measurements.

The CSC commends Colorado's leadership for its efforts to locate a USPTO satellite office in this region, and we thank you in advance for your consideration of Colorado's application.

Sincerely,

Andy Love
Major General, USAF (Ret.)
Colorado Space Coalition Co-Chair

January 5, 2012

Mr. David Kappos
Director, U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria VA 22313-1450

Dear Mr. Kappos:

I understand that the US Patent and Trademark Office (USPTO) is considering opening a regional satellite office, and eSpace: The Center for Space Entrepreneurship (eSpace) would like to express its support for locating that office in Denver, CO.

eSpace is a non-profit business incubator and workforce development organization for aerospace companies formed in 2009 from a partnership between the University of Colorado and Sierra Nevada Space Systems (see attached for more details). Our core business is commercializing new innovations by helping entrepreneurial aerospace companies become successful. We also provide training grants to entrepreneurial aerospace companies when they hire technicians or engineers from outside the aerospace industry.

One of the key success factors for the companies with which we work is being able to balance successfully protecting intellectual property within the limited time and funding available. If companies cannot protect their intellectual property within the available time and funding periods, then the innovation will likely not be commercialized (i.e., the company will dissolve), or it will be absorbed by a larger company, usually one of the prime aerospace contractors.

A more central location of a U.S. Patent & Trademark Office will support entrepreneurial companies and, therefore, facilitate the commercialization of new innovations and the creation of new jobs in the U.S. Western region. For example, clarifying patent application issues, which can be a long and arduous process by email, is expedited due to the ability to travel to a more geographically affordable region. This increases the likelihood of entrepreneurial success within the time and funding frames available, reduces overhead costs, and lessens the risk of a technology not being commercialized or being absorbed by a larger prime contractor.

4001 Discovery Drive • Suite 290 • Boulder • Colorado • 80303
http://eSpaceCenter.org
303/630-1611

As a case in point, eSpace is currently working with a company that is facing all of the issues listed above. "ABC Inc." has developed a unique technology that is of great interest to one of the DoD agencies. ABC has won three Phase I SBIRs through this agency and was invited to propose on two Phase II SBIRs. One of the major aerospace contractors is also interested in the technology. ABC cannot afford to apply for a patent, either in time or in money, without the Phase II awards so it is relying on "trade secrets" to protect its intellectual property. However, it would be quite easy for this much larger aerospace contractor to reverse engineer ABC's technology. ABC is concerned that it will not be able to patent the technology in time to protect its intellectual property and is hoping that it is awarded its two Phase II SBIRs in time to apply for a patent.

In addition to the advantages for entrepreneurial innovators, there are many advantages of a Denver PTO location to university students, faculty members, and technology transfer offices in the Western region. Through eSpace's close relationships with several Colorado universities, it is clear that many of the younger faculty and graduate student researchers are more entrepreneurially minded than previous generations. A more centrally located USPTO will, again, expedite the patent examination process and reduce the overhead costs to universities that are already operating within very tight budgets.

In summary, eSpace: The Center for Space Entrepreneurship and its incubated companies strongly support locating a USPTO regional office in Denver. Please feel free to contact me if you have any questions.

Sincerely,

Diane Dimeff
Executive Director
diane@espacecenter.org

eSpace: The Center for Space Entrepreneurship

eSpace: The Center for Space Entrepreneurship (eSpace) is a unique economic and workforce development organization formed from a partnership between Sierra Nevada Space Systems and the University of Colorado. eSpace was established in 2009 as a 501(c)(3) non-profit organization. The Center's mission is to: (1) create and catalyze entrepreneurial aerospace companies, (2) commercialize the technologies created by these companies, and (3) develop the workforce that will fuel their growth as well as the growth of the aerospace industry as a whole. Our mission is accomplished through three educational and training programs described below:

The eSpace Incubator
The eSpace Incubator is a critical component of both the economic and workforce development mission as it provides the environment in which new companies and jobs are created. Through eSpace's access to expensive, industry-approved manufacturing and testing facilities; access to experienced advisors and mentors; funding grants; experience in training entrepreneurs; and its network of connections into the aerospace industry and agencies, aerospace entrepreneurs are able to optimize their chances of successfully creating a new business.

To date, eSpace has incubated 14 companies, two of which have graduated and are on-going concerns, two of which are women-owned, and three of which have significant commercial and green applications. eSpace has created $1.4M in revenue to these companies. For every $1.00 spent on direct costs in this program, $2.63 have been created for the companies, a 163% return on investment.
Contact: Tom Zelibor; tom@espacecenter.org; 303/630-1612

Straight to Space (S2S)
In this program, eSpace provides training grants of up to $4,000 to entrepreneurial aerospace companies when they hire technicians or engineers from outside the aerospace industry. The Straight to Space program was developed to address a significant shortage of aerospace workers due to the current and upcoming wave of Apollo- and Shuttle-era retirements.

To date, eSpace has supported 74 individuals in 23 Colorado entrepreneurial aerospace companies with an economic impact of $3.3M as measured by annual salaries. For every $1.00 spent on direct costs to support this program, $13.93 in annual salaries have been created, a 1,293% return on investment.
Contact: Diane Dimeff; diane@espacecenter.org; 303/630-1611

Venture Design
In its collaboration with the University of Colorado, eSpace provides financial and academic support to eight graduate and undergraduate hands-on design projects that have potential for commercial success. Five of these eight projects have experienced a significant commercial event: Three projects have transitioned into the eSpace Incubator as viable companies, the intellectual property and talent from one project is being acquired by an entrepreneurial aerospace company in Colorado, and one project went on to win an $840,000 NSF grant.
Contact: Diane Dimeff; diane@espacecenter.org; 303/630-1611.

CBA
COLORADO BAR ASSOCIATION
Established in 1897

Jan. 20, 2012

David J. Kappos
Director, U.S. Patent Trademark Office
Mail Stop Office of Under Secretary and Director
P.O. Box 1450
Alexandria, VA 22313-1450

RE: PTO-C-2011-0066, Nationwide Workforce Program

Dear Mr. Kappos,

On behalf of the Colorado Bar Association and its 18,0000 members, I am writing to request Denver be selected as the next satellite office of the U.S. Patent Trademark Office.

Colorado is an important hub in the intellectual property field and has an established relationship with the USPTO. There are approximately 3,000 IP practitioners in Colorado, and more than 700 are members of our IP Section. These attorneys work in a variety of roles, in large and small firms or as in-house counsel. The IP community in Colorado is very active. In February, the CBA's IP Section will host the USPTO Road Show. It has also been chosen as the second national site for the USPTO *Pro Bono* Initiative, which will occur this summer. Likewise, our IP Section hosts a conference annually that draws IP practitioners from across the country.

Also, Colorado is a highly educated state. Colorado features a number of top-tier engineering and research schools, including Colorado School of Mines, Colorado State University, the University of Colorado, and the University of Northern Colorado. Indeed, Colorado is a standout because of its educated working adults – nearly 25 percent of whom have a bachelor's degree and about 13 percent have a graduate or professional degree, compared with 19 percent and about 11 percent nationally, according to the U.S. Census Bureau. The CBA works closely with the University of Colorado School of Law and University of Denver Sturm College of Law to ensure students are prepared to enter the workforce, through mentoring, volunteer, and networking opportunities, as well as continuing legal education courses.

In addition to our standout legal community, Colorado is known for its aerospace, bioscience, information technology, and green energy fields. Likewise, it is a burgeoning area for venture capital firms and entrepreneurs, encouraging innovation.

We feel our educated workforce, coupled with an innovative and technology-focused economy, would ensure a convenient and efficient satellite locale.

Last, Denver is a vibrant city with convenient access to the West and East Coasts. It's also important not to discount the quality of life that comes from living in Colorado. Whether skiing or snowboarding in the winter, climbing a fourteener in the summer, or enjoying the growing arts and restaurant scenes downtown, Denver is a spectacular city in which to work, live, and play. It's the kind of place natives don't want to leave, and others relocate to from across the country.

1900 Grant Street, Suite 900 • Denver, CO 80203-4336
Telephone (303) 860-1115 • Fax (303) 894-0821 • (800) 332-6736 • www.cobar.org

CBA
COLORADO BAR ASSOCIATION
Established in 1897

Thank you and the USPTO for the opportunity to comment on this matter. We hope you will seriously consider Denver in your search. I would be happy to speak with you further on this topic, should you have any questions. I and the rest of the CBA feel that Denver would be an excellent choice for a satellite office of the USPTO.

Sincerely,

David L. Masters, Colorado Bar Association President

1900 Grant Street, Suite 900 • Denver, CO 80203-4336
Telephone (303) 860-1115 • Fax (303) 894-0821 • (800) 332-6736 • www.cobar.org

ARVADA
ECONOMIC DEVELOPMENT ASSOCIATION

January 19, 2012

Director David Kappos
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

On behalf of the City of Arvada, we are writing to express our strong support for the U.S. Patent and Trademark Office currently considering a regional location in the Metro Denver area. As you probably know, Colorado is home to multiple federal laboratories and research universities. As a result, you will be able to access a large pool of talented technology, professional, and support staff for your regional office. Colorado's central location and Mountain Time zone offer extended communication coverage advantages across the country. You will also have easy access to our international airport with over 160 non-stop destinations daily.

Colorado is nationally recognized for its high quality of life, over 300 days of sunshine, and healthy lifestyle. As importantly, Colorado is an innovative State - developing industry clusters which includes energy, aerospace, bioscience, telecommunications, and other high technology industries. Recently Forbes recognized Colorado as one of the top five states for business.

Great things are happening in Colorado. We invite your team to join us and be a part of it.

Sincerely,

Marc Williams, Mayor of Arvada, Colorado
mwilliams@arvada.org

Hazel Hartbarger, Director of Arvada Economic Development Association
hazel@arvada.org

Arapahoe/Douglas WORKS! Workforce Center

January 4, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

Arapahoe/Douglas Works! is submitting this letter to respectfully request that the U.S. Patent Trade Office select Colorado for its next satellite office.

Arapahoe/Douglas Works! is one of nine federally funded workforce regions in Colorado. It serves Arapahoe and Douglas counties, which together make up the southeastern portion of the Denver Metropolitan Area. The two-county Arapahoe/Douglas region makes up approximately 1/3 of the Denver Metro Area's jobs, worker earnings and gross receipts. The region is an information and finance hub, with nearly half of the Denver Metro Area's employment in those sectors. It also has high concentrations of employment in real estate, retail, and professional, scientific & technical sectors.

The workforce in Arapahoe and Douglas counties is diverse and highly skilled. Educational attainment is well above the national average, with 42.5% having a Bachelors degree or higher and over 92% with at least a high school diploma or equivalency.

Since the area is a hub for finance and information sectors, and has strong representation in biosciences, healthcare, aerospace, aviation, defense and engineering, the labor force reflects those industry and occupational skills.

The region boasts a robust skilled labor pipeline, with over 47,000 students in the area are enrolled in high school and over 48,000 in regional colleges and universities. The occupational skills base of the two-county labor force is primarily management, professional, business, financial, sales related and office operations. Representation in technical, maintenance, installation and construction occupations is centered in other counties within the Denver-Aurora Metro Area.

As a regional and national business center for both private and public organizations in the United States, the Denver Metro area has become an important communication, transportation and distribution hub regionally, nationally and globally.

Colorado has the nation's 10th-highest use of broadband Internet, according to Commerce Department and census data, and virtually every household and business

Arapahoe County
6974 S. Lima Street
Centennial, Colorado 80112
Phone: 303.636.1160
Fax: 303.636.1250

Douglas County
4400 Castleton Court, Suite 198
Castle Rock, Colorado 80109
Phone: 303.688.4825 x5037
Fax: 303.688.0871

www.adworks.org

in the Denver Metro area can access broadband service. Denver's central location in the US means you can talk to someone in Asia or Europe in the same business day. Because of its unique geographic location on the 105th meridian, Denver is the only major city in the United States offering single-relay, one-bounce uplinks to world satellite networks and real-time connections to six out of seven continents in a single business day. Top information sector companies in the Arapahoe/Douglas region include Qwest, Time Warner, MediaOne Group, Echostar, and Sprint.

The Denver Metro Area is a national and international transportation hub. Transportation and warehousing companies located in the northern portion of the area along the I-70 corridor offer businesses throughout the region easy access to truck transportation. Denver International Airport is the fifth busiest airport in the United States, carrying over 50 million passengers in 2009, and 35.1 million passengers through August 2010.

Arapahoe County is home to Centennial Airport, the third busiest general aviation airport in the United States. Centennial Airport handles nonstop flights to Beijing, Moscow, Tokyo, Amsterdam, London and Paris, and serves a variety of Fortune 500 companies on a regular basis, including General Electric, Wal-Mart, and Lockheed Martin. With such a comprehensive transportation infrastructure, many businesses have chosen to headquarter close by.

Companies that have established corporate headquarters or divisions in the Denver Metro Area recently include TriZetto Group Inc., Juwi (wind energy), American Zephyr, Dot Hill Systems, Ascent Solar Technologies, Vestas Wind Systems, and United Launch Alliance. Siemens Energy, Inc. R&D, Bach Composite Industry, Taptu Ltd., and Aluwind chose this region for their first U.S. offices, and RE Power USA Corp. opened its U.S. headquarters in the metro area. Other companies headquartered in the Arapahoe/Douglas region include TSA Corporate Services, HSS Systems of Virginia, Safeway Stores, Newmont International Services and Columbia HCA's Denver division office.

The Arapahoe/Douglas region is a significant state hub for the oil and gas industry. In 2009, the region had over 13% of the state's jobs in this industry and boasted over 14% of the state's total gross receipts. In 2000, Colorado ranked 10th of all states in crude oil production and 6th in the nation in natural gas production. Colorado is ranked 7th in proven natural gas reserves and 11th in crude oil reserves.

The Denver Metro Area is home to the National Renewable Energy Laboratory, which has helped position Colorado as a hub in renewable energy resources. A five-year agreement between NASA and the Colorado Association for Manufacturing and Technology was announced on December 14, 2010 that will provide support to businesses throughout Colorado to quicken the development to marketplace of clean energy technologies. This partnership, which also includes the National Renewable

Energy Laboratory in Golden, is expected to bring over 10,000 aerospace and clean technology jobs to Colorado by 2016.

Colorado is a clean state that is emerging as a leader in wind and solar power generation. The Danish wind turbine company, Vestas, has invested $700 million in Colorado and brought three major manufacturing facilities and 2,500 jobs. Aluwind, a sister Danish company that produces parts for Vestas wind turbines, has also located a manufacturing facility in Colorado.

In 2011, Colorado ranked 9th in the nation in venture capital investment, with $483 million coming into the state. Over 89% of the venture capital flowing into Colorado comes from companies headquartered in other states. Industry breakdown of venture capital investments includes

- 41% energy
- 18% software
- 15% biotech
- 13% other
- 7% IT
- 6% media/entertainment

Arapahoe/Douglas Works! is committed to helping local businesses find qualified talent quickly and efficiently. Since it is publicly funded, Arapahoe/Douglas Works provides a wide variety of services at no additional cost to businesses. Our Business Development Representatives are experienced in listening to employers' needs and providing solutions to save your organization time, money and valuable resources.

We thank you for your consideration. Please feel free to contact me with any further questions at 303-636-1225.

Sincerely,

Joseph M. Barela
Arapahoe/Douglas Workforce Regional Director
Arapahoe Douglas Works! Division Manager

Arapahoe County
6974 S. Lima Street
Centennial, Colorado 80112
Phone: 303.636.1160
Fax: 303.636.1250

Douglas County
4400 Castleton Court, Suite 198
Castle Rock, Colorado 80109
Phone: 303.688.4825 x5037
Fax: 303.688.0871

www.adworks.org

January 17, 2012

Mr. David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

The Boulder Chamber and its economic development affiliate, the Boulder Economic Council, respectfully encourage the U.S. Patent and Trademark Office to select Colorado and the Denver metro area for its next satellite office.

The Denver region, in which Boulder is located, offers a highly robust and competitive concentration of companies and industries for which research, innovation and patent protection are vital. Among other industries, information technology, aerospace, biotech, cleantech, and telecommunications and their prominence in our region are recognized nationally. Leading companies in each of these industries are well-represented throughout the metro area.

The companies that comprise the core of these industry clusters are reinforced by one of the highest concentrations of research universities and laboratories in the world. Hundreds of millions of dollars in sponsored research are won by Colorado universities annually. In addition, a 2011 study by the University of Colorado at Boulder revealed that federal research labs in Colorado, most of them in the Denver metro area, produce $1.5 billion dollars in economic impact annually. The innovation derived from these research assets propels technology and product development in leading global industries.

Denver's private industries and research institutions all depend on one critical resource: a highly educated, talented and dedicated regional workforce. Our region ranks fourth among the largest metro areas in the U.S. for the percentage of residents with a bachelor's or higher-level degree. The Boulder metropolitan statistical area is number one on the list of most educated metro areas, according to the U.S. Census Bureau. Colorado's concentration of high-tech employment (the

number of workers employed in high-tech per every 1000 private-sector workers) has ranked third-highest nationally for four straight years.

The strengths of our regional workforce are certainly based in part on the desirability of professional jobs available in the private industries and research institutions here. Equally significant, however, is the attractiveness of Denver and Colorado as a place to live. Our desirable quality of life draws educated and talented people from around world. Companies throughout our region tell us that their location in Denver gives them a competitive advantage in recruiting and retaining employees. They say they can find talented employees here and that, when necessary, it is an easy place to which to recruit talent, that the quality of life makes employee retention easy, and that the region is an affordable place to live.

We hope this letter conveys some of the key advantages of a Colorado location for a USPTO satellite office. Our private industries propelling the global economy, our world-class research institutions, our highly-educated and technically-skilled workforce, and our desirable quality of life make Denver a compelling choice for many companies and employees.

Thank you for considering Colorado as a location for your next satellite office. Please feel free to contact us for more information about our region.

Sincerely,

Susan Graf
President and CEO
Boulder Chamber
303-442-1058

Clif Harald
Executive Director
Boulder Economic Council
303-786-7567

City of Centennial

Mayor
Cathy Noon

City Council

District 1
Rick Dindinger
Vorry Moon

DISTRICT 2
Sue Bosier
Keith Gardner

DISTRICT 3
Patrick Anderson
Rebecca McClellan

DISTRICT 4
Todd Miller
Ron Weidmann

January 23, 2012

Director David Kappos
US Patent & Trade Office
PO Box 1450
Alexandria, Virginia 22313-1405l

Dear Mr. Kappos:

The City of Centennial and its 4,000 businesses respectfully request your consideration of the metro Denver region as a satellite location for a US Patent & Trademark office. Centennial sits at the center of Denver's southeast region and is home to a diverse base of companies revolutionizing the aerospace, defense, information technology and medical technology industries.

The USPTO plays a critical role in job creation by supporting innovation. In our recovering economy, relieving backlogs and reducing delays in the patent and trademarking process is critical to supporting growth, particularly for small and start up businesses.

There are multiple reasons why metropolitan Denver is the best location for a new USPTO satellite. With our rich concentration of federal laboratories and research universities, metro Denver is already a critical hub for technology transfer to commercially viable private sector products. Metro Denver is easily and affordably accessible. Denver International Airport is the nation's 5th busiest airport and offers fares 10% or more below the national average. We offer a high quality of life for a reasonable cost of living. National surveys confirm that with 300 sunny days per year, four major sports teams and the Rocky Mountains in our backyard, metro Denver is a place where people want to live. We have a growing workforce of collaborators, innovators and entrepreneurs. The highly skilled workers who comprise our aerospace, energy, bioscience, telecommunications and other high-tech industry clusters offer a large pool of potential employees that can be drawn upon by the USPTO for filling the long-term patent examiner positions.

Our nation's economic recovery will depend in large part on our ability to innovate and speed new technologies to the international marketplace. Addressing the backlog of patent requests and supporting innovation in the technology rich western and southwestern US will be a critical factor in our nation's long-term success. As you consider your options for the next satellite office location, please remember the support of our community and that metro Denver offers an unparalleled combination of quality of life and innovation supporting resources that make it an ideal location for a new satellite USPTO.

Sincerely,

Cathy Noon
Mayor of Centennial, Colorado

cc: Monisha Merchant, Office of Senator Bennet
Pam Reichert, Metro Denver Economic Development Corporation

THE CHAMBER
colorado springs

January 9, 2012

US Patent and Trademark Office
600 Dulany Street
Alexandria, VA 22314

Re: Satellite Office Location – Colorado

To Whom It May Concern:

The Greater Colorado Springs Chamber of Commerce would like to add our support to the efforts of locating a US Patent and Trademark Office in Colorado.

Colorado was home to 547,770 firms during the 2007 census, 41,023 of which were in Colorado Springs. Many of these businesses are small innovative, entrepreneurial ventures that would be greatly served by the addition of a local Patent and Trademark Office.

We are already home to a local Small Business Development Center office (located at the University of Colorado), Technology Incubator, Service Core Of Retired Executives branch, El Pomar Institute for Innovation and Commercialization (EPIIC) and a variety of other business resources. These all demonstrate our commitment to the success of public, private, and university collaborations.

Adding a USPTO satellite office located closer to the Colorado Springs' "innovation ecosystem" will help advance the business development and economic health of the region and the many innovative businesses in Colorado Springs. With a USPTO satellite office in the state, we could see greater investment capital sooner due to faster turnaround on patent application reviews. In addition; we have many examples where industry is able to recruit a qualified workforce to move to Colorado, when the workforce is not available locally.

Adding this office to our portfolio of resources would be a great opportunity for our entire state. We ask for serious consideration in providing this important asset to Colorado citizens.

Sincerely,

Stephannie J. Finley

Stephannie Finley
President of Governmental Affairs and Public Policy

DENVER METRO CHAMBER OF COMMERCE

January 25, 2012

Mr. David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

The Denver Metro Chamber of Commerce (Chamber), representing 3,000 companies with 300,000 employees, strongly urges the United States Patent and Trademark Office (USPTO) to select the metro Denver region as a new location for a regional patent and trademark office.

The metro Denver region is synonymous with innovation with thriving aerospace, aviation, bioscience, energy, broadcast and telecommunications and information technology clusters. Economic development, infrastructure, health care and education are pillars of our organization and we work every day to ensure a strong, dynamic, business environment that would support a regional patent and trademark office. Many of our innovative member companies and entrepreneurs would directly benefit from a local patent office and a metro Denver patent and trademark office would support our economy in general.

The Chamber has been instrumental in the development of our transportation infrastructure required to support a regional patent office. We have led community campaigns to develop our state of the art transportation system, including Denver International Airport and the FasTracks light rail system, which provide the fundamental infrastructure the USPTO requires for a regional office to serve a national and global client base.

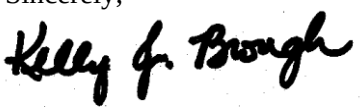
We believe the metro Denver region provides an ideal location to meet the USPTO's objective to improve its employee retention rates. The Metro Denver region's growth over the past 10 years is testament to our ability to not only attract talent, but to retain it. Population growth has averaged 1.5 percent per year for the past 10 years and net migration represents 45 percent of the region's total population change. Metro Denver is among the Brookings Institution's nine "Next Frontiers", or metro areas with the highly educated and diverse population needed to support future growth in a technology and diversity-driven economy.

The Chamber looks forward to the opportunity to work directly with you to engage a regional office and its employees in our community. To this end, the Chamber provides individuals with opportunities to discover their passion and become involved in the community in meaningful ways. The Denver Metro Chamber Leadership Foundation is nationally known for its programs to foster civic leadership, including

Access Denver, the Colorado Experience, and the Leadership Exchange Program, which are platforms for learning, networking, and volunteering in our community, and sharing best practices among communities. Strengthening employees ties to the community through these and other Chamber programs can serve to improve staff retention.

We look forward to welcoming you to Denver in the near future and invite you to call upon us if we can be of further assistance as you make your decision.

Sincerely,



Kelly Brough
President and CEO
Denver Metro Chamber of Commerce

DOWNTOWN DENVER PARTNERSHIP, INC.
DOWNTOWN DENVER, INC.
DENVER CIVIC VENTURES, INC.
DOWNTOWN DENVER EVENTS, INC.
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www.downtowndenver.com
info@downtowndenver.com

January 23, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Mr. Kappos:

On behalf of the Downtown Denver Partnership, it is with great pleasure that I write this letter in support of the U.S. Patent and Trademark Office selecting Metro Denver as the location for a regional patent office.

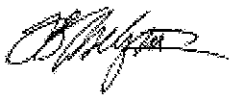
The Downtown Denver Partnership is a 55-year old, private-sector non-profit business organization that works to support the 5,000 Downtown businesses, 400 commercial property owners and 110,000 employees in the largest business district in the Rocky Mountain region. As a partner of the Metro Denver Economic Development Corporation, the Partnership also works directly with local economic development agencies to recruit and retain businesses within Colorado's innovative industry clusters, including energy, aerospace, bioscience, software and telecommunications. Examples of Downtown companies within these clusters are EnCana Oil & Gas, DaVita, Suncor Energy, CenturyLink, MapQuest, Ping Identity, BP America and Anadarko Petroleum.

By selecting the Metro Denver area, you will have access to numerous existing research universities and federal agencies and laboratories. In Downtown Denver alone, we are home to the Auraria Higher Education Center (AHEC): Metro State University, University of Colorado at Denver, and the Community College of Denver, as well as the Environmental Protection Agency's Region 8 headquarters. With access to these and other key research laboratories, including the National Renewable Energy Lab in Golden Colorado, our state offers a large number of technology workers that could serve as excellent long-term patent examiners.

The Downtown Denver Partnership is particularly proud of its collaboration with the state on the Colorado Innovation Network (COIN), a public enterprise that seeks to increase the state's reputation for innovative industries and to boost the amount of jobs and capital going to companies in that sector. In addition, the Partnership is working with AHEC to establish a public/private business incubation center that can leverage the proximity of the three institutions of higher education to the Downtown business community.

Our access to innovation and talent are two of the many reasons why the Downtown Denver Partnership believes you should select Colorado as the location for a regional patent office. Thank you for your consideration.

Sincerely,



Ferd Belz
Chair, Downtown Denver Partnership, Inc.

Cc: Monisha Merchant, US Senator Michael Bennet's Office
Pam Reichert, Metro Denver Economic Development Corporation

JEFFERSON COUNTY
ECONOMIC DEVELOPMENT CORPORATION

Opening the Future for Business in Jefferson County, Colorado

January 18, 2012

Mr. David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Mr. Kappos:

Jefferson County Economic Development Corporation (Jeffco EDC) strongly supports establishing a U.S. Patent and Trademark (USPTO) satellite office in the metropolitan Denver, Colorado area.

We are the economic development organization for Jefferson County, Colorado—part of the western corridor of metropolitan Denver. Jefferson County is one of the most populated counties in Colorado, housing a highly-educated workforce. The county has a large concentration of federal employees working and living here. It is home to the Denver Federal Center— a 623-acre campus consisting of fifty-five federal buildings, totaling four million square feet of rentable space with 6,200 federal employees. This is the largest concentration of federal agencies outside of Washington D.C.

With over 40,000 businesses in our community, we have a long history of developing and incubating strong, high-tech industry clusters that include aerospace, bioscience and energy. Innovation is engrained in Jefferson County's culture making it an ideal place for a USPTO satellite office. Examples of our major innovative drivers in the community include:

- Lockheed Martin (LMCO)—LMCO employs about 11,300 people in Colorado. Half of them work at the Space Systems headquarters in Jefferson County creating advanced technology systems for space and defense. Recent contract wins/growth areas for the aerospace company locally include: Global Positioning Satellite III, Orion Crew Exploration Vehicle project and United Launch Alliance (joint venture with Boeing).

- The National Renewable Energy Laboratory (NREL)—The U.S. Dept. of Energy's premier and only laboratory dedicated entirely to renewable energy and energy efficiency research and development. Already occupying 516,000 square-feet in the Denver West area, NREL received a $101 million budget increase for a major long-term campus expansion at South Table Mountain. A 218,000 square-foot, $64 million Research Support Facility was recently completed.

- Spin-offs from NREL—Many companies and technologies have developed as a result of NREL's research. PrimeStar Solar, located in Arvada, spun out of the Lab and was recently purchased by General Electric solar panels. GE is investing more than $600 million in a solar business built around PrimeStar's technology.

- Colorado School of Mines (CSM)—CSM is a public research university internationally recognized for its leadership in engineering, applied science and related disciplines. It is one of the few universities in the world to offer education from baccalaureate through doctorate levels in all key fields related to energy. The university has a growing technology transfer division.

Metropolitan Denver, Colorado plays an important central role for our region and is a great strategic location for a USPTO satellite office. Thank you for your consideration. Please feel free to contact me with any questions at 303-202-2965.

Sincerely,

Kevin McCasky
President and CEO

cc: Monisha Merchant – U.S. Senator Michael Bennet

Metro Denver
Economic Development Corporation

January 23, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Director Kappos:

The Metro Denver Economic Development Corporation strongly urges you to locate your future regional patent and trademark office in the Metro Denver region. We represent the seven-county Metro Denver area plus the two Northern Colorado counties (Larimer and Weld), bringing together the strength of 70 communities and 40 economic development organizations. As the premier economic development organization providing global marketing and site selection services for Metro Denver and Northern Colorado, we know first-hand that our region is an ideal location for a regional patent and trademark office.

A Metro Denver office would help you to meet your strategic objectives to create jobs and encourage innovation throughout the country through reducing the backlog of patent applications and improving employee retention.

- Our central location in the Mountain time zone, easy and affordable access through Denver International Airport, and vast public transportation system all extend the PTO's capacity to service the western hemisphere, Europe, and Asia, and provide many applicants with the opportunity to make a day trip for their patent application interview.
- Our lower cost of living relative to the coastal metropolitan areas and high quality of life attracts a skilled and active population.
- Our highly educated workforce ranks second only to Massachusetts for the number of college-educated adults.

Seven years ago, we embarked on a strategy to cultivate industry clusters, defined as sectors in which Metro Denver has a higher concentration of employment than the national average. The results are a dynamic, growing economy that supports and fuels innovation in a broad range of industries. This has led us to achieve our status as:

the number one private sector employer in the aerospace industry and the center of advanced manufacturing of NASA technologies through the nascent Aerospace and Clean Energy Park (ACE);

a growing force in bioscience, ranked ninth nationally with more than $437 million in research and development expenditure and more than $375 million in NIH funding in 2010;

fifth on CNBC's 2011 list of "America's Most Wired Cities" with an average download speed of 10.2-megabits-per-second (Mbps). The city received particular accolades for its large number of state and

1445 Market Street
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T 303.620.8092
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info@metrodenver.org
www.metrodenver.org
www.metrodenverGIS.org

Affiliate of
DENVER METRO CHAMBER OF COMMERCE

federal agencies and its key role as a distribution hub, making fast Internet connections a necessity in the region;

the center for the new energy economy, with more than 60 pieces of legislation passed since 2006 supporting the development and distribution of electricity, wind, solar, and natural gas and sustaining the growth of cleantech jobs in the state.

When you combine all of this with Colorado's four major research universities, 24 federal laboratories, numerous supportive industry associations, and the Renewable Energy Collaboratory, there is no better location to achieve our nation's goal to remain the global center of innovation.

Our office stands ready to assist you if Denver is selected for a regional patent and trademark office. As the central organization businesses turn to for site selection, we would look forward to the opportunity to work with the local federal General Services Administration office to help you find the best sites for an office. We can also help provide community information and services to current and future employees who are moving into the region.

We look forward to working with you to establish a model regional patent and trademark office.

Sincerely yours,

Tom Clark

Tom Clark
Chief Executive Officer
Metro Denver Economic Development Corporation

NORTHERN COLORADO
ECONOMIC DEVELOPMENT CORPORATION

January 12, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

Northern Colorado Economic Development Corporation (NCEDC), the only county-wide economic development organization in Larimer County Colorado representing over 130 business investors in northern Colorado, respectfully requests the U.S. Patent Trade Office select Colorado for its next satellite office. NCEDC believes that Colorado is an excellent location for this facility because of the vast amount of resources that are available to support this important office.

The new drivers of the economy are innovation and entrepreneurship, particularly in Colorado and the Rocky Mountain region. NCEDC focuses on primary job attraction, business growth and retention along with our partners, whom we help turn great ideas into great businesses. These businesses, in turn, create high wage job opportunities for the community, fuel the growth of the industries of the future and stimulate the economic development model for secondary job growth. We are striving to ignite the innovation economy in Colorado and develop the Rocky Mountain regional entrepreneurial and innovation business ecosystem, utilizing the industry cluster model.

Technology, Innovation and entrepreneurship are engrained in northern Colorado's culture making Colorado an ideal location for a patent office. Our companies understand the importance of patents and protected intellectual property for the advancement of the cluster industries in a global economy. Many of Colorado's early-stage companies stem from the region's incubators and accelerators, including: CSU's Research Innovation Center capable of manufacturing clinical-grade vaccines and biologics, the Rocky Mountain Innosphere Incubator supporting bioscience, clean tech and technology companies, Poudre Valley Health Systems system-wide research initiative with a primary focus on the Medical Center of the Rockies Research Foundation and NASA supported Rocky Mountain Center for Innovation and Technology facility located in Loveland, Colorado. This facility / project focuses on providing the private sector with a facility and resources necessary to develop many of the NASA generated patents and ultimately take the products to the market place.

Colorado is a center of innovation for the Rocky Mountain region and thus would be a great strategic location for a USPTO satellite office.

3553 Clydesdale Parkway, Suite 230 • Loveland, CO 80538 • ph. (970) 667 0905 • fx. (970) 669 4680 • www.ncedc.com

Thank you for your consideration. Please do not hesitate to contact about this project or doing business in northern Colorado.

Sincerely,

Walter J. Elish
President and CEO

South East Business Partnership
The Economic Development Leader For South Metro Denver

304 Inverness Way South, Suite 315
Englewood, CO 80112-5826
303-792-9447 ● 303-792-9452 (fax)
www.sebp.org

January, 20, 2012

Director David Kappos
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Director Kappos,

The Southeast Business Partnership (SEBP) is an organization of government and business leaders building economic foundations for the present and future economic vitality and sustainability of the South Metro Denver Region. As the preferred location for corporate headquarters in Colorado, SEBP believes that the South Metro Denver Region would be an ideal location for a satellite U.S. Trademark and Patent Office (USPTO).

As a center of innovation and growth in several industry clusters, Colorado would be an excellent location for the proposed USPTO satellite office. Energy, aerospace, bioscience, medical technology, telecommunications and other high technology industries already call Colorado home and would benefit from a USPTO office within close proximity, including the recent relocation of Arrow Electronics, one of the largest electronics companies in the world with many distribution and supply chains.

The South Metro Denver Region is known for a highly educated and talented workforce. Additionally, several federal laboratories and research universities are located in the Denver Metro Region. The staff of these existing institutions and the abundance of highly skilled technology workers offer an excellent talent pool to create new patents and draw from as long-term patent examiners.

In support of locating a USPTO satellite office in the Denver metro Region, SEBP has submitted available locations at Arapahoe Station and the RidgeGate developments, both along the I-25 corridor, for consideration. SEBP is looks forward to working with USPTO representatives on this exciting project.

We hope that you will take our strong support into account when making your decision.

Sincerely,

Mike Fitzgerald
President/CEO
Southeast Business Partnership

January 15, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

The South Metro Denver Economic Development Group, a regional organization representing 150 clients and the economic development interests of the South Metro Denver community, respectfully requests that the U.S. Patent and Trademark Office select Colorado for its next satellite location.

Colorado is the center of technology employment Rocky Mountain Region, and the South Metro Denver area represents major employers in all of its emerging industry clusters including aerospace, bioscience, energy, renewable energy, technology, and telecommunications. Innovation, therefore, is engrained in Colorado's culture, making it an ideal place for a satellite patent office. Examples of Colorado's innovative environment include:

- Colorado consistently ranks third nationally as a leader in the Milken Institute's Science and Technology Index report and ranked second in technology concentration.

- Colorado is a leader in the Renewable Energy Industry, and are ranked 5th in the Clean Energy Leadership Index (Clean Edge). We are also home to the National Renewable Energy Laboratory, the Colorado Center for Renewable Energy and Economic Development (CREED), the CleanLaunch technology incubator, and several significant renewable energy primary employers.

- The Colorado Bioscience Industry and its research universities ranked 9th nationally with over $437 million in R&D expenditures and received over $375 million in NIH Funding, according to a study in 2010 by Battelle.

- Colorado ranks third nationally in the Aerospace Industry, with 162,320 employed in space related jobs, many of which are located at primary employers in the South Metro Denver area.

Colorado is a center of innovation for the Rocky Mountain region. In an economy with increasing global competition and diminishing resources, Colorado plays an important role in our national economy, and is a great strategic location for a USPTO satellite office.

We thank you for your consideration. Please feel free to contact us with any further questions at 303-795-0142.

Sincerely,

Jeff Holwell

Jeff Holwell
Director
South Metro Denver Economic Development Group

January 18, 2012

Mr. David Kappos
Under Secretary of Commerce for Intellectual Property
Director, United States Patent and Trademark Office
PO Box 1450
Alexandria, VA 22313-1450

Bruce A. Kugler
Robert R. Brunelli
Attorney
Direct: 303.863.2992
303.863.2980
bkugler@sheridanross.com
rbrunelli@sheridanross.com

Via Email

Re: Colorado Satellite Patent Office

Dear Director Kappos:

It is with pride and confidence we submit this letter in support of a Colorado satellite Patent Office.

Sheridan Ross PC is an intellectual property boutique law firm. Intellectual property is all we do. We have continuously provided intellectual property legal services to Colorado, the Rocky Mountain region, nationally and internationally since our founding in 1954.

Speaking with experience, we can state that Colorado comprises a vibrant and technologically diverse entrepreneurial business community. The technology base includes telecommunications, software development, defense, launch and space vehicles, manufacturing, biotechnology, medical instrumentation, etc., among many others. In addition, Colorado also has a substantial and highly regarded educational support structure. We have four top tier universities: Colorado School of Mines, the University of Colorado, University of Denver and Colorado State University, that offer quality science, engineering and technology degrees, along with a number of other 4 year universities and colleges, including Adams State College, Colorado Mesa University and Western State University. Colorado also has two highly rated law schools at the University of Colorado and Denver University Sturm College of Law.

Our clients, as well as our law firm, benefit from this environment. Because Colorado offers a well educated population, as well as a healthy recreational lifestyle, businesses are attracted to and stay here. This also enhances the ability to attract and maintain employees from outside of Colorado. A majority of our employees are not native Coloradans, but they have no desire to relocate from Colorado. This is not surprising considering that Denver ranks high in quality of life factors that are important to retaining a highly-skilled workforce and is consistently ranked as one of the best places to live in the US. We firmly believe if a satellite office is placed here in Colorado, the USPTO will similarly be able attract and retain high quality and dedicated employees.

As you know, we live in a globally competitive world and science, engineering and technology are fundamental to the continuing success, influence and stature of the United States. The development and protection of intellectual property is a critical ingredient to our nation's on-going success and our clients recognize it is also central to their success. Most, if not all, of our

clients would confirm the importance of intellectual property in the advancement of their industries and their particular businesses. While this may be obvious to large businesses who operate at the international and national level, it is equally true for mid-sized, smaller and start-up businesses.

To many of our clients, the U.S. Patent Office is akin to a black box; they don't know or see how it works. Having a branch office in the Denver area can alleviate the mystery. Clients would not only have an opportunity to visit but, depending upon the examination group, they may be able to personally attend examiner interviews, which can be a tremendous thing for not only the client, but the examiner as well. Additionally, our clients would greatly benefit from US Patent Office outreach activities, including educational opportunities that would be presented at the Colorado office.

In summary, we are very pleased with the passing of the America Invents Act and firmly believe that it takes a positive step toward patent reform by expanding the USPTO through establishing satellite offices to make it more accessible, efficient, and timely. A Colorado patent office would serve the key USPTO goal of achieving better outreach and improving engagement with the patent community. It will also promote a core USPTO objective of reducing application pendency and improve patent quality as a result of the USPTO to attract and retain highly qualified patent examiners in Colorado.

Sincerely,

SHERIDAN ROSS P.C.

Bruce A. Kugler
President

Sincerely,

SHERIDAN ROSS P.C.

Robert R. Brunelli
Vice President and Corporate Secretary

BAK/RRB/gb

DENVER MUSEUM OF NATURE & SCIENCE

January 10, 2012

David Kappos
Director
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450.

Dear Director Kappos:

I am writing in support of the consideration of Colorado for a U.S. Patent and Trademark Office (USPTO) satellite office.

My interest in the matter of selecting Colorado as a USPTO satellite office stems from my passion and dedication to health science education in the region. As curator and chair of the Health Sciences Department at the Denver Museum of Nature & Science, and as co-director of the Colorado Bioscience Education Committee, I know firsthand how the bioscience sector directly affects the educational outreach and opportunity of Colorado's youth we are able to provide and support. These opportunities would be greatly strengthened with the growth of our bioscience sector as a direct impact of securing a USPTO satellite office.

Colorado is home to one of the country's most vibrant clusters of bioscience innovation, technological development, and economic growth, making Colorado the perfect choice for a new office.

Thank you for your time and consideration. Please feel free to contact me with any further questions at 303-370-6086.

Sincerely,

Nicole L. Garneau, PhD
Chair of Health Sciences Department
Curator of Human Health

2001 Colorado Blvd.
Denver, CO 80205-5798
P 303.370.6000
F 303.331.6492

www.dmns.org

Appendix 3 – Transportation

Denver International Airport

Regional Transportation District
- FasTracks

Major Interstate and Regional Highways

Metro Denver Transportation Network

Denver International Airport

Air travelers can reach most U.S. destinations within three hours from Denver.

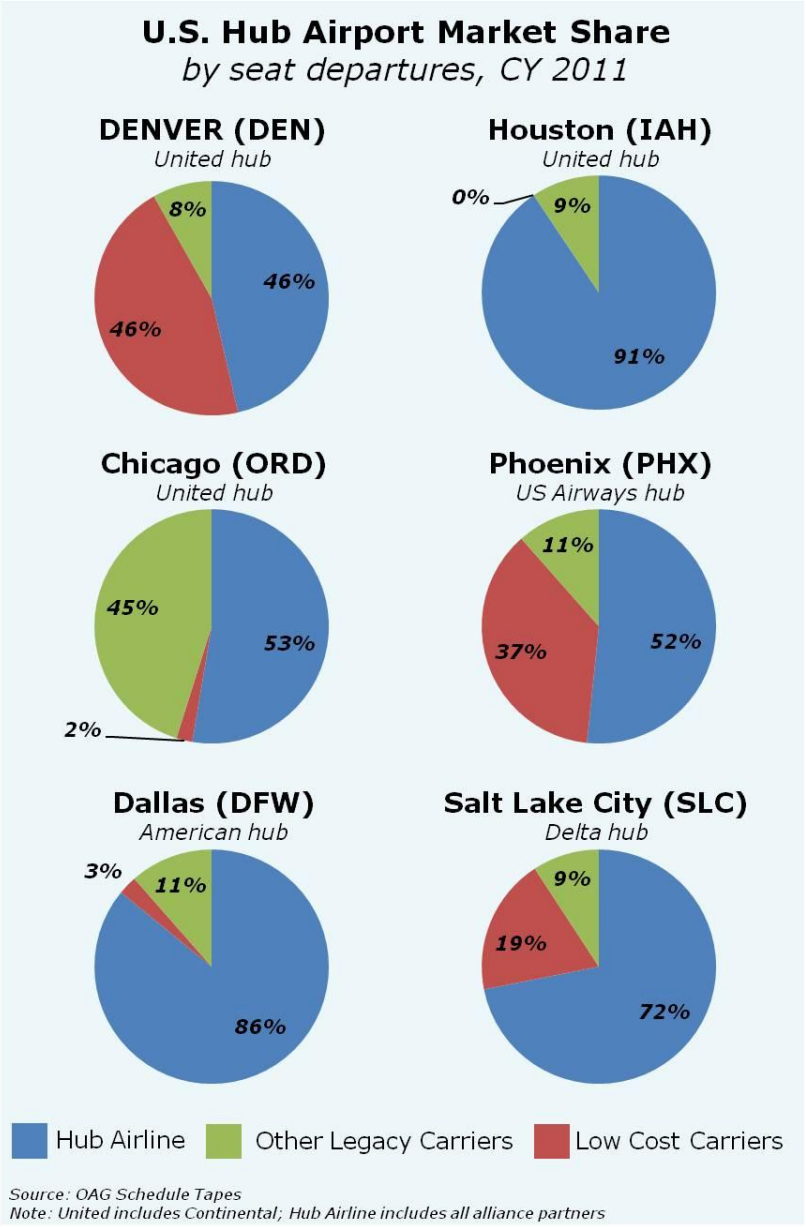
Denver is within 4 hours flying time of every North American city with a population of one million or more

Current Domestic and International Non-stop service

DIA added new destinations expanded service to many cities across the United States in 2011

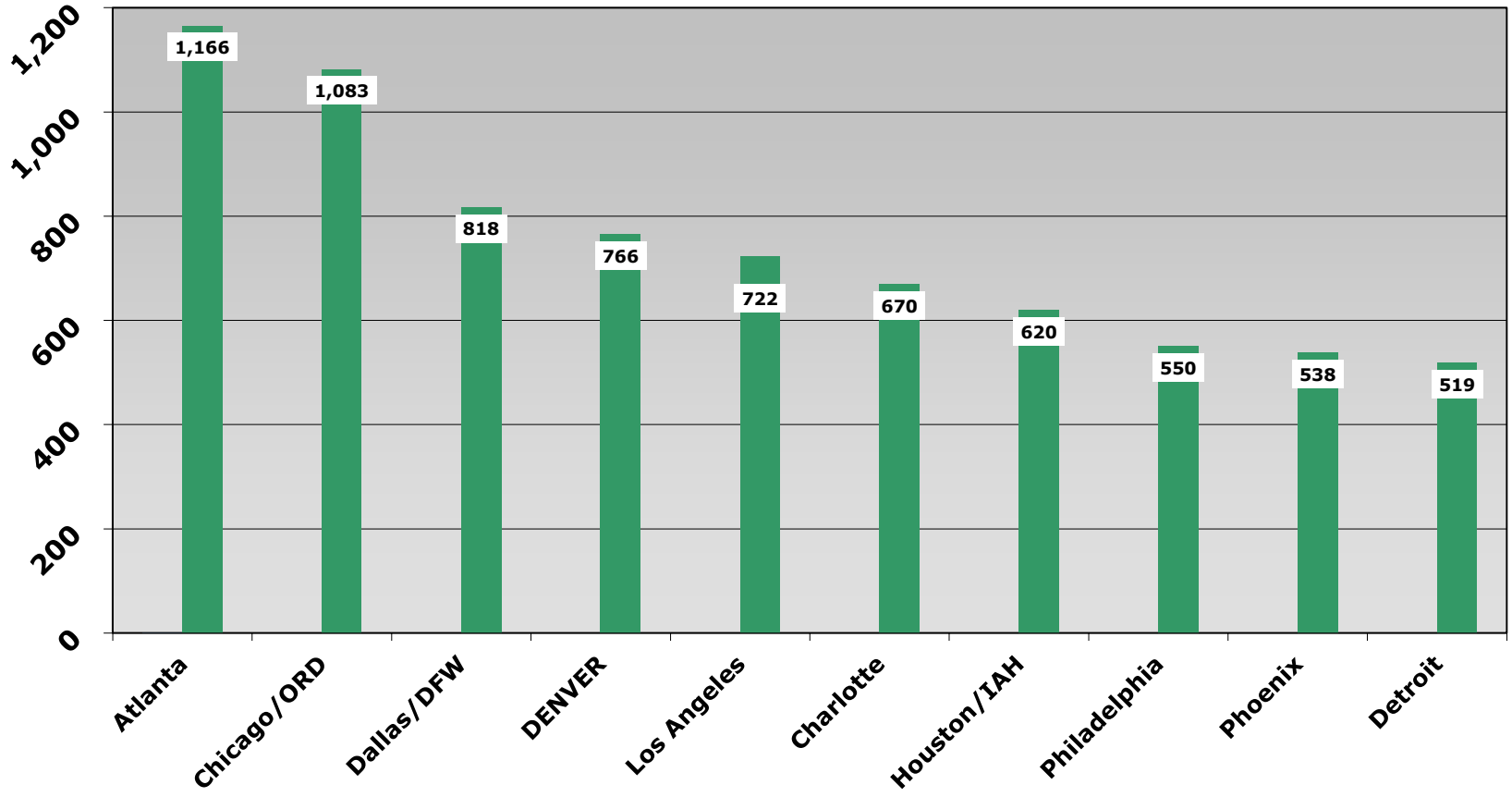
Extensive Carrier Service

- Fourteen air carriers provide service through DIA
- Denver is a hub for three major airlines—United/Continental, Southwest and Frontier Airlines
- The range of airlines servicing Denver, lowers the risk of reduced service if one carrier eliminates flights for any reason.
- The ratio of low-cost carriers means it will cost less for PTO agents and patent applicants to fly in and out of Denver.



Daily Flight Departures – All Airlines

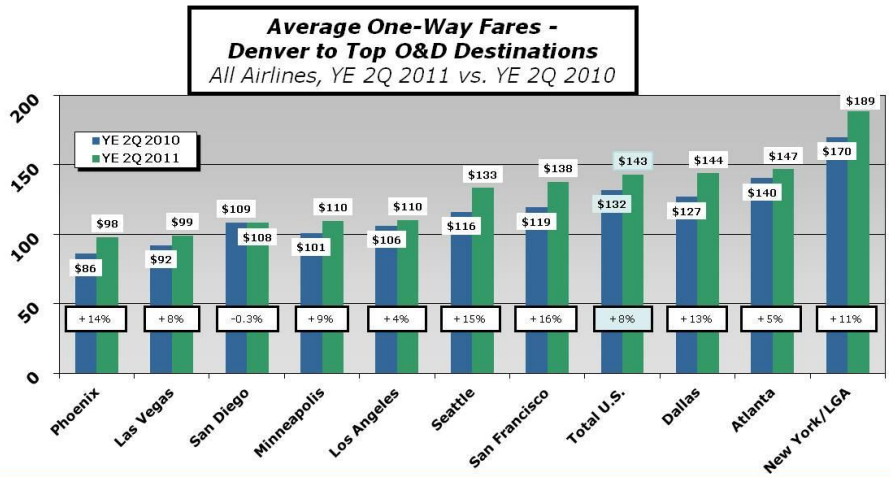
Note: Flight departures are a common measure of demand in the aviation industry; flight arrivals generally equal flight departures.



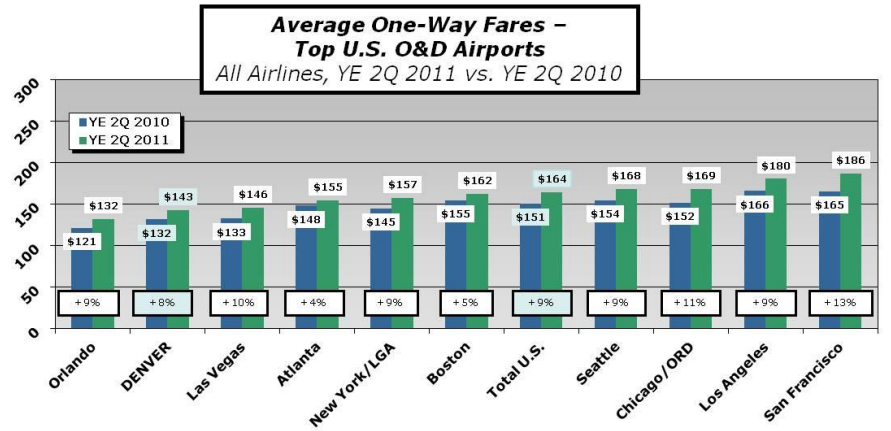
DIA offers low-cost airfare options

Denver ranks second in the United States for low-cost airfares relative to other major domestic airports.

Domestic Fare Summary



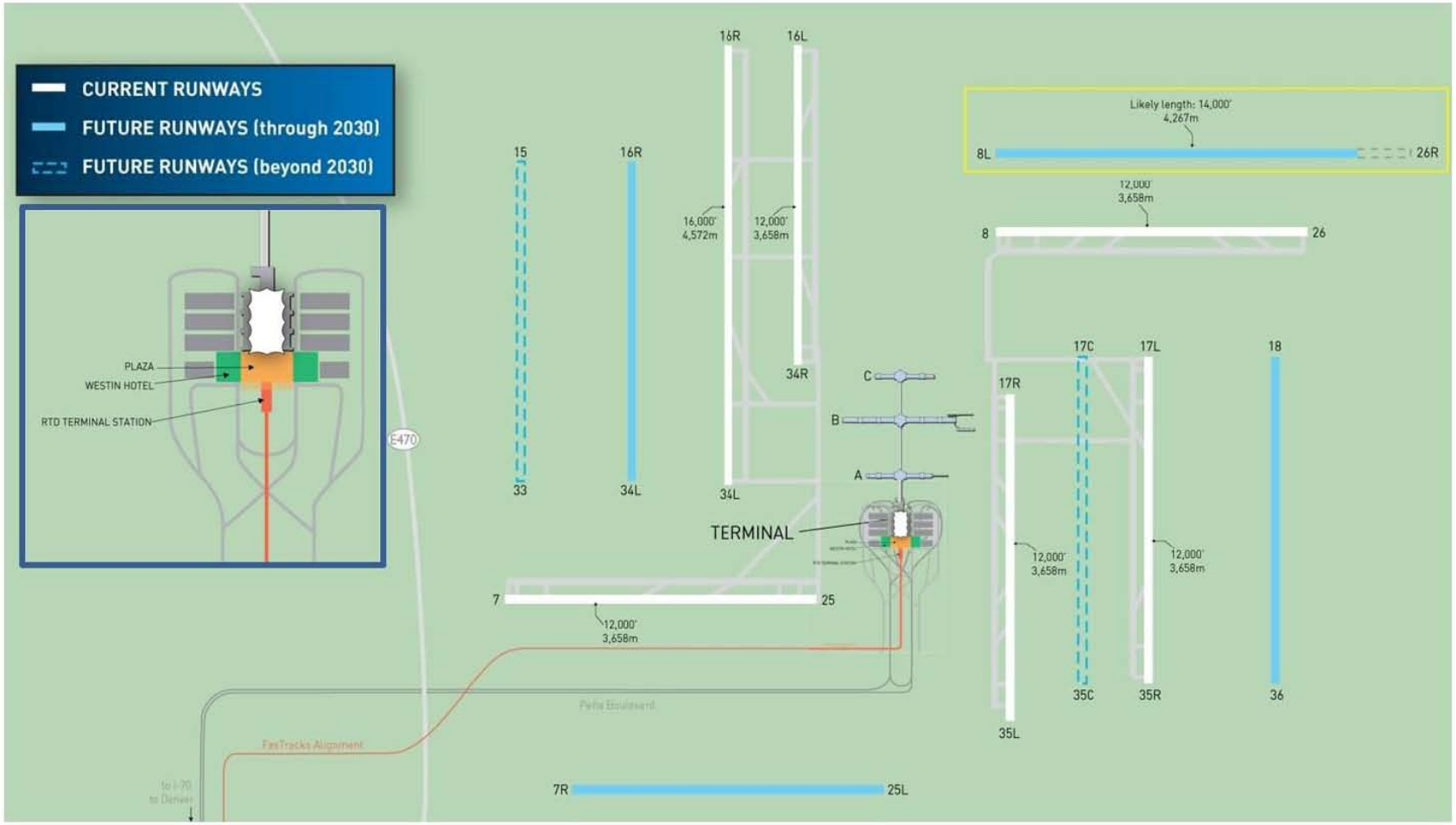
The above fares represent Denver's average one-way fare to Denver's top domestic O&D passenger destinations. The fares represent a weighted average of all domestic airlines serving the market pair nonstop or through connecting service. Passengers will, of course, pay less or more than the above average depending on the booking window, the ticket demand, the class of travel, etc.



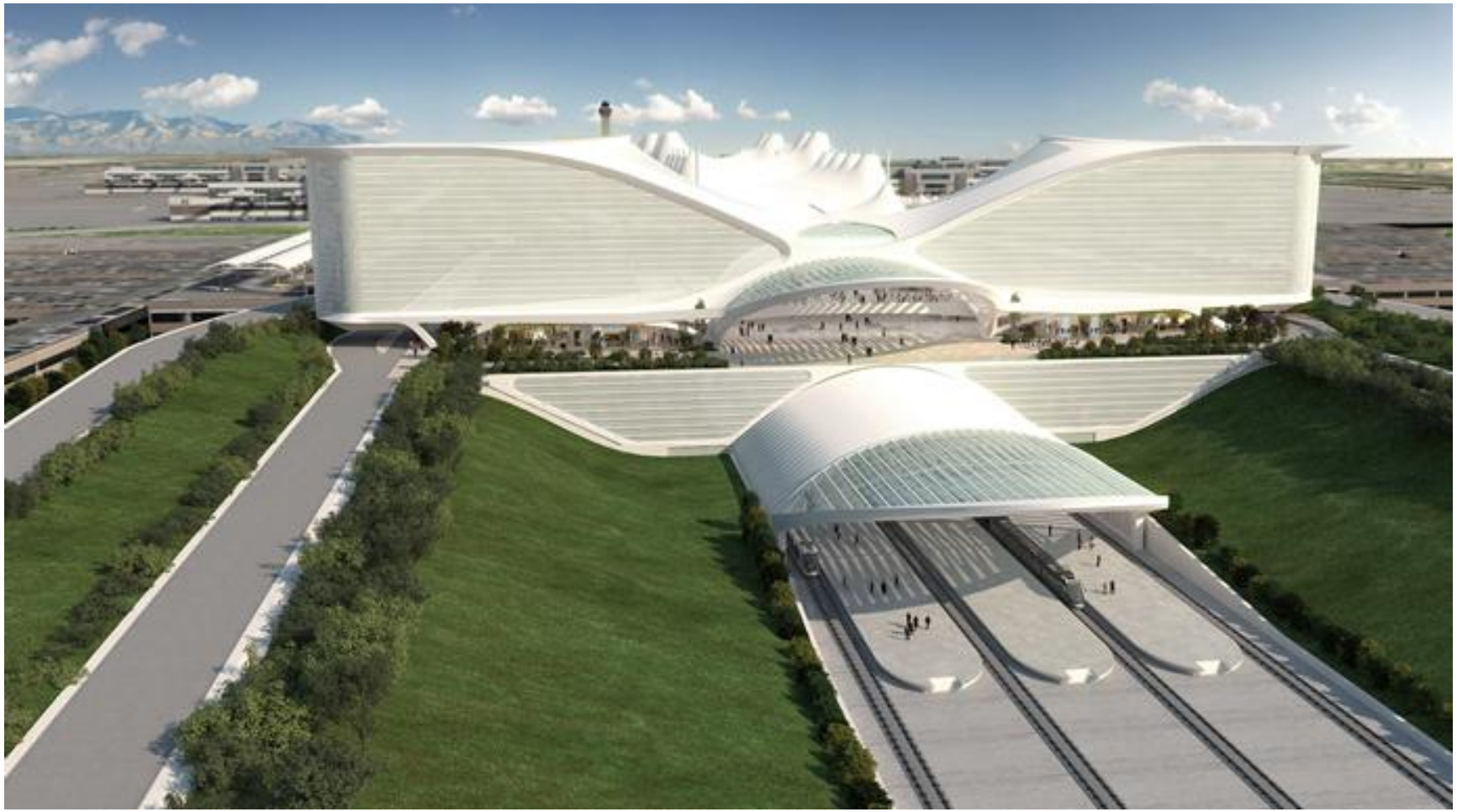
The above fares represent the average one-way fares for the top airports in the U.S. The averages include all domestic airlines serving each airport and all domestic O&D destinations for each airport. This average can, for example, provide a snapshot of each airport's competitive airline service, passenger demographics (business travelers will yield a higher average fare), geographic location, or cost of operation.

Source for data: Official Airline Guide (OAG) Schedule Tapes
Note: All United data includes Continental operations; all Southwest data includes Air ran operations

DIA currently operates 6 runways with the capacity to expand to 12. The red line shows the new light rail service scheduled to run between DIA and downtown Denver by 2016.



Scheduled for completion in 2016, DIA's South Terminal Redevelopment includes a high-speed rail line connecting the terminal to downtown Denver's Union Station, as well as a 500-room Westin hotel.



Mass Transit and FasTracks

- The Regional Transportation District (RTD) operates 1,029 buses on 148 fixed routes and 153 light rail vehicles on 35 miles of track
- FasTracks is a $6.7 billion plan to build out Metro Denver's entire mass transit system by 2019, adding 122 miles of light rail and commuter rail transit along six new lines
- When completed, FasTracks will add 57 new transit stations throughout the Metro Denver region
- Funding from a 4/10 cent increase in regional RTD sales tax and USDOT grants
- The largest build out of a U.S. transit system since the Washington D.C. Metro system

Highway System

Highways

- **Interstate Highways**
  - **North-South:** I-25, I-225, I-270
  - **East-West:** I-70, I-76
- **Regional Highways**
  - **Metro Denver Highways:** C-470, E-470, Northwest Parkway, U.S. 36, U.S. 285, U.S. 6
  - **Northern Colorado Highways:** U.S. 85, U.S. 34, U.S. 36, U.S. 287

- **T-REX:** The Transportation Expansion Project (T-REX) was the nation's largest multimodal project at the time of construction (2001-2006). The $1.67 billion expansion added 19 miles of light rail and improved 17 miles of highways and bridge infrastructure in southeast Denver, connecting the region's two largest employment centers—the Denver Tech Center and Denver's Central Business District.

Appendix 4 – Industry Clusters and Innovation

Metro Denver and Northern Colorado Key Industry Clusters

Innovation, Research, and Tech Transfer:

Colorado School of Mines

Colorado State University

University of Colorado

University of Denver

Key Colorado-Based Federal and Industry Research Facilities

Metro Denver and Northern Colorado Key Industry Clusters

Executive Summary

A community's economic development efforts should focus on industries in which the community has clear competitive advantages.

A major step in crafting a region's economic development strategy focuses on the types of industries to target for expansion and retention. Industry targets are chosen to meet varying community goals ranging from diversifying the economic base, to increasing the average wage, to utilizing natural and labor resources more fully. A community's economic development efforts should focus on industries in which the community has clear competitive advantages. Further, target industries should be economically, environmentally, and socially acceptable to the community.

This study is based on the concept of industry clusters, which are geographic concentrations of interconnected companies and institutions in a particular field. Where an industry's employment concentration is greater than the national economy, it is presumed that the production of goods and services is more than sufficient to meet local demand, and is therefore exported, either physically or financially. Where industries are highly concentrated, it is presumed that a high degree of specialization among firms exists, a feature of competitive industry clusters, commonly called "primary jobs." These industries drive wealth creation within a region.

Eight major industry clusters in the nine-county Metro Denver and Northern Colorado region (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld Counties) are key to our economy, making them primary targets for national recruitment efforts as well as economic development retention and expansion efforts to grow and expand the region's industry cluster base.

This report summarizes key points about each industry cluster, including a brief description, employment concentration ranking compared to the 50 largest U.S. metropolitan areas, and other major industry information. In addition, primary location factors are identified along with a brief assessment of the region's competitive position and future viability in attracting additional employment in each industry cluster.

An overview of Metro Denver's eight major industry clusters

- **AEROSPACE –** Colorado has reclaimed its standing as the second-largest space economy in the United States, behind California. The nine-county region is a center of excellence for space with 19,500 workers, ranking the region second out of the 50 largest metropolitan areas in total private aerospace employment concentration. In late 2011, officials began working with the Federal Aviation Administration to designate a spaceport in the state, which will expand Colorado's competitiveness by developing new opportunities in commercial space transportation.

- **AVIATION –** Denver International Airport (DIA) is a major economic engine for the region's aviation industry, which employs 14,650 workers. DIA continues construction on its South Terminal Redevelopment Program that includes a hotel and a train station to connect the airport to Denver Union Station in downtown Denver as part of the FasTracks mass transit project. In addition, three strategically located reliever airports—Centennial, Front Range, and Rocky Mountain Metropolitan—support growth in the region's aviation cluster.

- **BIOSCIENCE –** More than 14,100 employees work at 600 bioscience companies in the nine-county region. The region has a notable advantage in the medical devices and diagnostics subcluster, ranking eighth in the country for employment concentration. The region's research universities and numerous innovation assets support the industry, as well as opportunities to bring together academic, research, and bioscience companies at the 578-acre Fitzsimons Life Science District and the adjacent Anschutz Medical Campus in Aurora.

- **BROADCASTING & TELECOMMUNICATIONS –** With 40,500 broadcasting and telecommunications workers, the nine-county region has the fourth-highest employment concentration out of the 50 largest metropolitan areas. The area's unique geographic location in the Mountain time zone makes it the largest region in the United States to offer one-bounce satellite uplinks.

- **ENERGY –** The inter-relationship between fossil energy and cleantech provides unique growth opportunities for this industry that employs 41,230 people at 3,120 companies in the region. The area ranks sixth for both fossil energy and cleantech employment concentration out of the 50 largest metros. The U.S. Department of Energy's National Renewable Energy Laboratory (NREL) in Golden is a prime asset for the region.

- **FINANCIAL SERVICES –** The nine-county region is one of the few areas outside of the Northeast with a significant financial industry in three key market segments: banking and finance, investments, and insurance. Various trade associations and service firms support the region's diverse financial services base of 13,320 companies and 86,070 employees.

- **HEALTHCARE AND WELLNESS –** With more than 169,150 healthcare and wellness workers in 17,950 companies across the region, the healthcare and wellness cluster is one of the region's fastest growing industry clusters and is a substantial contributer to the region's overall economic productivity.

- **INFORMATION TECHNOLOGY–SOFTWARE –** Colorado ranked third in the nation (for the fifth-consecutive year) for high-tech workers per capita in the nation according to TechAmerica Foundation's *Cyberstates 2011* report. A strong entrepreneurial spirit fuels this industry, employing 41,640 workers in 4,430 companies throughout the nine-county region.

Location decisions are driven by a number of factors as companies within each of these industries examine communities in which to locate or expand.

Factors driving company location and expansion decisions

Location decisions are driven by a number of factors as companies within each of these industries examine communities in which to locate or expand. Some factors are industry specific. For example, proximity to military customers and prime contractors is important in aerospace company location decisions whereas fossil energy companies focus on access to natural resources. Other key locational factors cut across numerous industries, focusing on broader community attributes. While the combination of factors that enhance company success varies by industry, there are several common themes:

- The ability to recruit and retain technical and scientific talent.
- Affordable business operating costs.
- Favorable tax policies and pro-business state and local governments.
- A culture of innovation and entrepreneurism.
- Proximity to quality colleges, research universities, and federal laboratories.
- Efficient access to an international airport.
- An overall better quality of life.

Competitive positioning to create jobs and investment

- **The ability to recruit and retain technical and scientific employees**
  Of Colorado's adult population, 36 percent have a bachelor's degree or higher, making Colorado the second-most highly educated state in the country behind only Massachusetts. *(U.S. Census Bureau; 2010 American Community Survey)*

- **Affordable business operating costs**
  Colorado ranks fifth overall on *Forbes'* "2011 Best States for Business and Careers" list. Rankings are based on each state's business costs and regulations, economy, labor supply, growth prospects, and quality of life. (*Forbes*, *2011*)

- **Favorable tax policies and pro-business state and local governments**
  Legislation passed in 2008 simplified Colorado's corporate tax structure by establishing a "single sales factor" for multistate corporations. Single factor apportionment allows companies to pay taxes based solely on their sales in the state. Colorado's corporate income tax rate of 4.63 percent is one of the lowest in the nation. *(State of Colorado; The Tax Foundation, 2011)*

- **A culture of innovation and entrepreneurism**
  The Colorado Innovation Network (COIN)—a privately funded alliance designed to foster new technology development across the state's existing and emerging industries—launched in 2011. COIN is part of Gov. John Hickenlooper's economic development plan, Blueprint Colorado, and will eventually operate a business incubator. *(Colorado Office of Economic Development and International Trade, 2011)*

- **Proximity to quality colleges, research universities, and federal laboratories**
  Colorado is a national leader for producing scientific and engineering talent, ranking among the top 15 states for science and engineering graduate students per 1,000 individuals ages 25 to 34 years old 2007. In addition, Colorado has one of the highest concentrations of federally funded science and research laboratories in the nation. *(National Science Foundation, 2010; CO-LABS, 2011)*

- **Efficient access to an international airport**
  Denver International Airport is the fifth-busiest airport in the nation and is 10th-busiest worldwide for passenger traffic. Denver's central U.S. location allows travellers efficient access to both coasts and efforts are underway to establish additional nonstop international flights. *(U.S. Bureau of Transportation Statistics, 2011; Denver International Airport, 2011)*

- **An overall better quality of life**
  Denver attracted the most relocating adults aged 25 to 34 of any large U.S. metropolitan area from 2008 to 2010. The Brookings Institution, which authored the study, noted that Denver and other top ranking areas are cities where young people can feel connected and have attachments to colleges or universities among highly educated residents. *(Brookings Institution: U.S. Census Bureau, 2010 American Community Survey)*

Incorporating an industry cluster strategy into economic development

Successful companies rely on market research to guide their marketing efforts, and economic development is no different. Armed with in-depth data on the industries showing the most promising job growth over the long term, the Metro Denver EDC has a "road map" that guides its job creation efforts. This industry data helps determine: which legislation will be conducive or detrimental to industry, what opportunities exist to reach industry decision makers and site selection consultants, where might a "supplier" recruitment strategy come into play, and most importantly, which factors are most important to companies analyzing a community for location or expansion.

In 2010, only one subcluster in Metro Denver posted positive growth—cleantech with a 7.1 percent employment increase. As Metro Denver continues to work its way out of the national recession, our latest analysis of 2011 data shows that employment in seven industries/subclusters grew last year (see accompanying Metro Denver Industries Employment Snapshot), further emphasizing the importance of supporting a diversified industry base during challenging economic times.

The healthcare and wellness industry has emerged as a new cluster this year due to its significant overall economic impact on our region and Metro Denver's brand. With 9.5 percent job expansion in 2011, healthcare and wellness leads all of the region's top industries in growth. When it comes to our brand, now more than ever, we recognize that our healthy community is an incredible asset to economic development.

For additional information on Metro Denver's major industry clusters, please contact 303.620.8092, info@metrodenver.org, or **www.metrodenver.org/industries**.

Metro Denver
Economic Development Corporation

Published January 2012

Metro Denver Industries Employment Snapshot

U.S. data in ( )

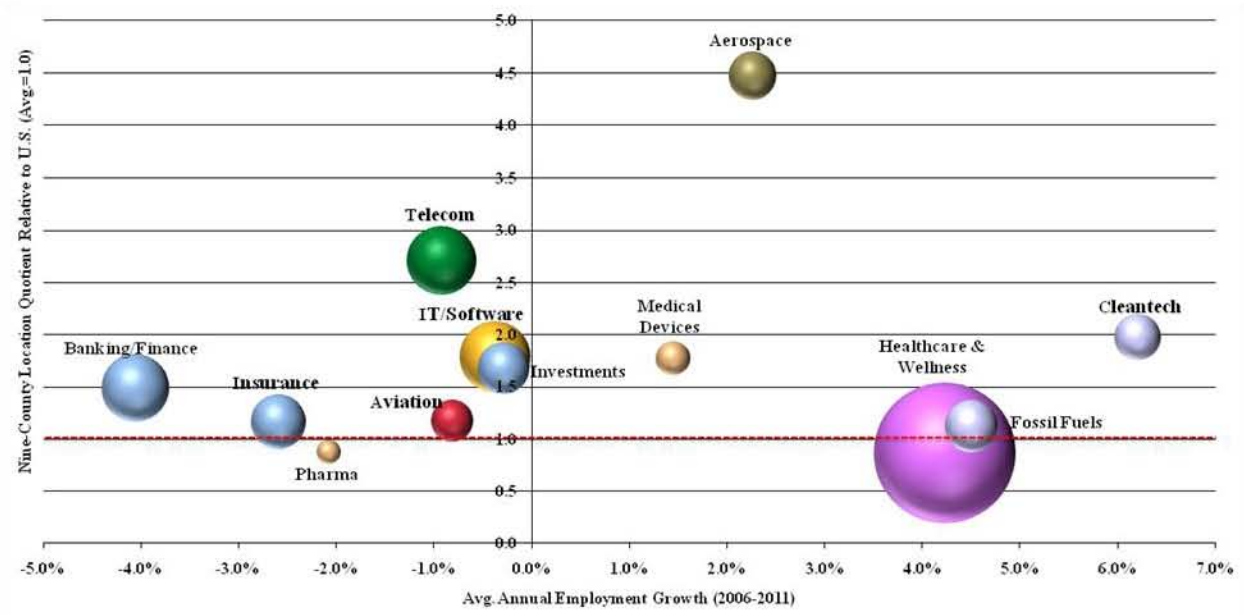
Metro Denver Industries	Aerospace	Aviation	Bioscience		Broadcasting & Telecommunications	Energy		Financial Services			Healthcare & Wellness	IT-Software
			Medical Devices & Diagnostics	Pharmaceuticals & Biotechnology		Fossil Energy	Cleantech	Banking & Finance	Investments	Insurance		
Direct Employment	19,500	14,650	9,480	4,630	40,500	23,230	18,000	38,460	22,520	25,100	169,150	41,640
Companies	110	590	330	270	2,640	1,620	1,500	4,190	5,440	3,690	17,950	4,430
Five-Year Employment Growth (2006-2011)	11.9% (-1.7%)	-4% (-0.4%)	7.5% (4.3%)	-9.9% (-5.9%)	-4.5% (-16.3%)	24.7% (15%)	35.2% (10.8%)	-18.7% (-14.2%)	-1.4% (-3.3%)	-12.3% (-8.8%)	23.1% (11.9%)	-1.8% (4.5%)
One-Year Employment Growth (2011)	1.7% (-0.5%)	-2.7% (2%)	1% (1.1%)	-1.2% (-2.2%)	-0.5% (-3.6%)	8.2% (7.1%)	6.4% (7.5%)	-0.4% (0.3%)	1.1% (2.5%)	-0.8% (-0.9%)	9.5% (1.7%)	4.7% (9.5%)
Direct Employment Concentration (2011)	1.1% (0.2%)	0.8% (0.7%)	0.5% (0.3%)	0.3% (0.3%)	2.3% (0.8%)	1.3% (1.2%)	1% (0.5%)	2.2% (1.5%)	1.3% (0.8%)	1.4% (1.2%)	9.6% 11.2%	2.4% 1.3%
Average Wage	$110,860	$47,060	$66,950	$94,770	$89,660	$103,010	$74,410	$61,430	$174,770	$62,840	$48,730	$93,800
Employment Concentration Ranking (among 50 largest metros)	2	13	8	21	4	6	6	4	8	26	25	9

Metro Denver and Northern Colorado Industries Economic Performance Snapshot

Bubble charts are popular tools used to illustrate industry clusters. These charts allow multiple variables to be plotted within the same graph, making it easy to assess relative economic performance. Bubble charts are often used for pinpointing priority industries since they allow visual comparisons of economic measures.

This chart illustrates industry cluster relationships for the 12 industry clusters and subclusters. The following three variables are plotted:

- Average annual employment growth, 2006 to 2011; on the *x-axis (horizontal)*;
- The industry's location quotient, 2011; on the *y-axis (vertical)*; and
- Employment size of the industry, 2011; indicated by the size of the bubble.



Industry subcluster bubbles are color coded to reflect that they belong to the same cluster. For example, fossil fuels and cleantech are light purple, indicating that they belong to the energy cluster.

Bubble charts show the clusters in a state or region as measured by total employment size (the bigger the bubble, the larger the industry in terms of employment), employment growth (the further to the right on the graph, the more growth), and the location quotient (the further up in the graph, the higher the location quotient (LQ)).

The LQ is a ratio that compares the region's employment share of a particular industry with the employment share nationwide. The following guidelines are used to evaluate the LQ:

- LQ > 1 indicates a significant employment concentration compared with the nation.
- LQ = 1 indicates that the region's employment concentration is equal to that of the nation.
- LQ < 1 indicates that the region has less of an employment concentration compared with the nation.

The dotted red line on the graph represents the location quotient equal to 1 to easily identify the bubbles that are above this demarcation.

For example, cleantech had substantial employment growth from 2006 to 2011, aerospace had a key locational advantage represented by its high LQ position on the graph, and healthcare and wellness had a significant number of employees represented by the size of its bubble. Looking at other clusters, broadcasting and telecommunications and IT-Software are relatively large industries represented by their bubble size and have above-average employment concentration compared to the nation, however have experienced employment declines from 2006 to 2011. While several of the industry clusters lost employment from 2006 to 2011 due to the recession, the location quotients greater than one indicate that the Metro Denver and Northern Colorado region remains a competitive location for these clusters, making them priority industries to pursue.

Colorado School of Mines (CSM)

Colorado School of Mines is a public research university devoted to engineering and applied science founded in 1874. It has the highest admissions standards of any public university in Colorado and among the highest of any public university in the U.S.

Mines has distinguished itself by developing a curriculum and research program geared towards responsible stewardship of the earth and its resources. Undergraduate and graduate degree programs include:

Chemical engineering	Liberal arts and international studies
Chemistry and Geochemistry	Materials science
Economics and business	Mathematical and computer science
Engineering	Metallurgical and materials engineering
Environmental science and engineering	Mining engineering
Geology and geological engineering	Petroleum engineering
Geophysics	Physics

Research at Mines

Mines is a global leader in research and the advancement of technology. Lead by our world-class faculty, the research conducted at Mines enhances the educational experience of our graduates. Students have the opportunity to actively participate in research at every level of their education.

CSM research spans many highly relevant areas with a specific focus on energy and environmental stewardship. Our first-rate facilities and partnerships with industry, national laboratories, other universities, funding agencies and international institutions enable us to maintain our cutting edge research and have a significant impact on real world problems. Research is a cooperative effort in the Mines community.

Technology Transfer at Mines

The Office of Technology Transfer (OTT) at Colorado School of Mines works to serve the citizens of Colorado and the United States by commercializing the inventions resulting from research to enhance the academic mission, provide a service to inventors and internal and external partners, locate the right partners and ensure fair return as a steward of the university's investment.

At present, Colorado School of Mines has 93 patents – 28 issued and 65 in various stages of prosecution. Thirty-one of these are licensed and 62 are available for licensing.

Mines Research Centers & Institutes

8th Continent Project (8C)

The 8th Continent Project is a comprehensive effort to integrate space technology and resources into the global economy. It includes a chamber of commerce, business incubator, internships, campus network, business plan competitions, seminars and training, career center, funding network, research center, and STEM outreach. The 8C Project is organizing "Space 2.0"— the emerging generation of entrepreneurial space-related business ventures— to help solve a variety of challenges, from global warming to resource and energy development to biotechnology.

Advanced Control of Energy Power Systems (ACEPS)

ACEPS focuses on intelligent control systems; real-time monitoring and advanced diagnostic systems; artificial intelligence; advanced acoustic, optical and electromechanical sensors; pollution reduction; transformers and breakers monitoring; smart substations; power quality; nondestructive evaluation; advanced power electronics; remote sensing, security, and control.

Advanced Coatings and Surface Engineering Lab (ACSEL)

ACSEL serves as a focal point for industry-driven research and education in advanced thin films and coating systems, surface engineering, tribology, electronic, optical, magnetic, and semiconductor materials. ACSEL provides opportunities for Mines faculty and graduate students to visit and work in sponsor facilities, participate in technical meetings with sponsors, and for Mines graduates to gain employment with sponsors.

Advanced Water Technology Center (AQWATEC)

The mission of AQWATEC is to develop novel water treatment processes enabling sustainable and energy efficient utilization of impaired water sources for potable and non-potable water supplies.

Advanced Steel Processing and Products Research Center (ASPPRC)

ASPPRC is an industry/university cooperative research center in the field of solid state ferrous physical and mechanical metallurgy. Research is conducted in a wide variety of areas related to future steel products and applications, with strong participation and involvement from steel producing and steel using industries from North America and overseas. Focus areas include sheet, plate and bar steels related to transportation, energy production and transmission, agriculture and construction, infrastructure, etc.

Center for Automation, Robotics and Distributed Intelligence (CARDI)

CARDI's research encompasses the fields of control systems, robotics and automation, and distributed systems and networking. Focus areas include the theory of adaptive and nonlinear control, intelligent and learning control systems, system identification and fault detection, computer vision and image processing, wireless communication networks, intelligent autonomous robotic systems, machine learning and artificial intelligence, network communication protocols and simulation and modeling of computer networks. Applications of CARDI research can be found in renewable energy and power systems, materials processing, sensor and control networks, bio-engineering and medicine, data mining and activity recognition, defense and homeland security, smart structures, intelligent geo-systems, and environmental monitoring.

Center for Earth Materials, Mechanics and Characterization (CEMMC)

EM2C fosters research in a variety of areas including rock mechanics, earth systems, and nontraditional characterization. The center does not limit its focus to either "hard" or "soft" rock applications but is, instead, intended to foster research in both arenas and encourage interdisciplinary communications between the associated disciplines.

Center for Environmental Risk Assessment (CERA)

CERA promotes and enhances environmental risk assessment research and educational activities at Mines. By bringing diverse interdisciplinary expertise to bear on problems in environmental risk assessment, the center facilitates the development of significantly improved, scientifically-based approaches for estimating human and ecological risks for using the results of such assessments.

Center for Experimental Study of Subsurface Environmental Processes (CESEP)

The mission of the center is to enhance environmental quality through experimental investigation of subsurface environmental processes and remediation techniques leading to improved and cost effective cleanup methodology and decision-making.

Center for Innovation in Earth Resources Science and Engineering (CIERSE)

CIERSE incorporates expertise and has research projects in other departments, including: Geology & Geological Engineering, Geophysics, Metallurgical & Materials Engineering, and Environmental Science & Engineering.

The Center for Oil Shale Technology and Research (COSTAR)

COSTAR conducts investigations to advance the development of oil shale resources in the United States and around the world. Center projects include:

- Study of rock physics and rock mechanics to understand how oil shale properties vary with temperature and how fractures will occur with heating
- Study of geology, stratigraphy and climatology, to understand the conditions of formation of oil shale and provide the integrating framework for the Center's work
- Study of geochemistry, to understand how best to characterize the productive potential of the resource, and to enhance geologic understanding of the formation of oil shale
- Development of a global database of oil shale information and support of the annual Oil Shale Symposium.

The founding Members of COSTAR include Total E&P USA, Shell E&P, and ExxonMobil Upstream Research Company.

Center for Petrophysics (CP)

The primary goal of exploration and production geophysics is to identify fluids, specifically hydrocarbons, in rocks. In the Rock Physics Lab, scientists research rock and fluid properties for exploration and reservoir monitoring. The most current projects center on fluid distributions in rocks and how these distributions affect characteristics such as wave attenuation, velocity dispersion and seismic signature.

Center for Research on Hydrates and Other Solids (CHS)

The mission of the center is to research, through discovery and innovation, the science and application of clathrate hydrates and other solids in complex fluids. This is accomplished by the generation and dissemination of knowledge through the training and education of scientists and engineers. The other solids of interest besides clathrate hydrates include ice, asphaltenes, waxes, clays, and sediments. The complex fluids include gases, oils, and aqueous fluids. The center fosters integrative and multidisciplinary research on these areas to address fundamental science and practical challenges involving clathrate hydrates and other solids in energy production, transportation and storage.

Center for Space Resources (CSR): Director

CSR is a research and technology development center dedicated to the human and robotic exploration of space and the utilization of its resources forth benefit of our society through the joint efforts of academia, government, and the private sector. The CSR conducts scientific studies and technology development projects on the areas of space and planetary remote sensing, prospecting, drilling, excavation and extraction, materials processing and manufacturing, propulsion, and spacecraft life-support systems.

Center for Solar and Electronic Materials (CSEM)

CSEM explores research and education in solar and electronic materials and technology. The center facilitates interdisciplinary collaborations across the Mines campus and fosters interactions with national laboratories, industries, public utilities, and other universities. It also serves to guide and strengthen the electronic materials curriculum.

Center for Wave Phenomena (CWP)

CWP's main focus is on seismic modeling, imaging, and inversion methods, as well as on improving the accuracy and efficiency of seismic processing algorithms, especially for application to regions of structural complexity.

Center for Welding, Joining and Coatings Research (CWJCR)

Research investigations by CWJCR are diverse, including hybrid laser-arc welding of high strength steels, laser processing of reactive metals, welding consumable development for controlling weld residual stress, hydrogen management in high strength steel weldments, flux-cored arc welding consumables for minimum fume generation, development of underwater wet welding consumables, welding of advanced steels used in the power generation industry, lead-free solder alloy development, electronic and magnetic alloy phase identification, pipeline for ethanol transportation, vision-based control of robotic welding, metal-ceramic and ceramic-ceramic brazing, and modeling of arc, electrode and weld pool. The center has excellent facilities for conducting materials welding, joining, and processing research.

Chevron Center of Research Excellence (CSM CoRE)

CoRE is a long term relationship established between the Colorado School of Mines and Chevron that promotes the research, education, recruiting, and training objectives of both organizations. CoRE supports the development of new earth science technology while providing Chevron international employees and other students the opportunity to earn advanced degrees.

Colorado Center for Advanced Ceramics (CCAC)

CCAC focuses on ceramic synthesis and processing; ceramic-metal composites; ceramic films, fibers and composites; oxidation and corrosion; dielectrics, ferroelectrics, and magnetics; glass/glass crystallization; materials for fuel cells and batteries; porous materials and substrates; electronic and optical ceramics; gas-solid interactions; ceramic-metal joining; combustion synthesis; powder and whisker synthesis.

Colorado Energy Research Institute (CERI)

CERI leverages Colorado's long tradition of energy leadership by bringing industry, government, and academic interests together to tackle challenging energy issues. CERI is equipped and ready to coordinate research statewide to develop clean fossil and renewable energy resources; position Colorado as a leader in the energy industry; investigate promising hybrid technologies; enable companies to outsource specific research needs and manage R&D risk; introduce bright students and professionals to challenging industry opportunities.

Colorado Fuel Cell Center (CFCC)

CFCC seeks to advance fuel-cell research, development, and commercialization and to promote business opportunities in Colorado. The day-to-day activities of the center are handled by a director. All contracting and business activities are conducted through Colorado School of Mines.

Colorado Institute for Energy, Materials and Computational Science (CIEMACS)

CIEMACS is an interdisciplinary research institute involving research active faculty and students from several academic departments at Colorado School of Mines. These faculty and students have expertise in the chemistry, physics and engineering of energy conversion processes, including solid oxide and PEMS fuel cells, clean fuels, combustion experimentation and modeling, materials synthesis in flames, atomistic materials modeling and the development of optical measurement techniques for combustion systems and reactive flows. CIEMACS is also a Mines focal point for high performance computing and is home to the CIEMACS-CHEETAH teraflop computing laboratory.

Colorado Institute for Macromolecular Science and Engineering (CIMSE)

CIMSE focuses on polymeric materials science; design and synthesis of new macromolecular species; polymer rheology and processing; polymers at surfaces and interfaces; directed self-assembly of colloidal particles; theoretical methods and biological fluids.

Earth Mechanics Institute (EMI)

EMI enhances education and research in the field of excavation technology both for mining and civil underground construction. Over the 30 years of its existence, EMI has developed a suite of physical property tests, cutter and cutterhead evaluation procedures for performance prediction, project costing, and design of mechanical rock excavation tools for all types of mechanical excavators in mining, civil underground construction, and microtunneling. The developed test procedures and the performance/cost prediction

models have been validated with extensive field data from excavation and drilling projects around the world.

The Energy and Mines Field Institute (EMFI)

EMFI provides intensive on-site educational opportunities on energy and mineral resource exploration, extraction, benefaction, and utilization operations and issues.

The Energy Modeling Group (EMG)

EMG's mission is to develop state-of-the-art reservoir modeling technology and advanced simulation tools for research, teaching, and field applications in the areas of subsurface energy and natural resources, and environmental science and engineering. Research members consists of faculty members, graduate students, visiting scholars, and post-doctoral.

Golden Energy Computing Organization (GECO)

GECO is a computational hub for finding new ways to meet the energy needs of our society. It is also the recognized energy node in a developing high performance computing infrastructure for the Front Range. GECO promotes education in energy science and high performance computing and plays an important role in coordinating large-scale, multi-group collaborations. The GECO collaboratory comprises three Colorado-based institutions which each bring a unique set of research expertise to the table: the Colorado School of Mines (Mines); the National Renewable Energy Laboratory (NREL); and the National Center for Atmospheric Research (NCAR).

Intelligent Biomedical Devices and Musculoskeletal Systems (IBDMS)

IBDMS focuses onimplant design, implant simulator (hip, knee, TMJ, etc.); fluoroscopic imaging of joint motion; in vivo measurements of implants dynamics; advanced biocompatible materials; modeling and simulation of musculoskeletal system; micro-electromechanical (MEM) sensors and actuators; electronically controlled implants; artificial sensory systems; automatic control; telemetric implants; spinal injuries and implants.

Integrated Ground Water Modeling Center (IGWMC)

IGWMC is an internationally oriented information, education and research center for ground-water modeling. IGWMC advises on ground-water modeling problems, distributes ground-water modeling software, organizes short courses and workshops, conducts research in practical, applied areas of ground-water hydrology and modeling, and provides technical assistance on problems related to ground-water modeling. As a focal point for ground-water professionals, the center supports and advances the appropriate use of quality-assured models in ground-water resources protection and management.

Kroll Institute for Extractive Metallurgy (KIEM)

A grant from the late W.J. Kroll, the inventor of the Kroll Process for the production of Titanium and Zirconium, enabled the establishment of an Institute for Extractive Metallurgy. The primary focus of the institute is the development of new technologies for the physical-chemical processing of materials. This includes the production and refining of metals, the processing of wastes and hazardous materials, the recycling of materials, and the synthesis of advanced materials.

Marathon Center of Excellence for Reservoir Studies (MCERS)

MCERS investigates a wide spectrum of reservoir problems with emphasis on field applications. Research areas include: reservoir characterization and connectivity, rate and pressure transient analysis, improved and enhanced oil recovery issues, infill well placement and multi-laterals, and improved physics/modeling of naturally fractured reservoirs.

Microintegrated Optics for Advanced Bioimaging and Control (MOABC)

The MOABC Center focuses on integrating optics into microscale and microfluidic systems. The use of integrated optics is the key to achieving both significant size and cost reduction for biomedical devices, and for meeting the requirements of biotechnology researchers for new assays and manipulation techniques.

Nuclear Science and Engineering Center (NuSEC)

A recognized strength and tradition of the Colorado School of Mines is the development of the earth's resources, energy applications, synthesis of advanced materials, and stewardship of the environment. This tradition includes the nuclear fuel cycle and the Nuclear Science and Engineering Center (NuSEC) serves to apply a demonstrated Mines capability in response to the rejuvenation of the nuclear industry. The NuSEC seeks to: advance research and development in the elements of the nuclear fuel cycle, advance basic nuclear and subatomic science and enhance the education of new and established scientists and engineers in the field.

Petroleum Exploration and Production Center (PEPC)

PEPC specializes in applied studies of petroleum reservoirs. The center integrates disciplines from within the Departments of Geology and Geological Engineering, Geophysics and Petroleum Engineering. PEPC offers students and faculty the opportunity to participate in research areas including: improved techniques for exploration, drilling, completion, stimulation and reservoir evaluation techniques; characterization of stratigraphic architecture and flow behavior of petroleum reservoirs at multiple scales;

evaluation of petroleum reserves and resources at multiple scales; evaluation of petroleum reserves and resources on a national and worldwide basis; and development and application of educational techniques to integrate the petroleum disciplines.

Power Systems Engineering Research Center (PSERC)

The "Energy Systems and Power Electronics" group at Colorado School of Mines (CSM) pursues both fundamental and applied research in the interrelated fields of conventional electric power/energy systems and machinery, renewable energy resources, distributed power generation, energy economics and policy, power electronics and power quality.

Renewable Energy Materials Research Science and Engineering Center (REMRSEC)

REMRSEC focuses on transformative materials innovation and educational directions that will significantly impact the emerging renewable energy technologies. The center is organized around two interdisciplinary research groups. The first will concentrate on harnessing unique properties of nanostructured materials to significantly enhance the performance of photovoltaic devices. The second Interdisciplinary research group will explore advanced composite membranes for renewable energy applications. The project involves the evaluation of clathrate structures as potential materials for hydrogen storage. A strategic partnership with scientists and engineers at the National Renewable Energy Laboratory will allow sharing of students, research associates, equipment and facilities between the two organizations. In addition, more than a dozen companies actively involved in alternative energy will partner with the center. The center will also collaborate with two internationally known academic partners: University of New South Wales and Imperial College, University of London.

Reservoir Characterization Project (RCP)

RCP is an independently sponsored research consortium whose mission is to develop and apply 4-D, multi-component seismology and associated technologies to effectively model complex reservoirs. We have established a leading-edge interdisciplinary research and teaching program which fosters industry and university interaction and provides cost effective, collaborative research. The research benefits consortium members, and trains and graduates students for employment in the oil and gas industry.

The John U. and Sharon L. Trefny Institute for Educational Innovation

The Trefny Institute focuses on curriculum and faculty development to both enhance Mines' distinction in undergraduate and graduate education and strengthen Mines leadership role in education research, curriculum development and assessment. Key elements of the Trefny Institute are the Center for Engineering Education (CEE) which

unites faculty interested in engineering education research and the Center for Assessment of Science, Technology, Engineering and Mathematics (CA-STEM), which focuses on assessment and evaluation. By integrating its programs, the institute seeks to form a cycle in which education research is conducted; theory is developed and tested; tools, materials and methods are designed and then implemented in classrooms; interventions are studied and assessed; and new insights and research questions are generated. This cycle helps to ensure that curriculum at Mines is based on best practices and the latest educational research.

SmartGeo Center for Intelligent Geosystems

SmartGeo is an interdisciplinary engineering and science graduate program designed to prepare a new generation of leaders in the development of intelligent geosystems - enabling engineered and natural earth structures and environments that sense their environment and adapt to improve performance. Research efforts focus on advancing intelligent geoconstruction, intelligent earth dams & levees, and remediation of contaminated soil and water.

Unconventional Natural Gas Institute

The Colorado School of Mines has established the Unconventional Natural Gas Institute (UNGI) to support unconventional natural gas research and to partner with industry and government organizations in enhancing enhance existing Mines in-house expertise and communication between departments in Colorado School of Mines. Fourteen current CSM research centers, along with faculty from nine of the thirteen degree-granting departments are affiliated with UNGI.

Western Mining Resource Center (WMRC)

WMRC addresses the research and training needs of western mining constituencies. The center complements the research and outreach activities of the Office for Mine Safety and Health of NIOSH, as well as the training programs of the Department of Labor, Mine Safety and Health Administration.

CSUVENTURES
Innovation at Work

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Innovation at Work

PO Box 483, Fort Collins, CO 80522 970.491.7100 www.csuventures.org

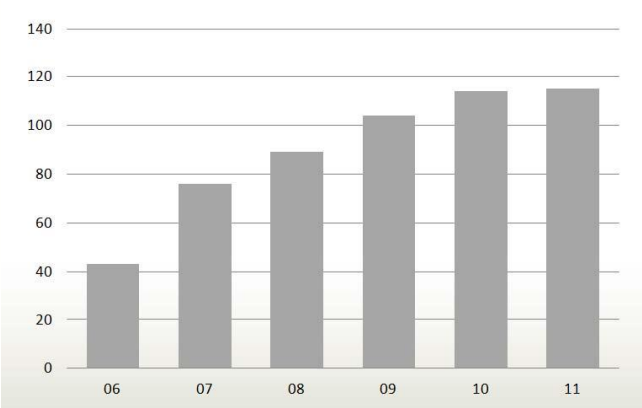
CSUVENTURES
Innovation at Work

Our mission is to actively support and promote the transfer of Colorado State University research and innovations into the marketplace for the benefit of society; advance research by connecting business and industry with CSU's researchers; protect and license marketable University generated inventions and intellectual property; leverage innovation to foster new business formation based on CSU technologies to enhance regional economic vitality.

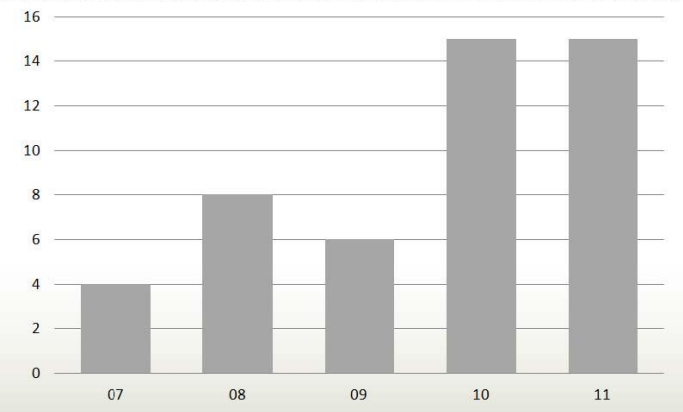
PERFORMANCE METRICS, FY2007 – FY2011

Invention Disclosures **515**
Patent Applications **627**
Patents Issued 48
Licenses Executed 165
Startup Companies **20**
Technologies Licensed:
Colorado Firms **136**
Out-of-State **59**
Licensing Income $8.4 Million

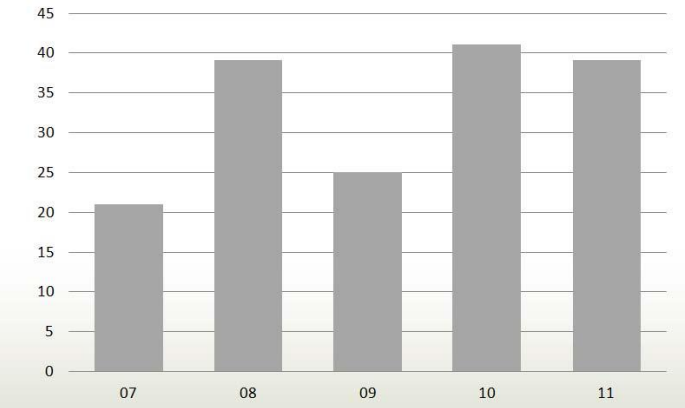
Invention Disclosures by Fiscal Year



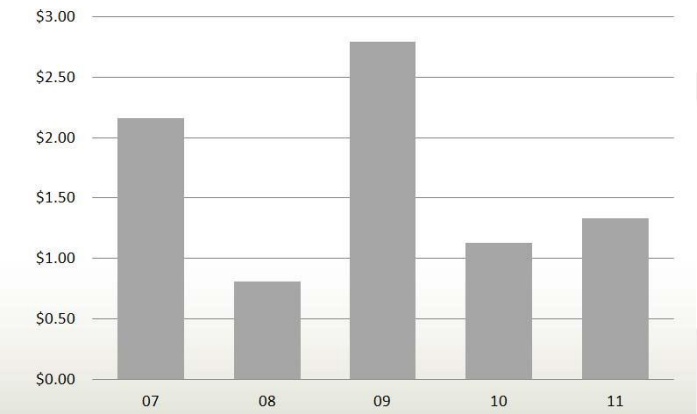
Patents Issued, by Fiscal Year



License Agreements, by Fiscal Year



Revenue ($ Million), by Fiscal Year



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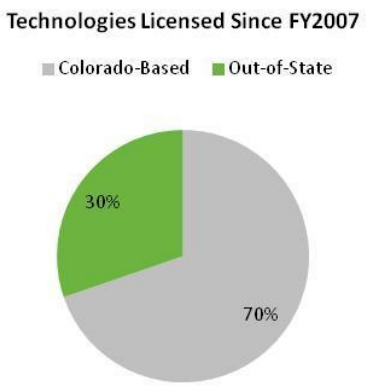
IMPACT

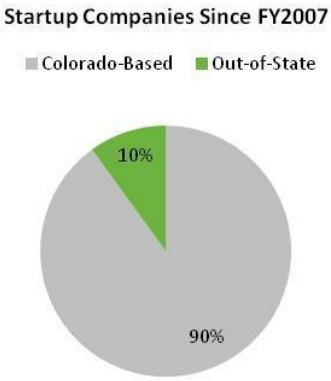
5 years → *CSU Ventures Formation – 5 years*

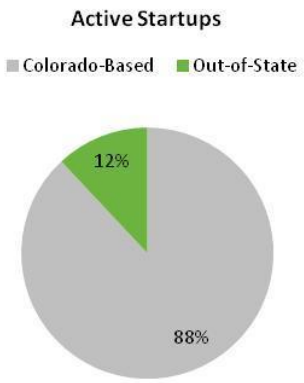
Technology Transfer Metric	FY2002-2006	FY2007-2011	% Change	Impact
Inventions	222	515	132%	√
Patent Applications (provisional and non-provisional)	232	627	170%	√
License Agreements	58	165	184%	√
New Startup Companies	9	20	122%	√
Licensing Income	$4.42M	$8.22M	86%	√

- Inventions ***more than doubled*** from the five preceding year period.
- Licensing revenue ***nearly doubled*** from the preceding five year period, increasing from $4.42M to $8.22M.
- The number of patent applications, license agreements, and new startup companies ***more than doubled***, as compared to the preceding five year period.

COLORADO IMPACT







Colorado-based CSU startup companies have:

- Raised approximately **$650 million** in private equity/debt
- Procured around **$80 million** in government and NGO funding
- Created around **1250** peak new jobs.

CSU Ventures Mission Statement:

Our mission is to actively support and promote the transfer of Colorado State University research and innovations into the marketplace for the benefit of society; advance research by connecting business and industry with CSU's researchers; protect and license marketable University generated inventions and intellectual property; leverage innovation to foster new business formation based on CSU technologies to enhance regional economic vitality.

CSUVENTURES
Innovation at Work

Patent Metrics:

	2007	2008	2009	2010	2011
Patent Applications	74	89	171	151	142
Patents Issued	4	8	6	15	15

- Fort Collins stands out nationally, as one of the best places to have a business and career, one of the best places to live and launch a business, and *we have the highest number of patents per capita in the U.S. (according to Fast Company, July 2007).*

Other Commercialization Metrics:

	2007	2008	2009	2010	2011
Disclosures	80	91	106	119	119
License Agreements Executed	21	39	25	41	39
New Startup Companies	5	3	1	6	5
Technologies Licensed to Colorado Companies	10	38	34	32	22
Technologies Licensed to Out of State Companies	8	11	9	16	15
Licensing Income	$2.16M	$0.81M	$2.79M	$1.13M	$1.33M

- 515 new technologies have been disclosed by CSU researchers in the last five years
- CSU technologies generated $8.2M in commercialization revenue in the last five years
- 37 CSU startup companies have been created, 23 of these since the formation of the Superclusters in 2007.
- CSU startup companies have raised approximately $700 million in private equity/debt, procured nearly $100 million in government/NGO funding, and created approximately 1300 peak new jobs

Resources for CSU Startups:

- *Incubator System:*
  - **Research Innovation Center (RIC): www.csuric.org**
    The RIC is a hybrid of business office space, university research offices and state-of-the-art bioscience laboratories, conceptualized to build university partnerships with CSU startups and existing businesses. A significant part of the building serves as a biosciences incubator, fostering startup companies that will help translate university research into new products that address unmet biomedical needs.
  - **Engines & Energy Conversion Lab (EECL): http://www.eecl.colostate.edu/**
    Based in the College of Engineering, the EECL is one of the nation's largest energy laboratories, whose mission is to 'create innovative energy solutions and entrepreneurial models that benefit the human condition and achieve global impact.' The EECL is currently adding additional space that will more than double the size of its facility.
  - **Rocky Mountain Innosphere (RMI): www.rmi2.org**
    RMI is a 501c3 non-profit corporation formed to accelerate the success of high-impact scientific and technology startup companies and promote the development of a regional entrepreneurial ecosystem in Northern Colorado. RMI provides entrepreneurial startup companies with resources such as subsidized facilities, assistance with raising capital, access and connections with academic and government institutions, a network of advisors and mentors including several who are in residence, discounted professional service providers and educational and networking opportunities for for realizing business success.

- *Sources of Proof-of-Concept Funding:*
    - **Bioscience Discovery Evaluation Grant Program (BDEGP):**
      The BDEGP was established by the Colorado General Assembly in 2006 to create new bioscience jobs and companies Colorado. Under the BDEGP, approximately $5.5 million in annual funding is allocated to the state's research institutions to facilitate proof of concept research, assist early-stage companies, and develop infrastructure to support Colorado's bioscience industry. Awards of up to $75,000 are available for POC projects, while early-stage bioscience companies can apply for up to $250,000.
    - **Colorado Center for Drug Discovery (C2D2): www.c2d2.org**
      C2D2 draws upon existing expertise and infrastructure at Colorado research institutions to foster multi-disciplinary and inter-institutional drug discovery collaborations. Funding is awarded to support drug discovery-related proof of concept studies with the aim of advancing research to a point where it can attract additional funding or private investment. Grants up to $40,000 are available for individual projects.
    - **Commercial Opportunity Investment Program (COIP):**
      http://www.csurf.org/tto/comm_opp_fund.htm
      COIP was established by the CSU Research Foundation Board of Trustees in 2004 to offer monetary support for the development of promising early-stage technologies. COIP provides up to $20,000 to CSU startup companies who can demonstrate the money's potential impact on their company' success and identify a feasible mechanism for repayment.
    - **CSU Fund I LLC: www.csumanagementcorp.com**
      CSU Fund I is a 10-year private equity investment fund created to advance early-stage companies associated with CSU. The fund's investments are intended to catalyze the success of emerging companies, promoting job creation and regional economic development. In order to be eligible for funding, companies must have an existing relationship with CSU and present an opportunity with significant potential return on investment.
    - **Supercluster Grants: http://superclusters.colostate.edu/**
      Each of CSU's three Superclusters—Cancer, Clean Energy, and Infectious Disease--award grants to support cross-disciplinary collaboration, promote translational research, and expand the capabilities of their individual Supercluster.

Superclusters:
CSU's Superclusters® address critical global challenges in the areas of infectious disease, cancer and clean energy solutions. Each Supercluster contains an academic infrastructure comprised of a multidisciplinary alliance of researchers, economists, and business experts working on innovative research and discovery. The academic side is complemented by an enterprise or commercialization arm that promotes business alliances, new commercial applications, and opportunities for additional investment.
Key elements of the Superclusters:

- Address global challenges ranging from infectious disease to cancer, energy solutions, and the environment
- Address challenges that are complex and demand multidisciplinary approaches
- Built on a foundation of scholarly excellence in core disciplines
- Focused on academic research areas that are of interest and importance to government, not-for-profit entities, and corporate and philanthropic partners locally, regionally, nationally, and across the world.

University of Colorado, Boulder (CU)

Research at CU

Research at CU-Boulder encompasses thousands of scholarly, scientific and creative endeavors at any given time, resulting in new knowledge, technologies and creative work that advance the economy, culture and health of Colorado, the nation and the world. CU-Boulder's 11 research institutes account for more than half of all sponsored research dollars at the university – and they employ some of the most productive researchers in the country.

CU-Boulder consistently reaches beyond campus boundaries to form strategic research partnerships with federal government, industry, and other universities, which have proven highly productive. The university is home to three of the highly prized NSF-funded research centers: The Extreme Ultraviolet Engineering Research Center (housed at CSU), The Liquid Crystals Materials Research Center, and The Center for Membrane Applied Science & Technology (MAST)

Over the course of 50-plus years, the university has formed highly productive research partnerships with national laboratories located in the Boulder area, including NOAA, CIRES, NIST, NCAR, NREL, and USGS. Collaborative efforts include large joint institutes with hundreds of scientists as well as university departmental appointments of adjunct faculty from the national laboratories. The national labs also provide numerous internships for undergraduate and graduate students as well as postdoctoral traineeships and fellowships at CU-Boulder.

These cooperative relationships have contributed to the university's world-renowned research on matters of atmospheric research, science and technology, and environmental research.

CU Technology Transfer Office U.S. Patent Activity

In 2011, there were 259 U.S. patent applications filed in the name of the University of Colorado – this figure includes both new Provisional Patent Applications and regular U.S. applications, and the University received 39 new U.S. patents during that period.

Over the past ten years almost 1400 CU assigned US patents have been filed and nearly 250 U.S. patents have issued. The number of total CU assigned U.S. patents in force as of today is 335, with 347 U.S. patents currently in prosecution.

CU-Boulder research institutions include:

Biofrontiers Institute

The Biofrontiers Institute strives to advance human health and welfare by exploring critical frontiers of unknown biology and translating new knowledge to practical applications. The institute is dedicated to educating a new generation of interdisciplinary scientists, empowering them to work together to push the boundaries of human knowledge and reap its benefits. Biofrontiers leverages and expands Colorado's leadership in biotechnology and its promise for human advancement.

Cooperative Institute for Research in Environmental Sciences (CIRES)

Through CIRES, the University of Colorado-Boulder collaborates with NOAA and other federal agencies, bringing together government and university researchers with students from eight departments. Research projects focus on earth system science, which includes environmental chemistry and biology, atmospheric and climate dynamics, cryospheric and polar processes, and dynamics of the earth's crust.

Institute for Behavioral Genetics (IBG)

The Institute for Behavioral Genetics (IBG) is an organized research unit of the University of Colorado Graduate School dedicated to conducting and facilitating research on the genetic and environmental bases of individual differences in behavior. IBG is home to one of the nation's largest DNA repositories for research on human behavior, as well as housing a wide array of behaviorally and genetically defined lines of selected, recombinant inbred, transgenic, and knockout-gene mice. Current research includes studies of aging (The Johnson Lab, The Link Lab), psychopathology, reading disability, cognition, substance abuse, behavioral development, and evolution. IBG receives funding from several federal agencies, principally through the National Institutes of Health

JILA

JILA is a research platform for some of the top physicists and scientific researchers in the world, including several Nobel Laureates. Located on the Boulder campus of the University of Colorado, JILA includes graduate and postgraduate students, faculty, and alumni who work in some of the most challenging and fundamental areas recognized by science. Research at the facility falls into seven categories: astrophysics, atomic and molecular physics, biophysics, chemical physics, nanoscience, optical physics, and precision measurement.

Laboratory for Atmospheric and Space Physics (LASP)

The formal goal of LASP is to "make discoveries through the research and technology efforts of our atmospheric, space physics, solar, planetary, engineering, and mission ops divisions." Based at the University of Colorado-Boulder, LASP's current projects include a satellite – designed, built, and controlled by LASP – that will help determine how and why variations in the sun affect Earth's atmosphere and climate.

Renewable and Sustainable Energy Institute (RASEI)

RASEI, part of the University of Colorado-Boulder, integrates the university's research on renewable and sustainable energy with several other disciplines. A joint institute with the National Renewable Energy Laboratory, RASEI's goal is to become an international force in solving energy challenges through research, education, and technology.

Other Research Initiatives:

CU-Boulder's Flagship 2030 strategic plan has inspired the development of five research initiatives that draw upon the knowledge and skills of people in multiple fields to address critical needs of society:

Aerospace Initiative

In 2008, CU-Boulder launched a wide-ranging research and education thrust through the AeroSpace Systems Science and Engineering Initiative (AS3E) that seeks to address some of the most challenging and critical problems in earth and space science as well as create stronger connections between engineering and the sciences. The initiative will combine climate and environmental research conducted from Earth orbit with space weather research, planetary exploration astronomy and astrophysics.

One of the key elements of the initiative is a planned $40 million Aerospace and Energy Systems Building that will enable student/faculty and engineering/sciences interactions and provide an incubator for small-scale space system development.

Biotechnology Initiative

The BioFrontiers Institute was founded in 2003 to foster research, teaching and technology development at the interfaces of the life sciences, physical sciences, math, computational sciences and engineering. Advances in biology are creating an explosion of new information that is redefining the understanding of life at the molecular level. BioFrontiers scientists work to harness that knowledge for diagnosing, treating, and preventing disease, among other purposes.

The molecular biotech initiative is led by CU-Boulder's Nobel laureate Tom Cech, who returned to the university in April 2009 after 10 years as president of the Howard Hughes Medical Institute.

Computational Sciences and Engineering Initiative

The Interdisciplinary Computational Sciences and Engineering Initiative addresses a rapidly growing field of study with long-standing historic ties between applied mathematics, computer science, engineering, and the natural and social sciences.

One early benchmark manifestation of this initiative is the acquisition of a ~200 TF research 'supercomputer' in 2010. This research computing resource, developed in close collaboration with NCAR, will facilitate research endeavors across campus and will allow CU-Boulder to provide formal training in and develop graduate level programs in high performance computer science to support this industry.

Energy Initiative (EI)

The Energy Initiative (EI) was launched in 2005 to help find solutions for the world's urgent energy needs. With more than 180 faculty and researchers engaged in some type of energy research, the initiative builds on existing strengths in climate and environmental science, behavioral studies, policy analysis, and entrepreneurship to seek answers to a growing global crisis.

The Energy Initiative acts as a catalyst to bring researchers from multiple fields together to address key problems and opportunities. Research efforts range from energy-efficient construction to energy storage, from solar and wind energy to hydrogen production. By 2008, the initiative had 43 funded research projects in renewable and sustainable energy. In 2009, the Renewable and Sustainable Energy Institute (RASEI) was formed. RASEI is a joint institute between the University of Colorado at Boulder and the National Renewable Energy Laboratory (NREL).

Geosciences Initiative (GI)

CU-Boulder's Geosciences Initiative (GI), still in the early stages of development, addresses one of society's greatest challenges: environmental sustainability. Nearly 800 faculty and more than 1,000 graduate students are involved in related projects reaching beyond traditional academic boundaries.

By taking an interdisciplinary approach, the Geosciences Initiative intends to bring the best minds to bear on complex problems. The initiative combines natural sciences research with social sciences, humanities, law, journalism, and business research and education, which describe how human societies function. It also seeks to form partnerships that draw upon federal and private-sector expertise to help solve the great environmental challenges.

University of Denver (DU)

Research & Innovation

At DU, our faculty lead the University community, dedicating themselves to creative, pioneering scholarship. And first-rate scholars collaborate across disciplines in our centers and institutes, which are dedicated to finding real solutions. Graduate students and even undergraduates perform original scholarship. Working together closely with faculty members, DU students follow their individual passions to places no one has gone before them.

Centers and Institutes

The more than 50 centers and institutes at DU do highly focused research and scholarship. They bring industry and the government together with the top researchers in a specialized field to find solutions to pressing problems. DU's centers and institutes span the academic and professional fields. Their work ranges from finding treatment for genetic disorders and addressing pressing social problems such as human rights abuses to re-examining the effectiveness of the American legal system and more.

Examples of DU's centers and institutes include:

Aerosol Research Group

Instruments created by the University of Denver Aerosol Research Group have ridden on NASA flights and collected data in regions around the world, including Antarctica and the North Pole. The group develops and uses instruments to study aerosols defined as any collection of particles suspended in gas. The research team has investigated everything from volcanic dust to urban pollution to global warming.

DU engineers working with the research group have studied rocket plumes, power plant emissions and stratospheric ozone depletion. Findings from this research have been published in the Journal of Geophysical Research and other periodicals, as well as several books.

The Geographic Technology Applications Center

GTAC brings together an array of experts to gather, track and evaluate data. GTAC researchers analyze trends in land management, population and demographics to help organizations make better-informed decisions. Faculty at the center work on data applications and modeling that can help businesses find viable new retail locations, for example, or help local governments distribute emergency response teams. GTAC's 4,300-square-foot on-campus facility includes specialized labs designated for GIS instruction,

laptop computing, crime mapping and analysis, aerial photography, cartography, and other projects. Researchers regularly work in fields such as homeland security, law enforcement and urban planning, as well as spatial data analysis, digital mapping and 3-D representations of events.

Key Colorado-Based Federal and Industry Research Facilities

Bureau of Reclamation Technical Services Center (TSC)

TSC is an engineering, science, research, and support center for projects related to water resources. The organization provides specialized expertise to the Bureau of Reclamation, regions, other Federal agencies, and international customers. The TSC, which is based in Lakewood, maintains a broad range of water resource management capabilities, from designing dams and power plants to studying aquatic plants.

Center for Astrophysics and Space Astronomy (CASA)

CASA is an affiliated unit within the Astrophysical and Planetary Sciences Department at the University of Colorado-Boulder. Faculty, research professors, research associates, and students conduct research in related areas, including stars, solar physics, interstellar and intergalactic matter, extragalactic astronomy, and high-energy astrophysics.

Centers for Disease Control and Prevention (CDC), Division of Vector-Borne Infectious Diseases

Based in Fort Collins, the CDC's Division of Vector-Borne Infectious Diseases is a national and international reference center for diseases caused by mosquitoes, ticks, and fleas (Lyme disease, plague, and other zoonotic bacterial infections). The division has a multi-faceted mission that includes research, surveillance, and the provision of reference information and technical expertise.

Colorado Renewable Energy Collaboratory

The Collaboratory consists of four Colorado-based research institutions and a network of industry partnerships with the goal of creating renewable energy technologies and rapidly transferring those technologies to the marketplace. The National Renewable Energy Laboratory, the University of Colorado-Boulder, Colorado State University, and the Colorado School of Mines jointly conduct research at a number of centers under a single administrative structure.

Cooperative Institute for Research in the Atmosphere (CIRA)

CIRA is a collaborative arrangement between NOAA and Colorado State University, similar in structure to that between CIRES and the University of Colorado. Its vision is to improve research in the atmospheric sciences by developing skills beyond standard meteorology. The National Park Service works with CIRA on air quality and visibility research. NASA and the Department of Defense are also active sponsors.

Earth System Research Laboratory (ESRL)

Headquartered in Boulder, the ESRL is the largest of NOAA's research labs. Its mission is to observe and understand the earth system and to develop products that advance NOAA's environmental information and services on global-to-local scales. ESRL scientists study the components and dynamics of the earth and how they work together to produce weather and climate and influence ecosystems.

Extreme Ultraviolet Science and Technology (EUV Center)

The EUV Center is an Engineering Research Center that explores the development of compact coherent extreme ultraviolet (EUV) sources and their applications in challenging scientific and technological problems. Its goal is to make extreme ultraviolet light routinely available throughout the country in a wide range of laboratory settings. The center is located on the main campus of Colorado State University in Fort Collins.

Federal Railway Administration Transportation Technology Center (TTCI)

A subsidiary of the Association of American Railroads (AAR), TTCI is headquartered at the U.S. Federal Railroad Administration's Transportation Technology Center near Pueblo. TTCI's mission is "accelerating the use of clean, safe and efficient technologies by railways worldwide." Under the direction of AAR, the center TTCI develops and maintains industry standards for freight cars and locomotives.

National Ecological Observatory Network (NEON)

NEON is expected to be in full operation in Boulder by 2016. Funded by the National Science Foundation, the goal of NEON will be "to contribute to global understanding and decisions in a changing environment using scientific information about continental-scale ecology obtained through integrated observations and experiments." NEON's development is being managed by NEON, Inc., an independent corporation created on behalf of the scientific community.

National Geophysical Data Center (NGDC)

NOAA's NGDC in Boulder is the steward for the nation's geophysical data, ensuring quality, integrity, and accessibility. The information gathered by the NGDC provides insight on widely diverse topics, from the explosive history of solar flares to mapping the outer continental shelf. NGDC collects, archives, and delivers data for research, commerce, and decision makers.

National Institute of Standards and Technology (NIST)

NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life. The organization has two national labs, one in Boulder and the other at the headquarters in Gaithersburg, Maryland.

The Boulder laboratory conducts research in a wide range of areas, including chemical, physical, materials, and information sciences and engineering.

National Oceanic and Atmospheric Administration (NOAA)

NOAA is the umbrella agency for the nation's earth system science components, including NOAA Research, National Weather Service, National Ocean Service, and NOAA Satellite and Information Service. NOAA's products and services impact more than one-third of the nation's gross domestic product. The agency has offices across the front range of Colorado: Boulder, Denver, Fort Collins, Grand Junction, Longmont, and Pueblo.

National Renewable Energy Laboratory (NREL)

Operating under the auspices of the U.S. Department of Energy and based in Golden, NREL is the nation's primary laboratory for renewable energy and energy efficiency research and development. NREL's scientists and researchers support critical market objectives to accelerate research from scientific innovations to market-viable alternative energy solutions.

National Telecommunications and Information Administration (NTIA)

NTIA is the principal adviser to the President of the United States on telecommunications and information policy issues. The organization also manages the federal use of spectrum; performs telecommunications research and engineering, including resolving technical telecommunications issues for the federal government and private sector; and administers infrastructure and public telecommunications facilities grants.

National Weather Service (NWS)

NOAA's NWS provides weather and seasonal climate forecasts, as well as broad hydrology information for the nation. The NWS operates three Weather Forecast Offices in Colorado – in Boulder, Grand Junction, and Pueblo – and 122 across the country. Each location provides up-to-date weather and flood warnings, daily forecasts, and long-term weather and water information.

National Wildlife Research Center (NWRC)

NWRC is part of the U.S. Department of Agriculture (USDA). Based at Colorado State University in Fort Collins, NWRC is within the Wildlife Services program of the USDA's Animal and Plant Health Inspection Service. Its primary objective is to minimize the negative effects of interaction between wildlife and humans.

Rocky Mountain Research Station (RMRS)

RMRS is one of seven research stations/institutes of the U .S. Forest Service Research and Development organization. Headquartered in Fort Collins, the RMRS develops and delivers scientific and technological information and knowledge to

improve the health and use of forest and rangelands. It maintains a forest and rangeland research and development program among 14 states of the Interior West.

Space Weather Prediction Center (SWPC)

The SWPC is one of nine National Centers for Environmental Prediction within the National Weather Service. It is the nation's official source for space weather alerts, watches, and warnings. SWPC operates continuously in Boulder. As one of only four National Critical Systems in the NWS, it partners with the Air Force Weather Agency at Offutt Air Force Base in Nebraska, which is responsible for supplying space weather guidance to the defense and intelligence communities.

University Corporation for Atmospheric Research (UCAR)

Headquartered in Boulder, UCAR is a nonprofit consortium of North American member universities. The organization manages the National Center for Atmospheric Research (NCAR) in Boulder as well as the UCAR Office of Programs, which provide research, observation, and computing facilities plus a variety of services for the atmospheric and earth sciences community.

U.S. Air Force Academy Research Institutes

The Air Force Academy research institutes, located near Colorado Springs, include the Institute for Information Technology Applications (IITA) and the Institute for National Security Studies (INSS). The IITA conducts information technology application research for the Department of Defense, the Air Force and the U.S. Air Force Academy. The INSS promotes national security research within the military academic community for the Department of Defense and supports the Air Force national security education program.

U.S. Department of Agriculture Agricultural Research Service (ARS)

ARS is the chief intramural research agency of the U.S. Department of Agriculture. It develops solutions for current problems facing agriculture in America, as well as new methods and technology to help increase productivity, safety, and efficiency of food and fiber production. Within Colorado, ARS supports seven research units; Fort Collins hosts the Northern Plans Area Office, which supports 13 locations in eight states.

U.S. Geological Survey (USGS)

The USGS is a bureau of the U.S. Department of the Interior; one of its two regional offices is located in Denver, and several USGS divisions operate in Colorado. The bureau provides reliable scientific information to: describe and help understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect quality of life.

Appendix 5 – Workforce

Competitive Staffing Analysis

University Profiles

Competitive Staffing Analysis:
Northern Front Range, Colorado
(Denver-Aurora, Boulder, Colorado Springs, Ft. Collins-Loveland & Greeley)

Prepared for

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by

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Background

This report was prepared by Arapahoe/Douglas Works! at the request of Laura Brandt, Manager of Economic Development, Metro Denver Economic Development Corporation to be used as part of an overall presentation on workforce availability for a proposed new location for a U.S. Patent and Trademark Office in Colorado. Geography requested includes five metropolitan areas that together make up the most populous portion of Colorado. These stretch along the Front Range (eastern slope) of the Rocky Mountains from Colorado Springs to the Wyoming border, and include Colorado Springs, Denver-Aurora, Boulder, Ft. Collins-Loveland and Greeley.

Educated and Skilled Workforce

Colorado's Front Range boasts a highly skilled workforce whose educational attainment is well above the national average. The table below shows educational attainment within the Front Range, the State of Colorado and the United States.

Educational Attainment: Pop and Older	enver-ora MSA	El Paso-Teller Region (Colo. Spgs.)	Colorado	United States
Less than 9th grade	4.6%	2.5%	4.5%	6.1%
9th to 12th Grade, No Diplom	6.9%	5.2%	6.7%	8.3%
High School Graduate or GED	22.6%	22.8%	23.7%	28.5%
Some College, No Degree	21.5%	24.9%	22.1%	21.3%
Associate Degree	7.2%	9.7%	7.6%	7.6%
Bachelor Degree	24.2%	21.6%	22.9%	17.7%
Graduate or Professional Deg	12.9%	13.3%	12.6%	10.4%

Source: U.S. Census

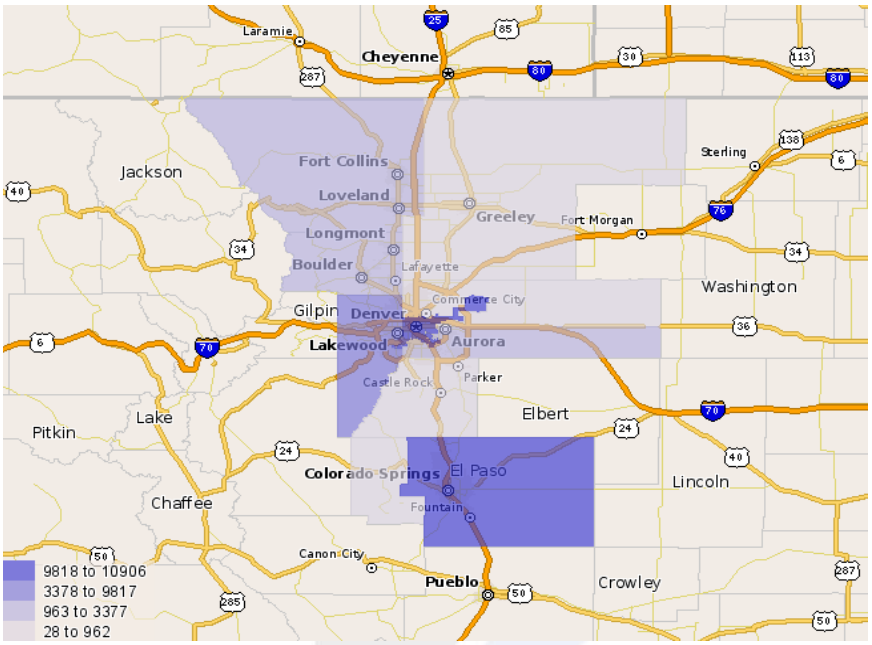
Local Economy

The Front Range contains over 81% of Colorado's workforce. The Front Range labor force makes up 86% of the state's payroll. Colorado's Gross Regional Product (GRP) is $240.9 billion. The Front Range contributes $205.7 billion (85.8%) of the state's GRP.

NAICS Code		Jobs	Earnings (000s)	Sales (000s)	Earnings Per Worker (000s)
90	Government	346,787	$ 23,755,271	$ 51,096,601	$ 69
54	Professional, Scientific	254,439	$ 19,003,666	$ 33,496,098	$ 75
62	Health Care and Soc	232,632	$ 12,052,349	$ 21,643,705	$ 52
52	Finance and Insuranc	174,950	$ 11,493,754	$ 37,685,022	$ 66
31-33	Manufacturing	123,331	$ 9,512,674	$ 43,389,458	$ 77
42	Wholesale Trade	91,560	$ 7,690,782	$ 17,300,662	$ 84
44-45	Retail Trade	239,191	$ 7,384,015	$ 16,415,345	$ 31
23	Construction	132,570	$ 7,297,222	$ 15,835,279	$ 55
51	Information	73,949	$ 7,111,773	$ 33,932,892	$ 96
56	Administrative and Su	160,260	$ 5,595,810	$ 10,707,562	$ 35
55	Management of Con	32,236	$ 4,555,597	$ 8,140,905	$ 141
48-49	Transportation and W	75,470	$ 4,203,604	$ 10,127,226	$ 56
81	Other Services (except Public Administration)	112,702	$ 3,897,371	$ 7,859,599	$ 35
72	Accommodation and Food Services	178,990	$ 3,759,229	$ 10,721,879	$ 21
53	Real Estate and Rental and Leasing	130,237	$ 3,675,413	$ 26,875,732	$ 28
21	Mining, Quarrying, and Oil and Gas Extraction	33,701	$ 3,258,156	$ 13,941,037	$ 97
61	Educational Services	57,222	$ 1,896,482	$ 3,206,571	$ 33
71	Arts, Entertainment, and Recreation	67,912	$ 1,600,984	$ 3,383,699	$ 24
22	Utilities	5,460	$ 690,177	$ 3,964,564	$ 126
11	Agriculture, Forestry, Fishing and Hunting	21,298	$ 591,532	$ 2,123,699	$ 28
	Totals	**2,544,897**	**$ 139,025,861**	**$ 371,847,535**	

Source: EMSI Complete Employment, 4th Quarter 2011

Federal Employment



Colorado has a large federal government presence along the Front Range, which includes the Federal Center, and the National Renewable Energy Laboratory in the Denver metro area, the National Center for Atmospheric Research in Boulder, and various military bases, including Ft. Carson in Colorado Springs.

This map and the table below show Federal Government employment and concentrations by county in the Front Range area.

Concentration By County: Federal Government Employment			
County	2011 Jobs	2011 Average Earnings	2011 Location Quotient
El Paso, CO (8041)	10,906	$90,629	2.25
Denver, CO (8031)	10,645	$116,647	1.48
Jefferson, CO (8059)	7,903	$126,963	2.31
Arapahoe, CO (8005)	2,377	$107,808	0.43
Larimer, CO (8069)	2,197	$115,256	0.87
Boulder, CO (8013)	1,762	$149,177	0.59
Adams, CO (8001)	905	$112,925	0.33
Weld, CO (8123)	295	$96,434	0.20
Douglas, CO (8035)	97	$93,398	0.06
Teller, CO (8119)	42	$62,118	0.28
Broomfield, CO (8014)	28	$91,211	0.05

Source: EMSI Complete Employment - 2011.4

Experienced Local Workforce

An analysis was done of key occupations likely to be needed in a U.S. Patent and Trademark Office. The table on the next page shows current employment, available labor pool with five years experience or more and competitive wage scales for these occupations.

Key Occupations Supporting a U.S. Patent and Trademark Office						
SOC Code	Description	2011 Jobs	Available Labor Pool (5 yrs exp or more)	10th Percentile Hourly Earnings	2011 Avg Hourly Wage	2011 Pct 90 Hourly Earnings
11-3021	Computer and information systems managers	4,959	611	$36.00	$54.64	$95.07
15-1011	Computer and information scientists, research	457	102	$22.97	$41.76	$63.87
15-1021	Computer programmers	6,796	454	$16.81	$34.66	$57.27
15-1031	Computer software engineers, applications	19,021	491	$26.88	$42.80	$62.17
15-1032	Computer software engineers, systems software	17,103	281	$29.22	$45.57	$66.10
15-1041	Computer support specialists	11,713	1,443	$14.71	$24.74	$37.83
15-1051	Computer systems analysts	12,331	495	$20.71	$36.21	$54.44
15-1061	Database administrators	3,288	174	$19.79	$34.85	$52.95
15-1071	Network and comput	9,061	618	$21.33	$36.22	$53.09
15-1081	Network systems and	8,042	149	$13.79	$28.93	$47.68
15-1099	Computer specialists,	7,189	651	$22.29	$36.09	$52.54
17-2011	Aerospace engineers	2,411	93	$27.59	$44.81	$63.18
17-2031	Biomedical engineers	92	9	$17.85	$31.54	$48.97
17-2051	Civil engineers	7,233	278	$21.58	$35.76	$52.37
17-2061	Computer hardware e	3,368	74	$31.50	$51.72	$73.48
17-2071	Electrical engineers	3,548	230	$22.48	$39.19	$57.41
17-2072	Electronics engineers,	4,903	112	$29.28	$45.42	$64.34
17-2081	Environmental engine	1,216	88	$24.43	$39.41	$54.28
17-2112	Industrial engineers	3,034	119	$25.69	$38.79	$54.33
17-2131	Materials engineers	534	32	$24.16	$41.23	$63.64
17-2141	Mechanical engineer	4,580	242	$25.78	$44.28	$66.57
17-2151	Mining and geologica	597	13	$24.72	$39.08	$59.17
17-2171	Petroleum engineers	1,185	16	$37.01	$65.37	$99.82
19-1012	Food scientists and te	179	15	$12.63	$23.49	$40.39
19-1021	Biochemists and biopl	332	28	$19.93	$39.84	$67.61
19-1041	Epidemiologists	58	1	$15.49	$26.55	$41.18
19-1042	Medical scientists, exc	845	29	$17.72	$34.77	$61.11
19-2012	Physicists	513	20	$29.30	$54.57	$87.24
19-2031	Chemists	1,566	84	$22.37	$37.50	$57.73
19-2032	Materials scientists	84	11	$20.42	$36.41	$57.22
19-2042	Geoscientists, except	2,065	44	$21.14	$45.34	$71.91
19-2043	Hydrologists	478	9	$26.11	$42.67	$63.44
23-1011	Lawyers	5,407	164	$19.27	$48.79	$99.55
27-3041	Editors	3,025	196	$14.25	$22.56	$36.32
27-3042	Technical writers	1,120	158	$19.92	$30.62	$43.97
43-1011	First-line supervisors/m	7,803	1,768	$14.27	$25.00	$38.24
43-6011	Executive secretaries	8,165	2,982	$14.05	$21.43	$30.92
43-6014	Secretaries, except le	4,360	882	$10.43	$15.88	$22.54
	Total	0,297	13,169	$19.04	$32.37	$49.90

Source: EMSI Complete Employment - 2(

Sector Infrastructure Supporting U.S. Patent and Trademark Office

Professional, Technical & Scientific

Emplo			.1
County			tion ient
Denver, CO (8031)			1.46
Arapahoe, CO (8005)			1.56
Boulder, CO (8013)			2.34
El Paso, CO (8041)			1.26
Jefferson, CO (8059)			1.58
Larimer, CO (8069)			1.34
Douglas, CO (8035)			1.64
Adams, CO (8001)			0.78
Broomfield, CO (8014)	6,111	$83,667	2.16
Weld, CO (8123)	4,936	$40,656	0.62
Teller, CO (8119)	871	$41,294	1.12

Source: EMSI Complete Employment - 2011.4

The Professional, Technical & Scientific sector includes legal, accounting, architectural and engineering, scientific research, computer systems design, public relations and consulting firms. These firms are particularly concentrated in Denver and Arapahoe counties, with concentrations in Jefferson, Boulder and El Paso counties.

Bioscience & Healthcare Sector

Employment Concentration: Biosciences & Healthcare Sector			
County	2011 Jobs	2011 Average Earnings	2011 Location Quotient
Denver, CO (8031)	36,307	$72,906	0.78
Arapahoe, CO (8005)	31,285	$73,157	0.87
El Paso, CO (8041)	22,487	$56,433	0.72
Boulder, CO (8013)	21,847	$69,019	1.12
Jefferson, CO (8059)	21,696	$65,682	0.98
Larimer, CO (8069)	16,772	$54,720	1.03
Adams, CO (8001)	13,542	$62,495	0.76
Weld, CO (8123)	7,800	$54,443	0.80
Douglas, CO (8035)	7,637	$62,939	0.72
Broomfield, CO (8014)	2,233	$68,339	0.64
Teller, CO (8119)	491	$37,589	0.51

Source: EMSI Complete Employment - 2011.4

This sector includes biomedical and pharmaceutical manufacturing, medical supply wholesale, ambulatory care, hospitals and nursing care centers.

The Denver-Aurora metropolitan area has the greatest concentrations of healthcare employment, which includes the Anschutz Medical Campus, Health One, Centura Health, Kaiser Permanente and others. Biosciences and device manufacturing are concentrated more in Boulder and Larimer counties. Some light manufacturing exists in Arapahoe County.

Aerospace and Defense Sector

Employment Concentration: Aerospace & Defense Sector			
County	2011 Jobs	2011 Average Earnings	2011 Location Quotient
El Paso, CO (8041)	52,219	$97,373	3.42
Arapahoe, CO (8005)	20,917	$76,876	1.20
Denver, CO (8031)	17,835	$76,975	0.79
Jefferson, CO (8059)	17,500	$108,578	1.62
Boulder, CO (8013)	16,438	$105,571	1.73
Adams, CO (8001)	7,263	$63,012	0.83
Larimer, CO (8069)	7,070	$78,272	0.89
Douglas, CO (8035)	5,014	$87,833	0.97
Broomfield, CO (8014)	3,377	$116,721	1.98
Weld, CO (8123)	2,611	$48,925	0.55
Teller, CO (8119)	317	$42,847	0.68

Source: EMSI Complete Employment - 2011.4

Colorado is ranked second in the nation for aerospace research and development and boasts several major defense contractors, including Lockheed Martin, Raytheon, Ball Aerospace, United Launch Alliance, Honeywell, and Sierra Nevada.

Metro Denver and Northern Colorado Universities: Enrollment and Science and Engineering Degree Programs

Source: Colorado Department of Higher Education

Higher Education Facilities in Metro Denver and Northern Colorado
Fall 2010 Enrollment

Four Year Public Colleges and Universities	
Colorado School of Mines - Golden	5085
Colorado State University - Fort Collins	26598
Metropolitan State College - Denver	23682
University of Colorado Boulder	30877
University of Colorado Denver	18275
University of Northern Colorado - Greeley	11286
Four Year Private Colleges and Universities	
Colorado Christian University - Lakewood	2511
Johnson & Wales - Denver	1532
Regis University - Denver	10874
University of Denver - Denver	11463
University of Phoenix - Metro Denver	2603

Colorado State University

Fall 2010 Enrollment: 26,598

Life Sciences

Agricultural Economics
Animal Science
Applied Computing Technology
Biochemistry
Biological Science
Biomedical Sciences
Chemistry
Environmental Horticulture
Equine Science
Fish, Wildlife, and Conservation Biology

Forestry
Geology
Health and Exercise Science
Horticulture
Mathematics
Microbiology
Natural Sciences
Nutrition and Food Science
Physics
Plant Health
Soil and Crop Sciences

Watershed Science
Zoology

Engineering & Technology

Chemical & Biomedical Engineering

Chemical and Biological Engineering

Civil Engineering

Computer Engineering
Computer Science
Electrical & Biomedical Engineering - Lasers and Optics
Electrical & Biomedical Engineering - Electrical
Electrical Engineering
Engineering Science
Environmental Engineering
Mechanical & Biomedical Engineering
Mechanical Engineering

Colorado School of Mines

Fall 2010 Enrollment: 5,085

Engineering & Technology

Applied Computer Sciences
Applied Chemistry
Applied Physics
Biochemistry
Chemical and Biochemical Engineering
Chemical Engineering
Chemistry
Civil Engineering
Electrical Engineering

Engineering
Engineering and Technology Management
Engineering Geology
Engineering Physics
Environmental Chemistry
Environmental Engineering
Environmental Science & Engineering
Geochemistry
Geological Engineering
Geology
Geophysical Engineering
Geophysics
Geotechnics & Groundwater Engineering
Hydrology Engineering/Science
Materials Science
Mathematical and Computer Sciences
Mechanical Engineering
Metallurgical and Materials Engineering
Mineral Exploration & Mining GeoSciences
Minerals & Petroleum Exploration Engineering
Mining & Earth Systems Engineering

Mining Engineering

Mining Exploration & Mining GeoSciences
Nuclear Engineering
Petroleum Engineering
Petroleum Reservoir Systems

University of Denver

Fall 2010 Enrollment: 11,463

Life Sciences

Animal Technology
Astrophysics
Biochemistry
Biological Sciences

Chemistry
Ecology & Biodiversity
Environmental Chemistry
Environmental Science
Geographic Information Science
Geology
Integrated Sciences
Mathematics
Medical Physics
Molecular Biology
Molecular and Cellular Biophysics
Physics
Physics and Astronomy
Science and Technology
Statistics

University of Denver

Engineering & Technology

Applied Computing
Bioengineering
Computer Engineering
Computer Science
Computer Science and Engineering
Computer Science Systems Engineering
Electrical and Computer Engineering
Electrical Engineering
Engineering
Information Technology
Information Technology Studies
Materials Science
Mechanical Engineering
Mechatronic Systems
Mechatronics Systems Engineering
Nanoscale Science and Engineering

School of Law

Law

Public Policy

Public Policy
Public Policy and Social Services

University of Colorado at Boulder

Fall 2010 Enrollment: 30,877

Life Sciences
Astronomy
Astrophysical Science
Audiology
Biochemistry

Chemical Physics
Chemistry
Ecology and Evolutionary Biology
Geology
Geophysics
Molecular, Cellular, Developmental Biology
Physics
Cognitive Science
Neuroscience
Mathematics

School of Law
Law

Engineering & Technology
Aerospace Engineering Sciences
Applied Mathematics
Architectural Engineering
Chemical and Biological Engineering
Chemical Engineering
Civil Engineering
Computer Science
Electrical and Computer Engineering
Electrical Engineering
Engineering Management
Engineering Physics

Environmental Engineering

Mechanical Engineering

University of Colorado at Colorado Springs

Fall 2010 Enrollment: 8,900

Life Sciences
Applied Geography
Biology
Chemistry
Geography & Environmental Studies
Health Sciences/Allied Health/Health Sciences General
Master of Sciences
Mathematics
Nursing
Nursing Practice

Physics

Engineering & Technology
Applied Mathematics
Computer Engineering
Computer Science
Electrical Engineering
Engineering
Mechanical Engineering

University of Colorado - Denver & Health Sciences

Fall 2010 Enrollment: 18,275

Life Sciences

Biochemistry
Biochemistry and Molecular Genetics
Biology
Biophysics & Genetics
Biostatistics
Cancer Biology
Cell & Developmental Biology
Chemistry
Clinical Science
Cognitive Science
Computational Bioscience
Dental Surgery
Doctor of Nursing Practice
Environmental Sciences
Epidemiology
Genetic Counseling
Geography
Health & Behavioral Science
Health Services Research
Human Medical Genetics
Humanities
Immunology
Information Systems
Integrated Sciences
Masters of Physician Assistant Studies
Mathematics

University of Colorado - Denver & Health Sciences

Life Sciences (cont.)

Medical Science
Medicine
Microbiology
Molecular Biology
Neuroscience
Nursing
Pharmaceutical Sciences
Pharmacology
Pharmacy
Physics
Physiology
Psychology
Public Health
Toxicology

Engineering & Technology

Applied Mathematics
Civil Engineering
Computer Science
Computer Science & Engineering
Computer Science & Information Systems
Electrical Engineering
Electrical Engineering
Engineering
Mechanical Engineering

Appendix 6 – Economic Impact Study

The Business Research Division of the Leeds School of Business at the University of Colorado Boulder has prepared a comprehensive study of the economic impact of a regional patent and trademark office in Metro Denver.

UNITED STATES PATENT AND TRADEMARK OFFICE

Economic Impacts on Colorado of a Regional Satellite Office in the Metro Denver Region

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January 18, 2012

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UNIVERSITY OF COLORADO BOULDER
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EXECUTIVE SUMMARY

Colorado is a state with a highly educated workforce and a diverse economy that includes advanced technology and federal research laboratories. It is a comparatively affordable to place to live and do business, with world-class accommodations and transportation. These attributes make the state competitive in the pursuit of a satellite United States Patent and Trademark Office. The patent office will offer great economic benefits to Colorado, including jobs, facility and visitor expenditures, economic development opportunities, as well as yet another innovation asset.

The Alexandria, Virginia, USPTO headquarters served as a proxy for satellite office expenditures on salary, rents, travel, supplies, materials, maintenance, training, and other costs. Lease rates, construction costs, and tenant improvements were estimated from market data for the Metro Denver region. For the Alexandria office, patent direct costs are estimated in excess of $240,000 per employee. Colorado expenditures are estimated at $157,600 per employee in year 1. Over five years, the facility is estimated to account for $261 million in direct patent office facility expenditures, most of which remain within the state and the Metro Denver region.

This study estimated the impacts of a satellite office with 200 patent examiners and 30 support staff initially, growing to 500 examiners and 75 support staff over five years. With compensation commensurate with training and expertise, patent examiners earn higher-than-average wages for Colorado—initially estimated at $90,000 per year plus benefits. Support staff, including IT and administration, will earn average wages in excess of $70,850 plus benefits. All of these employees will be Colorado-based, and 9-in-10 of them will likely live in the Metro Denver region.

Over the first five years, the satellite facility will lead to economic activity totaling $439 million (direct, indirect, and induced), of which $389.2 million will occur in the Metro Denver region. The employment impacts reach beyond the 230 examiners and support workers. The total facility employment impact will be 440 workers in year 1, growing to 958 in year 5, including employment spawned from indirect purchases and household spending. Given that examiners' wages exceed average Colorado salaries, their incomes will have a greater induced effect than those of employees in many other industries, due to their higher level of disposable income.

An ideal location for a satellite USPTO, Colorado and the Metro Denver region offer numerous economic, physical, social, and cultural assets. State and metro population continues to outpace the nation, driven by steady natural increases and strong in-migration. Growth in gross domestic product and employment is driven partially off strengths in the high-tech and extraction industries. Complementary strengths in occupations, including IT, engineering, math, and life sciences occupations, lends to the skills and expertise needed to fill positions at a satellite USPTO. Industry clusters, with quantifiable critical masses of employment, are built on trained and talented human resources, including aerospace, aviation, biosciences, finance, energy, software, and telecommunications. An extensive network of higher education facilities in Colorado both trains this workforce and fuels research and innovation. These efforts are complemented by federal research facilities along the Front Range and private industry R&D. Behind the economic success, cultural diversity, and appealing recreation lies a physical infrastructure that eases the costs and burdens of doing business, ranging from airports to interstates and from education to natural resources.

While Colorado can offer the USPTO critical assets for satellite office success, the addition of a satellite USPTO will add to Colorado's growing reputation as a place of innovation and entrepreneurship while strengthening the state's economy.

PROJECT OVERVIEW

This purpose of this study is to quantify economic activity associated with the location of a United States Patent and Trademark Office (USPTO) in the Metro Denver region, demonstrate the economic and demographic assets of the state, and describe ancillary benefits of a patent office in Colorado.

Colorado's many business and cultural attributes make it a compelling location for a satellite USPTO. The state has a talented and highly educated workforce and a diverse economy that includes advanced technology and federal research laboratories. Among the state's assets are an integrated higher education system, a high-traffic airport, major transportation routes that include a web of interstates and highways, and abundant natural energy and recreational resources. Compared to major metropolitan areas, the Metro Denver region is a comparatively affordable to place to live and do business, with world-class accommodations.

This study was conducted by the Business Research Division (BRD), a business and economic research center within the Leeds School of Business at the University of Colorado Boulder. The BRD has been a source of economic data and business knowledge within the state of Colorado since 1915. The BRD delivers a consensus economic forecast for the state of Colorado each December, titled the *Colorado Business Economic Outlook.* This information is shared throughout the Colorado community and nationally through presentations made by the Executive Director. The BRD also publishes quarterly industry reports (*Colorado Business Review*) and a quarterly confidence index (Leeds Business Confidence Index). Additionally, the BRD engages in consulting research projects that serve to inform numerous stakeholders in Colorado. These economic and market research studies utilize both primary data collected through surveys, interviews, and focus groups, as well as publicly available economic and financial data. Studies have been conducted for federal, state, and local government entities, and for private enterprise and nonprofits. Please visit http://leeds.colorado.edu/brd for more information.

METHODOLOGY

This study was conducted in cooperation with the Metro Denver Economic Development Corporation (Metro Denver EDC). It provides context for the economic footprint of the Metro Denver region and the state of Colorado, illustrating the economic strengths of the region. To demonstrate these facts, publicly available data on labor force, employment, wages, gross domestic product, population, and demographics were obtained from the Bureau of Labor Statistics, the Bureau of Economic Analysis, and the U.S. Census Bureau. Information on clusters (e.g., aerospace, energy, etc.) was produced by Development Research Partners and provided by the Metro Denver EDC.

Economic impacts on the state of Colorado were estimated by examining expected Colorado-based operating expenditures, capital expenditures, employee salaries and benefits, and construction expenditures. Data were obtained for the Washington office from a report titled *FY 2011 USPTO Performance and Accountability Report*. The information was converted into a per employee basis and extrapolated to the expected employment levels at a proposed satellite office in Colorado. Leakage was accounted for by examining the portion of purchases made outside the state by other federal facilities in survey data gathered by the BRD for other studies, including:

- *National Renewable Energy Laboratory: Economic and Fiscal Impacts of NREL on Colorado, FY2009-FY2011 (October 2011);*
- *CO-LABS Impact Study: Impact of Federal Research Laboratories in Colorado 2009-2010 (March 2011)*;
- *CO-LABS Economic Impact Study: The Impact of Federally Funded Research Laboratories in Colorado (May 2008)*; and
- *The Impact of the Federal Government Facilities in the Metro Denver Region on the Region and on the State of Colorado (May 2007)*.

Construction expenditures and leases were estimated using information from CO-STAR, Mortensen Construction, and the U.S. General Services Administration.

The multiplicative impacts of direct expenditures on other industries in the economy were estimated through input-output modeling by using IMPLAN. Employment and operating expenditures were assigned as Government and Non-NAICS in the model, while construction and lease expenditures were assigned to the Construction and the Real Estate and Rental and Leasing industries. Visitation was assigned to the Accommodations, Food Services and Drinking Places, and General Merchandise Stores sectors.

Lastly, this study describes the ancillary community and economic development benefits that may be reaped by locating the USPTO satellite office in Colorado as illustrated through examples such as the formation of United Launch Alliance and the building of Vestas manufacturing facilities.

This study does not attempt to estimate the economic impacts of the patents or trademarks granted by the office, nor the technology or business growth related to those patents.

DEFINITIONS

Gross Domestic Product (GDP): A measure of economic activity, GDP is the total value added by resident producers of final goods and services.

Gross Output (Output): The total value of production is gross output. Unlike GDP, gross output includes intermediate goods and services.

Value Added: The contribution of an industry or region to total GDP, value added equals gross output, net of intermediate input costs.

Metro Denver Region: Unless otherwise noted, is defined as Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson counties for this study, thus, excludes Clear Creek, Elbert, Gilpin, and Park counties.

ASSUMPTIONS

Given the absence of operating satellite offices, the Alexandria, Virginia, United States Patent and Trademark Office served as the best proxy for operations. Information from the Virginia office was extrapolated for employment ratios, operating expenditures, and visitors. Lease rates, construction costs, and tenant improvements were estimated using market information for the Metro Denver region.

Employment

Headquartered in Alexandria, Virginia, the United States Patent and Trademark Office employs thousands of technical examiners and attorneys, as well as support staff. In FY2011, employment totaled 10,210 federal workers, of which 6,780 (66.4%) were patent examiners and 378 (3.7%) were trademark examining attorneys.[1]

The first USPTO satellite office was awarded to Detroit. This office will open in 2012 and is expected to operate initially with 100 examiners and 15 support employees. The baseline assumption for this study's analysis is that a satellite patent office in Colorado would begin operations with 200 examiners, ramping up to 500 over five years given local talent and recruiting ability. Similar to the Detroit office, a Colorado satellite office is anticipated to have fewer support workers and no trademark attorneys. Facility employment in Colorado would total 230 in year 1, increasing to 575 in year 5.

TABLE 1: EMPLOYMENT, YEARS 1 THROUGH 5

Occupations	Year 1	Year 2	Year 3	Year 4	Year 5
Examiners	200	275	350	425	500
Attorneys	0	0	0	0	0
Support Workers	30	41	53	64	75
Total	**230**	**316**	**403**	**489**	**575**

Salary and Benefits

Based on discussions with USPTO economists, most patent examiners at the satellite office are expected to be hired as grades 11-13 on the government pay scale. Patent examiners have a special salary rate, legislated to help retain examiners, and the rate is the same regardless of location. Pay is commensurate with training and expertise for examiners, who are mostly engineers and patent lawyers. Based on this pay rate table, minimum salary for GS-11 is $69,899 and the maximum salary for GS-13 is $123,923. For this study, average salaries for patent examiners will begin at $90,000 in year 1, with inflationary adjustments of 2.5% per year.

Based on a study of Colorado federal research facilities conducted in 2011, benefits accounted for 24.9% of total compensation. This brings the employment costs to $119,840 per employee (75.1% salary, 24.9% benefits). Eight percent of the total compensation is assumed to be allocated to retirement, thus immediate economic benefits to the local community will be negligible.

It is assumed that 100% of employees will live in Colorado. Based on other studies conducted by the research team on government entities, it is estimated that 90.2% of employees will live within the Metro Denver region.

[1] *FY2011 USPTO Performance and Accountability Report.*

TABLE 2: PATENT EXAMINER SALARY RATES, SPECIAL SALARY RATE TABLE

Grade	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10
5	$41,969	$43,368	$44,766	$46,165	$47,563	$48,962	$50,360	$51,758	$53,157	$54,555
7	$51,988	$53,721	$55,455	$57,188	$58,922	$60,655	$62,389	$64,122	$65,856	$67,589
9	$60,682	$62,704	$64,726	$66,748	$68,770	$70,792	$72,815	$74,837	$76,859	$78,881
11	$69,899	$72,229	$74,558	$76,888	$79,217	$81,547	$83,877	$86,206	$88,536	$90,866
12	$80,164	$82,836	$85,508	$88,180	$90,852	$93,524	$96,196	$98,868	$101,540	$104,212
13	$95,326	$98,504	$101,681	$104,859	$108,036	$111,213	$114,391	$117,568	$120,745	$123,923
14	$112,647	$116,402	$120,156	$123,911	$127,665	$131,420	$135,175	$138,929	$142,684	$146,438
15	$132,505	$136,922	$141,339	$145,756	$150,173	$154,590	$155,500	$155,500	$155,500	$155,500

Source: United States Patent and Trademark Office, Patent Examiner Salary Rates Effective 01/01/2011, http://usptocareers.gov/Pages/Misc/SalaryRates.aspx, retrieved January 11, 2012.

Nonexaminers (e.g., administration, human resources, IT, etc.) are paid based on the federal general schedule for all employees. Assuming these individuals are hired at GS-11, the average salary will be $70,852. Applying benefits ratios, employment costs for nonexaminers are $93,344 per employee.

TABLE 3: FEDERAL ANNUAL RATES BY GRADE AND STEP, DENVER-AURORA-BOULDER, 2011

Grade	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10
1	$21,812	$22,541	$23,267	$23,988	$24,714	$25,140	$25,857	$26,579	$26,608	$27,284
2	$24,525	$25,108	$25,919	$26,608	$26,907	$27,698	$28,490	$29,281	$30,073	$30,864
3	$26,758	$27,650	$28,542	$29,434	$30,326	$31,218	$32,110	$33,002	$33,894	$34,786
4	$30,039	$31,040	$32,041	$33,042	$34,043	$35,044	$36,045	$37,046	$38,047	$39,048
5	$33,608	$34,728	$35,848	$36,968	$38,088	$39,208	$40,327	$41,447	$42,567	$43,687
6	$37,463	$38,711	$39,960	$41,208	$42,457	$43,705	$44,954	$46,202	$47,451	$48,699
7	$41,631	$43,019	$44,407	$45,796	$47,184	$48,572	$49,960	$51,348	$52,736	$54,124
8	$46,106	$47,642	$49,178	$50,715	$52,251	$53,788	$55,324	$56,860	$58,397	$59,933
9	$50,923	$52,620	$54,317	$56,014	$57,711	$59,407	$61,104	$62,801	$64,498	$66,195
10	$56,079	$57,948	$59,818	$61,688	$63,557	$65,427	$67,297	$69,166	$71,036	$72,906
11	$61,612	$63,665	$65,719	$67,772	$69,825	$71,879	$73,932	$75,986	$78,039	$80,093
12	$73,848	$76,309	$78,771	$81,232	$83,693	$86,155	$88,616	$91,078	$93,539	$96,001
13	$87,815	$90,742	$93,669	$96,596	$99,523	$102,450	$105,377	$108,304	$111,231	$114,158
14	$103,771	$107,230	$110,688	$114,147	$117,606	$121,064	$124,523	$127,982	$131,441	$134,899
15	$122,064	$126,133	$130,202	$134,271	$138,340	$142,409	$146,478	$150,546	$154,615	$155,500

Source: United States Office of Personnel Management, Salaries & Wages, Salary Table 2011-DEN, Incorporating a locality payment of 22.52%, For the locality pay area of Denver-Aurora-Boulder, CO, Effective January 2011, http://www.opm.gov/flsa/oca/11tables/html/den.asp, retrieved January 11, 2012.

TABLE 4: ESTIMATED TOTAL COMPENSATION, YEARS 1-5

Category	Year 1	Year 2	Year 3	Year 4	Year 5
Examiners					
Examiner Salary	$90,000	$92,250	$94,556	$96,920	$99,343
Examiner Benefits	$29,840	$30,586	$31,351	$32,135	$32,938
Total Compensation	**$119,840**	**$122,836**	**$125,907**	**$129,055**	**$132,281**
Nonexaminers					
Nonexaminer Salary	$70,852	$72,623	$74,439	$76,300	$78,207
Nonexaminer Benefits	$23,492	$24,079	$24,681	$25,298	$25,930
Total Compensation	**$94,344**	**$96,702**	**$99,120**	**$101,598**	**$104,138**

Operating Expenditures

The Alexandria operation is a significant local business with more than $2.1 billion in program costs, or $210,391 per employee. The largest expenditure is on personnel and benefits, accounting for 70.5% of program costs in FY2011. This is followed by contractual services (13.8%); rent, communications, and utilities (5.3%); and printing and reproduction (4.2%). The remaining program costs account for 6.2% of expenses.

TABLE 5: PROGRAM COSTS, FY2011

Program	Direct	Allocated	Total
Personnel Services and Benefits	$1,411,130	$102,855	$1,513,985
Travel and Transportation	1,726	591	2,317
Rent, Communications, and Utilities	82,185	31,282	113,467
Printing and Reproduction	90,510	366	90,876
Contractual Services	155,394	140,174	295,568
Training	716	845	1,561
Maintenance and Repairs	3,792	31,795	35,587
Supplies and Materials	33,030	903	33,933
Equipment not Capitalized	1,866	5,960	7,826
Insurance Claims and Indemnities	282	—	282
Depreciation, Amortization, or Loss on Asset Dispositions	21,219	31,476	52,695
Total Program Costs	**$1,801,850**	**$346,247**	**$2,148,097**

Source: *FY2011 USPTO Performance and Accountability Report*.

TABLE 6: PER EMPLOYEE PROGRAM COSTS, FY2011

Program	Direct	Allocated	Total
Personnel Services and Benefits	$138,211	$10,074	$148,285
Travel and Transportation	169	58	227
Rent, Communications, and Utilities	8,049	3,064	11,113
Printing and Reproduction	8,865	36	8,901
Contractual Services	15,220	13,729	28,949
Training	70	83	153
Maintenance and Repairs	371	3,114	3,486
Supplies and Materials	3,235	88	3,324
Equipment not Capitalized	183	584	767
Insurance Claims and Indemnities	28	—	28
Depreciation, Amortization, or Loss on Asset Dispositions	2,078	3,083	5,161
Total Program Costs	**$176,479**	**$33,913**	**$210,391**

Note: Total FY2011 program costs divided by total FY2011 employment.
Source: *FY2011 USPTO Performance and Accountability Report*.

Direct program costs are identified by responsibility segment. More than $1.6 billion (90%) of direct costs are related to patents, $137.2 million (8%) to trademarks, and $36.4 million (2%) to intellectual property protection. Within patents, 79% of direct costs are related to personnel services and benefits. Contractual services account for 8%; printing and reproduction, 5.5%; rent, communication, and utilities, 4.5%; and all other categories, 3.3%. Dividing direct patent costs by the 6,780 examiners yields per employee costs of $240,151. Excluding payroll and benefits, maintenance and repair, and depreciation, per employee costs total $48,226.

Based on other studies conducted by the research team on government entities, it is estimated that 61% of operating expenditures will occur within the state and 49.8% within the Metro Denver region.

TABLE 7: PROGRAM COSTS BY CATEGORY AND RESPONSIBILITY SEGMENT, FY2011

Direct Costs	Patent	Trademark	Intellectual Property Protection	Total
Personnel Services and Benefits	$1,281,576	$112,142	$17,412	$1,411,130
Travel and Transportation	306	114	1,306	1,726
Rent, Communications, and Utilities	72,679	7,135	2,371	82,185
Printing and Reproduction	90,208	300	2	90,510
Contractual Services	129,991	10,700	14,703	155,394
Training	372	318	26	716
Maintenance and Repairs	1,947	1,791	54	3,792
Supplies and Materials	31,707	1,056	267	33,030
Equipment not Capitalized	1,428	374	64	1,866
Insurance Claims and Indemnities	282	—	—	282
Depreciation, Amortization, or Loss on Asset Dispositions	17,726	3,290	203	21,219
Subtotal Direct Costs	1,628,222	137,220	36,408	1,801,850
Allocated Costs				
Automation	145,308	31,915	1,288	178,511
Resource Management	139,824	22,625	5,287	167,736
Subtotal Allocated Costs	285,132	54,540	6,575	346,247
Total Program Costs	**$1,913,354**	**$191,760**	**$42,983**	**$2,148,097**

Source: *FY2011 USPTO Performance and Accountability Report*.

TABLE 8: PER EMPLOYEE DIRECT PROGRAM COSTS BY CATEGORY AND RESPONSIBILITY SEGMENT, FY2011

Direct Costs	Patent
Personnel Services and Benefits	$189,023
Travel and Transportation	$45
Rent, Communications, and Utilities	$10,720
Printing and Reproduction	$13,305
Contractual Services	$19,173
Training	$55
Maintenance and Repairs	$287
Supplies and Materials	$4,677
Equipment not Capitalized	$211
Insurance Claims and Indemnities	$42
Depreciation, Amortization, or Loss on Asset Dispositions	$2,614
Subtotal Direct Costs	**$240,151**

Note: Total FY2011 program costs divided by total FY2011 patent examiner employment.
Source: *FY2011 USPTO Performance and Accountability Report*.

Real Estate and Construction

The Alexandria, Virginia, headquarters currently occupies buildings with net leasable area in excess of 2.4 million square feet based on local assessor's records. The General Services Administration lists the space as 2,386,940 square feet.

TABLE 9: USPTO BUILDINGS, ALEXANDRIA, VIRGINIA

Building Name	Street Address	Lot Size	Gross Building Area	Net Leasable Area
Carlyle Townhouse	551 John Carlyle Street	0	0	0
East Parking Garage	551 John Carlyle Street	115,701	31,345	28,598
Elizabeth Townhouse	550 Elizabeth Lane	0	0	0
West Parking Garage	550 Elizabeth Lane	113,726	1	0
Jefferson Building	500 Dulany Street	57,555	447,751	358,450
Knox Building	501 Dulany Street	56,957	404,775	358,715
Madison Building (East)	600 Dulany Street	203,560	1,178,900	906,235
Madison Building (West)	600 Dulany Street	0	0	0
Remsen Building	400 Dulany Street	64,379	428,702	381,728
Randolph Building	401 Dulany Street	69,980	428,702	381,722
Total	**-**	**681,858**	**2,920,176**	**2,415,448**

Sources: List of buildings and addresses from Building Detail-USPTO Alexandria Headquarters, http://www.uspto.gov/main//buildings/map_alex_bldg.htm#, retrieved January 10, 2012. Lot size, gross building area, and net leasable area from City of Alexandria, Real Estate Assessments, Search Property & Sales Data, http://realestate.alexandriava.gov/, retrieved January 10, 2012.

Dividing the Alexandria headquarters building space and leasable area by total employment yields gross area of 286.01 square feet per employee, and net leasable area of 236.58 square feet per employee. Average office space per employee is typically 300 square feet,[2] reflecting the impact and mobility of the USPTO telework program.

TABLE 10: ALEXANDRIA HEADQUARTERS, BUILDING SPACE PER EMPLOYEE

Metric	Value
FY2011 Employment	10,210
Gross Building Area (SF)	2,920,176
Net Leasable Area (SF)	2,415,448
Gross Area per Employee (SF)	286.01
Net Area per Employee (SF)	236.58

Extrapolating per employee square footage to expected employment totals at a Colorado satellite office yields total demanded leasable area of 61,459 square feet in year 1, growing to 153,647 square feet in year 5.

TABLE 11: COLORADO BUILDING SPACE DEMANDS

Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Total Workers	260	357	455	552	649
Gross Building Area	74,301	102,164	130,027	157,890	185,753
Net Leasable Area	61,459	84,506	107,553	130,600	153,647

[2] *Final Report, City of Arvada, Colorado, Vauxmont/Cimarron Park ODP,* June 25, 2007, page 39.

A Colorado satellite office would first secure a 100,000-square-foot building. As employment grows, additional square footage would be necessary to accommodate more workers. This would require an additional 36,000 leasable square feet in year 4. Lease rates in the Metro Denver region have been soft with the weak economy, driving prices down from a recent peak of $21.82 to $19.78 per square foot. Class-A property was renting at $23.92 at the end of third quarter 2011[3].

With growing leasable area, but stable lease rates, total lease expeditures will increase from $2.39 million in year 1 to $3.25 million in year 5. Estimated at $45 per square foot, tenant improvements will total $4.5 million in year 1 and $1.6 million in year 4. If the facility decided to build-to-suit, estimates for construction are between $125 and $175 per gross square foot, plus soft costs and land. This would have an estimated cost of more than $18.1 million in year 1, with additional expenditures in year 4, assuming staggered construction to meet facility space needs. This study works under the assumption that the facility will utilize existing real estate, thus incurring the $45 per square foot cost of tenant improvements.

TABLE 12: COLORADO BUILDING ASSUMPTIONS

Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Gross Building Area	120,896	120,896	120,896	164,418	164,418
Leasable Area	100,000	100,000	100,000	136,000	136,000
Lease Rate	$23.92	$23.92	$23.92	$23.92	$23.92
Total Lease	$2,392,000	$2,392,000	$2,392,000	$3,253,120	$3,253,120
TI Cost PSF	$45.00	$45.00	$45.00	$45.00	$45.00
Total TI	$4,500,000	$0	$0	$1,620,000	$0
Build-to-Suit PSF Low	$125	$125	$125	$125	$125
Build-to-Suit PSF High	$175	$175	$175	$175	$175
Average Build-to-Suit	$18,134,375	$0	$0	$6,528,375	$0

Visitation

In-person and remote patent interviews facilitate the patent review process. Interviews are encouraged as demonstrated by the evolving First Action Interview pilot programs. Interviews will be offered at satellite offices in addition to the Alexandria headquarters, and visitation on the part of patent applicants for the purpose of in-person interviews will result in additional economic benefits to the local economy.

Part of the impetus for creating satellite patent offices is to increase the USPTO's capacity for patent review. The 536,604 patents filed in FY2011 represent a 5.2% increase year-over-year, adding to the backlog of patent filings.

TABLE 13: U.S. PATENT FILINGS, FY2007-FY2011

Filings	FY2007	FY2008	FY2009	FY2010	FY2011
Patent Filings	468,330	496,886	486,499	510,060	536,604
Percentage Change in Patent Filings	5.10%	6.10%	-2.10%	4.80%	5.20%

Source: *United States Patent and Trademark Office, Performance and Accountability Report Fiscal Year 2011*.

[3] The CoStar Office Report, Third Quarter 2011, Denver Office Market (Page 2).

The Alexandria office currently has 6,780 patent examiners. Assuming a Colorado office would begin with 200 examiners, the state would presumably handle 2.9% of the workload, or 15,829 patent filings based on the FY2011 volume. A review of filings from 2000 through 2005 shows that 18% of applications were associated with a patent interview.[4,5] This would yield 2,849 interviews for the Colorado office. Assuming one-in-three interviewees engage in an on-site interview, an estimated 940 interviews would be conducted in Colorado each year. These interview events will lead to spending on travel and at hotels and restaurants, as well as discretionary spending on entertainment and retail goods. In 2011, estimated average daily rates totaled $106.25 in Colorado and $100.34 in the Metro Denver area. According to the Longwoods International *Colorado Travel Year 2010*, the average business traveler spends $307 over the course of their trip.[6]

TABLE 14: COLORADO LODGING AND HOSPITALITY STATISTICS

Location	Occupancy	Average Daily Rate	RevPAR
Metro Denver Area			
Downtown	71%	$146.50	$104.67
Airport/East	64%	79.50	51.02
West	61%	81.25	49.86
North	65%	83.00	54.36
South	66%	82.50	54.51
Subtotal	66%	100.34	66.49
Percentage Change	*5.2%*	*4.0%*	*9.5%*
Colorado Total	59.3%	$106.25	$63.03
Percentage Change	*5.5%*	*2.7%*	*8.3%*

Sources: STR Analytics (www.STRanalytics.com) and the *2012 Colorado Business Economic Outlook*.

TABLE 15: VISITOR IMPACTS FROM PATENT INTERVIEWS

	Year 1	Year 2	Year 3	Year 4	Year 5
Total Patents Filed	536,604	536,604	536,604	536,604	536,604
Colorado Patents Reviewed	15,829	21,765	27,701	33,637	39,573
Colorado Interviews Conducted	2,849	3,918	4,986	6,055	7,123
On-site Interviews	940	1,293	1,645	1,998	2,351
Trip Expenditures	$307	$315	$323	$331	$339
Direct Visitor Impact	$288,655	$406,823	$530,719	$660,556	$796,553

[4] Patently-O Blog, The Effectiveness of Examiner Interviews. http://www.patentlyo.com/patent/2009/07/the-effectiveness-of-examiner-interviews.html?cid=6a00d8341c588553ef0115721f1c5c970b, retrieved January 10, 2012.
[5] The advent of First Action Interview programs likely increased this rate of interviews, but statistics are not currently available.
[6] *Colorado Travel Year 2010*, page 25, http://www.colorado.com/IndustryPartners/LongwoodsInternational.aspx, retrieved January 11, 2012.

Summary of Facility Expenditures and Impacts

Estimated direct spending by the satellite patent office will top $36.6 million in year 1, mostly attributable to salary and benefits costs. Spending leakage is expected for operating expenditures, reducing direct spending in Colorado and the Metro Denver region.

TABLE 16: DIRECT FACILITY IMPACTS, YEARS 1 THROUGH 5

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Salaries and Benefits	$20,125,560	$28,364,461	$37,002,729	$46,055,182	$55,537,131	$187,085,063
Operating Expenditures	$9,645,200	$13,593,704	$17,733,604	$22,072,004	$26,616,240	$89,660,753
Construction	$4,500,000	$0	$0	$1,620,000	$0	$6,120,000
Rents	$2,392,000	$2,392,000	$2,392,000	$3,253,120	$3,253,120	$13,682,240
Total Direct Expenditures	$36,662,760	$44,350,165	$57,128,333	$73,000,306	$85,406,492	$296,548,056
Per Employee Spending	*$159,403*	*$140,238*	*$141,934*	*$149,361*	*$148,533*	-
Visitor Spending	$288,655	$406,823	$530,719	$660,556	$796,553	$2,683,306

TABLE 17: DIRECT FACILITY IMPACTS IN COLORADO, YEARS 1 THROUGH 5

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Salaries and Benefits	$20,125,560	$28,364,461	$37,002,729	$46,055,182	$55,537,131	$187,085,063
Operating Expenditures	$5,882,990.62	$8,291,340	$10,816,430	$13,462,592	$16,234,302.21	$54,687,655
Construction	$4,500,000	$0	$0	$1,620,000	$0	$6,120,000
Rents	$2,392,000	$2,392,000	$2,392,000	$3,253,120	$3,253,120	$13,682,240
Total Direct Expenditures	$32,900,551	$39,047,801	$50,211,159	$64,390,894	$75,024,554	$261,574,958
Visitor Spending	$288,655	$406,823	$530,719	$660,556	$796,553	$2,683,306

TABLE 18: DIRECT FACILITY IMPACTS IN THE METRO DENVER REGION, YEARS 1 THROUGH 5

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Salaries and Benefits	$18,144,999	$25,573,108	$33,361,282	$41,522,881	$50,071,709	$168,673,978
Operating Expenditures	$4,801,695	$6,767,389	$8,828,366	$10,988,163	$13,250,432	$44,636,046
Construction	$4,500,000	$0	$0	$1,620,000	$0	$6,120,000
Rents	$2,392,000	$2,392,000	$2,392,000	$3,253,120	$3,253,120	$13,682,240
Total Direct Expenditures	$29,838,694	$34,732,497	$44,581,648	$57,384,164	$66,575,261	$233,112,264
Visitor Spending	$288,655	$406,823	$530,719	$660,556	$796,553	$2,683,306

ECONOMIC IMPACT

Summary of Impacts

Over the first five years, the $261.6 million in direct Colorado patent office facility expenditures is estimated to result in economic activity totaling $439 million (direct, indirect, and induced), of which $389.2 million will occur in the Metro Denver region. The employment impacts reach beyond the 230 examiners and support workers. The total facility employment impact will be 440 workers in year 1, growing to 958 in year 5, including employment spawned from indirect purchases and household spending. Given that examiners' wages exceed average Colorado salaries, their incomes will have a greater induced effect than those of employees in many other industries, due to their higher level of disposable income.

TABLE 19: TOTAL ECONOMIC BENEFITS TO COLORADO, YEARS 1 THROUGH 5

Year	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
1	440	$29.7	$40.4	$49.4
2	529	$37.9	$51.7	$66.5
3	670	$49.3	$66.6	$85.6
4	834	$62.3	$84.4	$109.6
5	958	$73.8	$99.3	$127.9
Total	**-**	**$252.9**	**$342.3**	**$439.0**

TABLE 20: TOTAL ECONOMIC BENEFITS TO THE METRO DENVER REGION, YEARS 1 THROUGH 5

Year	Employment	Labor Income (millions)	Value Added (millions)	Output (millions)
Year 1	394	$27.0	$36.7	$49.7
Year 2	464	$33.8	$45.1	$58.0
Year 3	587	$44.0	$58.0	$74.5
Year 4	732	$55.7	$73.7	$95.8
Year 5	839	$65.9	$86.5	$111.3
Total	**-**	**$226.5**	**$300.0**	**$389.2**

Detail Impacts

While the facility is expected to grow from 230 employees to 575 employees in five years, the direct employment impacts will exceed onsite employment due to impacts derived from other activities, primarily construction. Federal employment has little indirect impact on employment, but given the above-average wages, the induced (or household) impact is significant. Colorado total employment (direct, indirect, and induced) will increase from 440 in year 1 to 958 in year 5. Given that some individuals will live outside the direct region and will telework, the metro employment impacts are on average 12% smaller than the state total.

TABLE 21: EMPLOYMENT, YEARS 1 THROUGH 5

	Colorado				Metro Denver			
Year	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
1	274	23	143	440	251	23	120	394
2	329	20	20	529	299	18	18	464
3	417	25	25	670	378	22	22	587
4	518	33	33	834	470	30	30	732
5	595	34	34	958	540	30	30	839

While the examiners and support workers earn higher-than-average wages compared to other industries in Colorado, indirect and induced average income (labor income divided by employment) adequately reflects the reality of off-site goods and services being delivered to the facility, as well as to households.

TABLE 22: LABOR INCOME, IN MILLIONS, YEARS 1 THROUGH 5

	Colorado				Metro Denver			
Year	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
1	$22.1	$1.4	$6.2	$29.7	$20.1	$1.4	$5.4	$27.0
2	$28.7	$1.3	$8.0	$37.9	$25.9	$1.2	$6.8	$33.8
3	$37.3	$1.6	$10.3	$49.3	$33.7	$1.4	$8.9	$44.0
4	$47.1	$2.1	$13.1	$62.3	$42.6	$2.0	$11.2	$55.7
5	$56.0	$2.3	$15.5	$73.8	$50.6	$2.1	$13.3	$65.9

Value added is a better reflection of GDP than total output because it takes into account intermediate resources. In essence, the satellite office would account for $40 million in additional state GDP in year 1, growing to nearly $100 million in year 5. The majority of this is nested within the Metro Denver region.

TABLE 23: VALUE ADDED, IN MILLIONS, YEARS 1 THROUGH 5

	Colorado				Metro Denver			
Year	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
1	$26.4	$2.3	$11.7	$40.4	$24.1	$2.4	$10.1	$36.7
2	$34.6	$2.2	$14.9	$51.7	$30.4	$2.0	$12.7	$45.1
3	$44.5	$2.8	$19.3	$66.6	$39.1	$2.5	$16.5	$58.0
4	$56.2	$3.7	$24.5	$84.4	$49.5	$3.4	$20.9	$73.7
5	$66.3	$4.0	$29.0	$99.3	$58.2	$3.6	$24.7	$86.5

TABLE 24: OUTPUT, IN MILLIONS, YEARS 1 THROUGH 5

	Colorado				Metro Denver			
Year	Direct	Indirect	Induced	Total	Direct	Indirect	Induced	Total
1	$27.3	$3.8	$18.3	$49.4	$30.1	$3.9	$15.7	$49.7
2	$39.4	$3.7	$23.4	$66.5	$35.1	$3.3	$19.6	$58.0
3	$50.7	$4.5	$30.4	$85.6	$45.0	$4.0	$25.5	$74.5
4	$64.9	$6.2	$38.5	$109.6	$57.9	$5.5	$32.3	$95.8
5	$75.7	$6.6	$45.6	$127.9	$67.2	$5.8	$38.3	$111.3

COLORADO AND METRO DENVER ECONOMY

Regional Assets

From economic diversity to educational offerings, Colorado, and specifically the Metro Denver region, has numerous assets. Population growth continues to outpace the nation, driven by steady natural increases and strong in-migration. GDP growth, too, has been outperforming the nation, with comparative strengths in extraction and high-tech industries. These strengths in gross output are complemented with similar strengths in industry and occupational employment, notably IT, engineering, math, and life sciences occupations. These strengths are harbored in thriving industry clusters in Colorado, including aerospace, aviation, biosciences, energy, software, and telecommunications. An extensive network of higher education facilities in Colorado both trains the workforce and fuels research and innovation. These efforts are complemented with federal research facilities along the Front Range and private industry R&D. Behind the scenes of economic success, cultural diversity, and appealing recreation lies a physical infrastructure that eases the costs and burdens of doing business, ranging from airports to interstates and from education to natural resources. The following sections demonstrate some of Colorado's economic and demographic assets.

TABLE 25: COLORADO AND METRO DENVER ASSETS

Asset	Adams	Arapahoe	Boulder	Broomfield	Denver	Douglas	Jefferson	Colorado
Commercial Airport					X			X
General Aviation Airport	X	X	X				X	X
Interstate Highway	X	X		X	X	X	X	X
Federal Facility	X	X	X	X	X	X	X	X
Military Facility	X	X						X
Two-year College/University	X	X	X		X	X	X	X
Four-year College/University	X	X	X		X		X	X
Private College/University	X	X	X	X	X	X	X	X
>35% of Pop. with Bach. Degree or Higher		X	X	X	X	X	X	X
>100,000 employees	X	X	X		X		X	X
Companies w/ 500+ employees	X	X	X	X	X	X	X	X
Ski Resorts			X					X
Casinos/Gaming								X
National Parks/Sites			X					X
Professional Sports Teams	X				X			
Oil, Gas, CO2 Production	X	X	X		X			X
Coal Production								X
Wind Energy								X
Biomass Energy Potential								X

Population

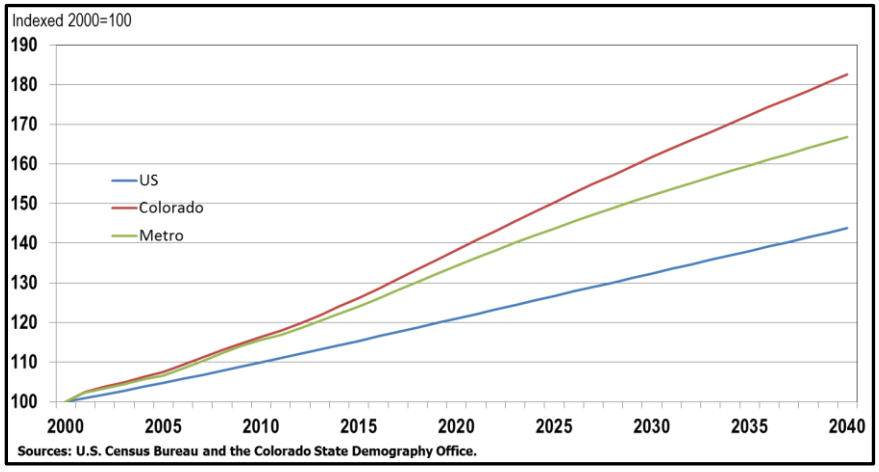
Colorado recorded more than 5.1 million residents in 2011, spurred both by solid natural increases and strong net migration over the last decade. Both Colorado and the Metro Denver region are growing at faster rates than the nation. Colorado continued to record positive in-migration through the recession, attesting to the state's quality of life and economic opportunities. Colorado's population will continue to expand—forecasts through 2040 show the Metro Denver region and the state outpacing the nation in population growth.

TABLE 26: COLORADO AND METRO DENVER POPULATION, 2000-2011

Year	Colorado Population	Percent Change	Metro Denver[a] Population	Percent Change
2000	4,338,801	2.91%	2,421,222	3.07%
2001	4,444,513	2.44	2,476,410	2.28
2002	4,504,709	1.35	2,504,883	1.15
2003	4,555,084	1.12	2,528,665	0.95
2004	4,608,811	1.18	2,558,106	1.16
2005	4,662,534	1.17	2,582,177	0.94
2006	4,745,660	1.78	2,626,197	1.70
2007	4,821,784	1.60	2,670,038	1.67
2008	4,901,938	1.66	2,716,819	1.75
2009	4,976,853	1.53	2,762,164	1.67
2010	5,050,869	1.49	2,784,228	0.80
2011	5,119,779	1.36	2,798,766	0.52
5-year CAGR[b]	1.21%	-	0.95%	-
10-year CAGR	1.29%	-	1.12%	-

[a]The following seven counties are included in the metro area statistics: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson.
[b]Compound annual growth rate.
Source: Colorado Department of Local Affairs, State Demography Office, Population Estimates and Forecasts.

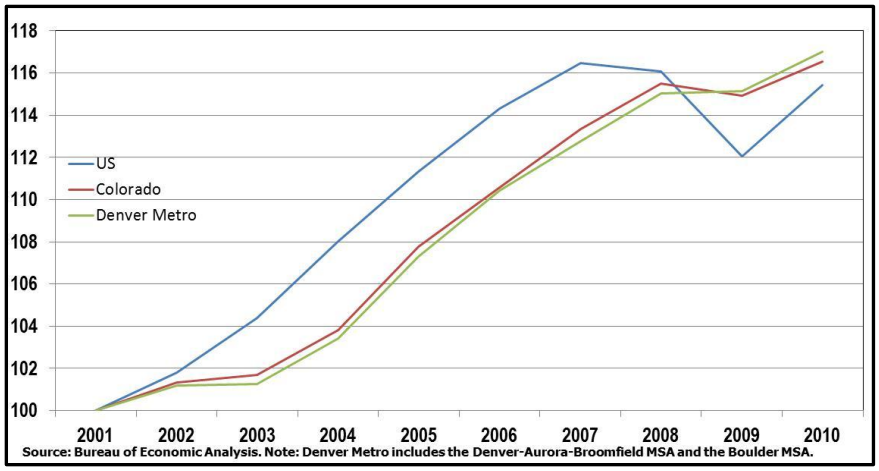
FIGURE 1: INDEXED POPULATION GROWTH, 2000-2040



Gross Domestic Product

While the nation recorded two years of declining output of -0.3% and -3.5% during the recession, Colorado GDP declined only in 2009 (-0.5%), and the Metro Denver region continued to expand during the downturn. Statewide, the largest private industries in terms of GDP include Real Estate and Rental and Leasing; Professional, Scientific, and Technical Services; Information; and Manufacturing. Compared to the nation, Colorado's pockets of strength include the Mining; Information; Professional, Scientific, and Technical Services; and Arts, Entertainment, and Recreation. In 2010, the combined Denver-Aurora-Broomfield and Boulder MSAs accounted for 68.3% of the Colorado economy in terms of GDP.

FIGURE 2: INDEXED REAL GDP GROWTH, 2001-2010



Source: Bureau of Economic Analysis. Note: Denver Metro includes the Denver-Aurora-Broomfield MSA and the Boulder MSA.

TABLE 27: COLORADO GROSS DOMESTIC PRODUCT, 2010

Industry	GDP	Percentage	LQ
Private industries	$224,162	87.0%	1.0
Agriculture, forestry, fishing, and hunting	$2,433	0.9%	0.9
Mining	$11,591	4.5%	2.3
Utilities	$3,503	1.4%	0.7
Construction	$9,599	3.7%	1.1
Manufacturing	$17,959	7.0%	0.6
Wholesale trade	$12,812	5.0%	0.9
Retail trade	$14,067	5.5%	0.9
Transportation and warehousing	$6,476	2.5%	0.9
Information	$23,278	9.0%	2.0
Finance and insurance	$17,642	6.8%	0.8
Real estate and rental and leasing	$32,334	12.6%	1.0
Professional, scientific, and technical services	$24,405	9.5%	1.3
Management of companies and enterprises	$4,850	1.9%	1.1
Administrative and waste management services	$7,793	3.0%	1.1
Educational services	$1,947	0.8%	0.7
Health care and social assistance	$16,371	6.4%	0.8
Arts, entertainment, and recreation	$2,986	1.2%	1.3
Accommodation and food services	$7,807	3.0%	1.1
Other services, except government	$6,310	2.4%	1.0
Government	$33,478	13.0%	1.0
All Industry Total	**$257,641**	**100.0%**	**1.0**

Source: Bureau of Economic Analysis.

Employment and Wages

Following two consecutive years of employment losses, the state and the Metro Denver region resumed job growth in 2011. Total state nonfarm employment topped 2.2 million in 2011, making it the 22nd-largest state in the nation, and forecasts call for the state to be in the top 10 for growth in 2012. The Metro Denver region accounted for 58% of the state's total labor force of nearly 2.7 million in 2011.

Aggregate nonfarm wages grew statewide in 2010 and 2011, while Metro Denver total wages fell slightly. In 2010, average annual pay totaled $46,751 nationally, compared to $47,868 for the state, and $52,888 for the Denver-Aurora MSA, according to the Bureau of Labor Statistics. The Metro Denver region and Colorado average annual pay was less than comparable states and MSAs, including California ($53,285), San Jose-San Francisco-Oakland ($66,163), Texas ($46,952), Austin-Round Rock MSA ($48,706), Washington D.C. ($80,200), and Washington-Baltimore-Northern Virginia CSA ($61,121).

TABLE 28: COLORADO AND METRO DENVER EMPLOYMENT AND UNEMPLOYMENT, 2000-2011

Year	Colorado Labor Force (thousands)	Metro Denver[a] Labor Force (thousands)	Colorado Employment (thousands)	Metro Denver[a] Employment (thousands)	Colorado Unemployment Rate	Metro Denver Unemployment Rate
2000	2,365.0	1,404.0	2,213.8	1,374.9	2.7%	2.6%
2001	2,395.3	1,406.3	2,226.9	1,375.2	3.8%	3.8%
2002	2,442.7	1,419.1	2,184.2	1,332.8	5.7%	5.9%
2003	2,492.3	1,452.5	2,152.8	1,313.9	6.1%	6.3%
2004	2,535.4	1,470.3	2,179.6	1,324.7	5.6%	5.8%
2005	2,588.4	1,496.5	2,226.0	1,350.1	5.1%	5.2%
2006	2,655.6	1,528.5	2,279.1	1,377.5	4.3%	4.3%
2007	2,698.6	1,552.2	2,331.3	1,407.4	3.7%	3.8%
2008	2,737.3	1,582.8	2,350.3	1,420.9	4.8%	4.9%
2009	2,727.6	1,570.9	2,245.6	1,359.4	8.3%	8.4%
2010	2,687.4	1,554.1	2,220.1	1,350.0	8.9%	8.9%
2011[b]	2,688.2	1,552.9	2,235.6	1,356.8	8.6%	8.5%

[a]The following 11 counties are included in the metro area statistics: Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Jefferson, Gilpin, and Park.
[b]Average of the last 12 months.
Source: Bureau of Labor Statistics, Current Employment Statistics and Local Area Unemployment Statistics, not seasonally adjusted.

TABLE 29: COLORADO AND METRO DENVER WAGES, 2001-2011

Year	Colorado Wages (billions)	Percent Change	Metro Denver[a] Wages (billions)	Percent Change
2001	$83.5	-	$50.4	-
2002	$81.9	-2.0%	$49.5	-1.6%
2003	$82.5	0.8%	$49.8	0.5%
2004	$86.3	4.6%	$51.9	4.2%
2005	$91.1	5.6%	$54.6	5.2%
2006	$97.5	7.1%	$58.6	7.3%
2007	$104.1	6.7%	$62.3	6.3%
2008	$107.7	3.5%	$64.2	3.1%
2009	$103.2	-4.2%	$61.9	-3.7%
2010	$104.2	1.0%	$62.7	1.4%
2011[b]	$106.9	2.6%	$62.6	-0.3%

[a]The following seven counties are included in the metro area statistics: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson.
[b]Average of the last four quarters.
Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

By industry, Colorado's largest nonfarm employers are the Trade, Transportation, and Utilities; Government; Professional and Business Services; Leisure and Hospitality; and Education and Health Services supersectors, which collectively accounted for 75% of Colorado total nonfarm employment in 2011. Sectors with notably greater concentrations of employment than the nation include the Mining, Information, Leisure and Hospitality, Construction, Professional and Business Services, and Financial Activities supersectors. Employment composition in the Metro Denver region models the state, with even greater concentrations in advanced technology industries.

TABLE 30: COLORADO EMPLOYMENT BY INDUSTRY, 2007-2011

Industry	2007	2008	2009	2010	2011[a]	5-Year CAGR	10-Year CAGR	2010 Location Quotient
Mining and Logging	25.2	28.5	24.2	24.4	27.2	1.5%	7.7%	2.0
Construction	167.8	161.8	131.3	114.9	107.7	-8.5%	-3.9%	1.2
Manufacturing	147.0	144.1	129.6	125.2	125.9	-3.1%	-2.6%	0.6
Trade, Transportation, and Utilities	429.2	429.3	403.8	397.2	400.8	-1.4%	-0.3%	0.9
Information	76.4	76.8	74.7	71.4	68.4	-2.2%	-3.0%	1.5
Financial Activities	159.5	155.6	148.0	143.7	140.0	-2.6%	-0.7%	1.1
Professional and Business Services	347.9	351.9	330.2	329.2	335.0	-0.8%	1.2%	1.1
Education and Health Services	240.4	250.5	257.2	264.8	273.2	2.6%	2.7%	0.8
Leisure and Hospitality	270.4	272.9	262.4	263.1	273.8	0.2%	1.0%	1.2
Other Services	92.9	94.8	93.7	92.9	92.9	0.0%	0.8%	1.0
Government	374.7	384.1	390.5	393.4	390.9	0.9%	1.0%	1.0

[a]Average of the last 12 months.
Source: Bureau of Labor Statistics, Current Employment Statistics, not seasonally adjusted.

TABLE 31: METRO DENVER EMPLOYMENT BY INDUSTRY, 2007-2011

Industry	2007	2008	2009	2010	2011[a]	5-Year CAGR	10-Year CAGR	2010 Location Quotient[b]
Mining, Logging, and Construction	99.4	97.8	81.7	74.3	71.4	-6.4%	-3.3%	1.1
Manufacturing	89.4	87.4	78.5	76.2	76.7	-3.0%	-2.2%	0.6
Trade, Transportation, and Utilities	267.9	268.3	252.7	249.5	253.3	-1.1%	-0.2%	1.0
Information	57.2	57.6	55.1	53.1	50.8	-2.3%	-3.1%	1.9
Financial Activities	107.2	104.8	100.3	97.6	95.5	-2.3%	-0.7%	1.2
Professional and Business Services	242.0	245.9	230.6	230.7	237.1	-0.4%	1.3%	1.3
Education and Health Services	147.0	153.3	157.8	162.4	166.1	2.5%	2.8%	0.8
Leisure and Hospitality	145.6	147.7	142.6	143.8	145.2	-0.1%	1.0%	1.1
Other Services	52.3	53.7	52.8	52.8	52.8	0.2%	0.7%	0.9
Government	199.3	204.5	207.5	209.6	207.8	0.8%	0.8%	0.9

[a]Average of the last 12 months.
[b]The following 11 counties are included in these metro area statistics: Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Elbert, Jefferson, Gilpin, and Park.
Source: Bureau of Labor Statistics, Current Employment Statistics, not seasonally adjusted.

Clusters

Seven large industry clusters create a unique economic infrastructure in the Metro Denver region. The aerospace cluster is five times more concentrated in the Metro Denver area than in the nation as a whole. Supported by Colorado's four military commands, eight major space contractors, NASA research, and several research universities, the metro aerospace cluster engages nearly 20,000 direct employees and many more indirect employees in industries like manufacturing, software, and government. One of these support industries, which is significant in Colorado in its own right, is aviation. Denver International Airport (DIA) drives growth in the aviation cluster in the Metro Denver region, serving approximately 142,400 passengers per day. Over the next 5-15 years, DIA is planning to expand and improve its facilities to accommodate the consistent annual increases in airport traffic.

The bioscience cluster, comprised of medical devices and diagnostics, and pharmaceuticals and biotechnology, has more than 14,000 workers in 510 companies with focal areas ranging from agriculture and energy to cardiovascular and diabetes. Private industry partners with research universities, notably Colorado State University, the University of Colorado Boulder, and the University of Colorado Denver Anschutz Medical Campus. Bioscience can cross into energy through clean technologies, including biomass. This adds to Colorado's significant fossil fuels, including coal, oil, and gas, as well as cleantech, such as wind and solar. Collectively, energy accounts for more than 41,000 employees in the Metro Denver and Northern Colorado region, or 1.5 times the national concentration of energy employment.

The financial services cluster employs more than 86,000 workers in Colorado, ranging in activities from venture capital investment and banking, to securities and insurance. Metro Denver and Northern Colorado also have comparative strength in telecommunications and software, with 2.9 times and 1.8 times the national concentration of workers. These two clusters each boast more than 40,000 workers.

Many of these clusters are also supported through collaborative nonprofit organizations, such as the Colorado Bankers Association (www.coloradobankers.org), Colorado BioScience Association (www.cobioscience.com), the Colorado Cleantech Industry Association (www.coloradocleantech.com), and the Colorado Technology Association (www.coloradotechnology.org).

TABLE 32: METRO DENVER INDUSTRY CLUSTERS, 2011

Cluster	Sector	Employment	Employment Concentration	Location Quotient
Aerospace	Aerospace	19,500	1.1%	5.1
Aviation	Aviation	14,650	0.8%	1.1
Bioscience	Pharmaceuticals and Biotechnology	4,630	0.3%	1.0
Bioscience	Medical Devices and Diagnostics	9,480	0.5%	1.7
Energy	Fossil Fuels	23,230	1.3%	1.1
Energy	Clean Tech	18,000	1.0%	2.0
Financial Services	Banking and Finance	38,460	2.2%	1.5
Financial Services	Investments	22,520	1.3%	1.6
Financial Services	Insurance	25,100	1.4%	1.2
Software	Software	41,640	2.4%	1.8
Telecommunications	Broadcasting and Telecommunications	40,500	2.3%	2.9

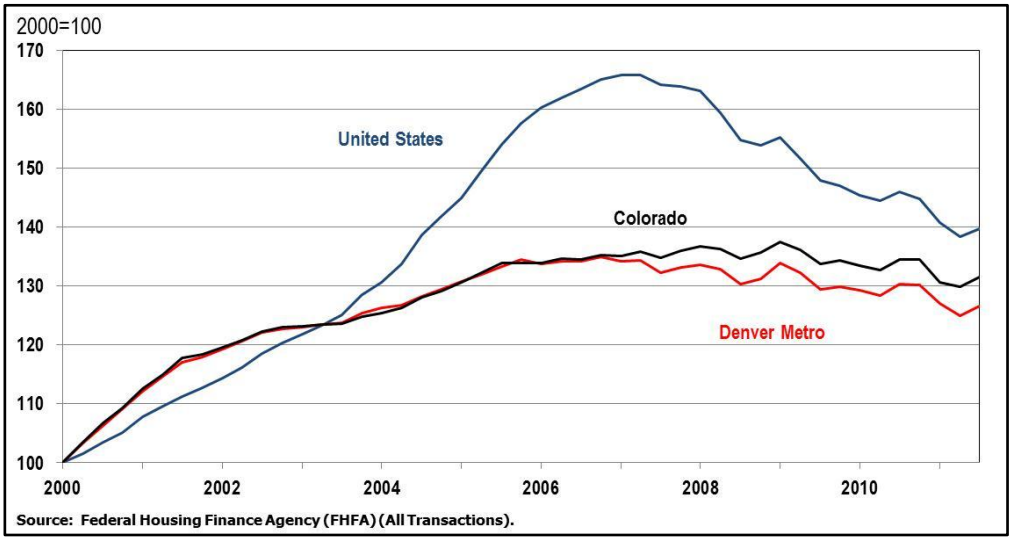
Source: Metro Denver Economic Development Corporation.

Note: The following nine counties are included in these metro area statistics: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld.

Housing

In 2010, the median sales price of homes sold in the United States was $221,800; the average sales price was $272,900. The National Association of Realtors reported in 2010 that median home prices were higher than the national figure in the Boulder MSA ($358,100) and in the Denver-Aurora MSA ($232,400). However, compared to other metropolitan areas, the Denver-Aurora MSA is quite competitive: the Washington-Arlington-Alexandria MSA ($325,300), the San Francisco-Oakland-Fremont MSA ($525,300), and the Boston-Cambridge-Quincy MSA ($357,300).[7] Since 2007, home prices have been falling across the United States. Although Colorado and the Metro Denver region mirrored this decline, home prices in these areas have experienced less dramatic changes than national home prices over the past 11 years.

FIGURE 3: FHFA HOME PRICE INDEX, 2000-2011



Income

Personal per capita income is a broader metric of average monetary inflows per person than wages received for labor because it includes other types of earnings such as divide nds and property appreciation. Since 2000, per capita income in the United States has risen every year except 2009. Both Colorado and the Metro Denver region also experienced drops in income in 2009 and in the aftermath of the 2001 recession as well. State and metro per capita income is consistently higher than the national average.

[7] National Association of REALTORS, Median Sales Price of Existing Single-Family Homes for Metropolitan Areas, http://www.realtor.org/research/research/metroprice, retrieved January 11, 2012.

TABLE 33: U.S., COLORADO, AND METRO DENVER PER CAPITA PERSONAL INCOME, 2000-2010

Year	United States	Percent Change	Colorado	Percent Change	Metro Denver	Percent Change
2000	$30,319	7.0%	$33,986	9.9%	$37,790	10.7%
2001	$31,157	2.7%	$35,355	4.0%	$39,160	3.6%
2002	$31,481	1.0%	$35,131	-0.6%	$38,678	-1.2%
2003	$32,295	2.5%	$35,312	0.5%	$38,688	0.0%
2004	$33,909	5.0%	$36,849	4.3%	$40,235	4.0%
2005	$35,452	4.5%	$38,795	5.2%	$42,249	5.0%
2006	$37,725	6.4%	4$1,181	6.1%	$44,960	6.4%
2007	$39,506	4.7%	$42,724	3.7%	$46,043	2.4%
2008	$40,947	3.6%	$44,164	3.3%	$47,184	2.4%
2009	$38,846	-5.1%	$41,317	-6.4%	$45,161	-4.2%
2010	$39,945	2.8%	$42,226	2.2%	--	--

Source: U.S. Census Bureau.

Occupations

Occupational employment statistics for 2010 reveal the largest employment occupations in Colorado as Office and Administrative Support, Sales and Related, Food Preparation and Serving Related, and Business and Financial Operations occupations, collectively accounting for 43% of statewide employment. However, Colorado and Metro Denver occupations with a comparatively large concentration of employment include key high-tech and support industries: Computer and Mathematical, Business and Financial Operations, Architecture and Engine ering, Life Physical and Social Science, and Legal.

TABLE 34: COLORADO AND METRO DENVER OCCUPATIONS, 2010

Occupation	Colorado Employment	Metro Denver Employment[a]	Colorado LQ	Denver Metro LQ[a]	Colorado Wages vs. National	Denver Metro Wages vs. National
All	2,157,690	1,336,090	1.0	1.0	105.3%	112.3%
Management	91,400	59,490	0.9	0.9	101.9%	110.9%
Business and Financial Operations	133,330	95,980	1.3	1.5	101.1%	104.2%
Computer and Mathematical	86,510	65,500	1.6	1.9	105.5%	106.9%
Architecture and Engineering	52,660	35,880	1.3	1.5	106.0%	109.2%
Life Physical and Social Science	25,150	16,270	1.4	1.5	105.7%	113.1%
Community and Social Service	29,450	16,100	0.9	0.8	99.7%	102.9%
Legal	19,480	14,640	1.2	1.4	94.9%	99.7%
Education Training and Library	131,690	73,560	0.9	0.8	97.4%	104.2%
Arts Design Entertainment Sports and Media	37,760	25,160	1.3	1.4	94.5%	101.2%
Healthcare Practitioners and Technical	114,240	68,110	0.9	0.9	102.6%	107.9%
Healthcare Support	53,730	31,710	0.8	0.8	108.5%	112.9%
Protective Service	52,660	29,670	1.0	0.9	102.2%	103.9%
Food Preparation and Serving Related	202,670	119,380	1.1	1.0	104.0%	104.3%
Building and Grounds Cleaning and Maintenance	74,070	43,110	1.0	1.0	99.6%	98.3%
Personal Care and Service	56,220	34,980	1.0	1.0	106.7%	109.6%
Sales and Related	241,880	151,940	1.1	1.1	108.1%	117.8%
Office and Administrative Support	350,850	220,400	1.0	1.0	105.0%	110.3%
Farming Fishing and Forestry	3,290	NA	0.5	NA	112.9%	NA
Construction and Extraction	108,540	57,130	1.3	1.1	97.2%	96.8%
Installation Maintenance and Repair	83,570	49,960	1.0	1.0	102.8%	104.8%
Production	90,210	52,030	0.6	0.6	102.7%	104.9%
Transportation and Material Moving	118,340	73,720	0.8	0.8	104.6%	107.3%

[a]Includes the Denver-Aurora MSA and the Boulder MSA.
Source: Bureau of Labor Statistics, Employment and Wages from Occupational Employment Statistics (OES) survey.

Physical Infrastructure

Colorado's physical infrastructure facilitates the flow of both interstate and intrastate business. Denver is home to the fifth-busiest domestic airport, DIA, and major east-west and north-south interstate highways pass through the Metro Denver region. The Colorado Convention Center, hotels, and other visitor bureaus help the state host major national events. The area has an abundance of natural resources, pipeline and refining infrastructure, and numerous federal research facilities. As well, Colorado is known for its world-class ski resorts and other outstanding recreational resources. The Pepsi Center hosts the Colorado Avalanche (NHL) and the Denver Nuggets (NBA), Coors Field is home to the Colorado Rockies (MLB), Sports Authority Field at Mile High hosts the Denver Broncos (NFL), and Dick's Sporting Goods Park is home to the Colorado Rapids (MLS).

Airports

DIA lies on the eastern front of the Metro Denver region. The facility recorded 51.985 million passengers in 2010—its busiest year. Year-to-date statistics in 2011 show the airport enplanements and deplanements will surpass the 2010 banner year as the airport initiates construction of a new terminal and hotel, as well as a rail line connecting the Metro Denver region to the airport.

TABLE 35: COLORADO AIRPORT STATISTICS, 2007-2010

Passengers and Cargo	2007	2008	2009	2010
Passengers (in thousands)[a]				
Denver International Airport (DEN)	49,863.4	51,245.3	50,167.4	51,985.0
Colorado Springs Municipal Airport (COS)	2,067.4	1,993.0	1,864.0	1,738.3
Grand Junction Regional (GJT)	340.9	425.2	457.7	438.7
Eagle County Regional Airport (EGE)	463.4	425.7	363.3	402.0
Aspen-Pitkin County Airport (ASE)	364.5	426.8	433.7	445.5
Yampa Valley Airport (HDN)	279.3	273.2	245.0	220.1
Durango-La Plata County Airport (DRO)	232.6	268.8	296.2	327.2
Montrose Regional Airport (MTJ)	185.2	171.7	184.4	193.2
Gunnison-Crested Butte Regional Airport (GUC)	85.2	72.1	84.3	74.6
Fort Collins-Loveland Municipal Airport (FNL)	56.6	62.2	62.2	71.3
Telluride Regional Airport (TEX)	32.9	26.7	13.5	18.7
Cortez Municipal Airport (CEZ)	20.4	16.8	15.4	12.7
San Luis Valley Regional/Bergman Field (ALS)	15.0	14.3	12.6	13.5
Pueblo Memorial Airport (PUB)	9.8	8.7	10.4	23.3
Total Passengers	54,016.6	55,430.4	54,209.9	55,964.2
Cargo, Freight, and Air Mail (in millions of lbs.)				
DIA Freight and Express	573.9	527.1	468.2	517.7
DIA Air Mail	15.5	26.4	26.6	37.5
DIA Total	589.4	553.5	494.8	555.2
Colorado Springs Cargo	27.0	24.0	23	22.3
Colorado Springs Air Mail	0.0	0.0	0.0	0.6
Colorado Springs Total	27.0	24.0	23.0	22.3

[a]Passengers include enplanements and deplanements.
Sources: Denver International Airport, Colorado Springs Municipal Airport, Grand Junction Regional Airport, Federal Aviation Administration, and the *2012 Colorado Business Economic Outlook*.

TABLE 36: METRO DENVER COMMERCIAL AND GENERAL AVIATION AIRPORTS

Airport Name	County	Address	Website
Denver International	Denver	Denver, CO	http://flydenver.com/
Centennial	Arapahoe	Englewood, CO	http://www.centennialairport.com/Home
Rocky Mountain Metropolitan	Jefferson	Broomfield, CO	http://jeffco.us/airport/
Buckley AFB	Arapahoe	Buckley AFB, CO	http://www.buckley.af.mil/
Front Range	Adams	Watkins, CO	http://www.ftg-airport.com/index.php
Vance Brand	Boulder	Longmont, CO	http://www.ci.longmont.co.us/airport/index.htm

Interstates

Approximately 960 miles of interstate highway run north-south, east-west, and diagonally through Colorado:[8]

- I-25: Approximately 300 miles, from Wyoming to New Mexico;
- I-70: Approximately 450 miles, from Utah to Kansas;
- I-76: Approximately 185 miles, from Nebraska to Denver, connecting I-70 and I-80;
- I-225: Approximately 12 miles, connects I-25 and I-70; and
- I-270: Approximately 6 miles, connects I-25 and I-70.

Regional Transportation District

Created by the Colorado General Assembly in 1969, the Regional Transportation District (RTD) provides public transit needs to a service area population of 2.8 million in all or parts of eight Colorado counties: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, and Weld. The district's bus and light-rail transportation system covers more than 2,300 miles and over 10,000 bus stops. For the one-year period October 2009 through September 2010 (the most recent data available), annual boardings totaled more than 97.2 million. Included in this number are more than 15 million trips for special services provided by RTD, including Access-a-Ride, BroncosRide, BuffRide, Komen Denver Race for the Cure bus service, RockiesRide, and SeniorRide. RTD revenues are derived from passenger fares, a sales and use tax (a dedicated 1% tax on certain sales in the service area), grant-operating assistance (from a federal grant program), and capital grant (federal) and local contributions that are used for capital construction.

[8] http://www.coloradodot.info/about/50th-anniversary, retrieved January 11, 2012.

Attractions

The Metro Denver area is close in proximity to notable attractions and events, including museums, world-class ski areas, theaters, professional and collegiate sporting events, concerts, casinos, Rocky Mountain National Park, and other entertainment. The following represent a sample of attractions within the Metro Denver region:

Adams County

- Butterfly Pavilion
- Colorado Rapids – Major League Soccer
- Rocky Mountain Wildlife Refuge

Arapahoe County

- Cherry Creek State Park
- Hudson Gardens and Event Center
- Museum of Outdoor Arts

Boulder County

- Colorado Chautauqua National Historic Landmark
- Eldora Ski Area
- Pearl Street Mall
- University of Colorado Boulder sports and arts/cultural events

Broomfield County

- 1STBANK Center concert venue
- FlatIron Crossing Shopping Mall

Denver County

- Cherry Creek Shopping Center
- Colorado Convention Center
- Colorado Avalanche – National Hockey League
- Colorado Rockies – Major League Baseball
- Denver Broncos – National Football League
- Denver Nuggets – National Basketball Association
- University of Denver hockey team
- Colorado History Museum
- Denver Art Museum
- Denver Botanic Gardens
- Denver Center for the Performing Arts
- Denver Museum of Nature and Science
- Denver Zoo

Douglas County

- Renaissance Festival
- The Wildlife Experience (museum)

Jefferson County

- Red Rocks Amphitheater concert venue
- Rocky Mountain Air Show at Rocky Mountain Metropolitan Airport

Educational Attainment

Colorado, and the Metro Denver area specifically, has one of the most highly educated workforces in the nation. According to the U.S. Census Bureau, the percentage of the population age 25 and over with a bachelor's degree or higher is 36.4% for Colorado, 57.5% for the Boulder area, and 38.2% for the Denver-Aurora-Broomfield area compared to 28.2% for the nation. The state also outperforms the nation when the percentages of graduate or professional degrees are considered: 10.4% for the United States compared to 13.0% for the state, 24.5% for Boulder, and 13.2% for Denver-Aurora-Broomfield.

TABLE 37: EDUCATIONAL ATTAINMENT

Subject	United States	Colorado	Boulder, CO Metro Area	Denver-Aurora-Broomfield, CO Metro Area
Less than 9th grade	6.10%	4.30%	2.60%	4.80%
9th to 12th grade, no diploma	8.30%	6.10%	3.30%	6.40%
High school graduate (includes equivalency)	28.50%	22.80%	13.70%	22.00%
Some college, no degree	21.30%	22.60%	17.30%	21.50%
Associate's degree	7.60%	7.80%	5.60%	7.00%
Bachelor's degree	**17.70%**	**23.40%**	**33.00%**	**25.00%**
Graduate or professional degree	**10.40%**	**13.00%**	**24.50%**	**13.20%**
Percent high school graduate or higher	85.60%	89.70%	94.10%	88.80%
Percent bachelor's degree or higher	28.20%	36.40%	57.50%	38.20%

Source: U.S. Census Bureau.

Educational Facilities

A sample of higher education institutions in the Metro Denver area appears below.

Adams County

- Anschutz Medical Campus, Aurora
- Front Range Community College
- University of Phoenix, Turnpike Learning Center, Westminster
- Accounting & Business School of the Rockies – Northglenn
- Colorado Technical University – Denver North
- DeVry University – Westminster Campus
- Everest College – Thornton
- Denver Career College

Arapahoe County

- Arapahoe Community College, Littleton Campus
- T.H. Pickens Technical Center
- College for Financial Planning
- Community College of Aurora
- Jones International University
- Platt College
- Webster University, Denver Metropolitan Campus
- University of Phoenix, Southglenn Learning Center, Centennial, and Southlands Learning Center, Aurora
- Accounting & Business School of the Rockies – Greenwood Village
- Colorado Technical University, Denver South
- DeVry University, Denver South Center (Greenwood Village)
- Everest College, Aurora Campus
- Keller Graduate School of Management, DeVry University

- American Sentinel University
- TechSkills

Boulder County

- University of Colorado Boulder
- Front Range Community College (Longmont)
- Naropa University

Broomfield County

- DeVry University

Denver County

- University of Colorado Denver
- Denver Campus of Anschutz Medical Center
- University of Denver
- Metropolitan State College of Denver
- Regis University
- Community College of Denver
- Emily Griffith Technical College
- Art Institute of Colorado
- Illif School of Theology
- Aspen University
- Johnson & Wales University
- Pima Medical Institute
- Teikyo Loretto Heights University
- Westwood College–North Campus and South Campus
- Argosy University, Denver
- College America–Denver
- Brown Mackie College–Denver

Douglas County

- University of Phoenix, Colorado Campus
- Arapahoe Community College, Castle Rock Campus and Parker Campus
- Webster University, Castle Rock Campus
- Colorado Christian University

Jefferson County

- Colorado Christian University
- Colorado School of Mines
- Front Range Community College
- Red Rocks Community College
- Rocky Mountain College of Art + Design
- University of Phoenix, Turnpike Learning Center, Westminster

Natural Resources

Colorado is an energy- and mining-rich state. The latest U.S. Energy Information Agency ranking of natural gas and oil fields in the nation shows Colorado is home to all, or part of, nine of the largest natural gas fields and two of the largest oil fields. The state is the 11th-largest coal producer in the country, and the Henderson Mine (in Clear Creek County) is the world's largest primary producer of molybdenum. In addition to traditional energy resources, Colorado's renewable energy standard of 30% potential renewable electricity by 2020 is one of the most aggressive in the nation. Although mining is not prevalent in the Metro Denver area, Denver is the location of the headquarters of the world's 2nd-largest gold producer, Newmont Mining.

TABLE 38: VALUE OF COLORADO NATURAL RESROUCES AND MINING

	Oil and Gas Extraction					Mining					
Year	Crude Oil	Natural Gas	Carbon Dioxide	Subtotal	Percent Change	Coal	Minerals	Subtotal	Percent Change	Total	Percent Change
2007	1,619	6,426	257	8,302	-9.3%	1,075	1,886	2,961	8.2	11,263	-5.3%
2008	2,561	10,905	430	13,896	67.4%	887	2,100	2,987	0.9	16,883	49.9%
2009	1,540	5,420	324	7,284	-47.6%	1,166	971	2,137	-28.5	9,421	-44.2%
2010	1,796	6,794	330	8,920	22.5%	1,069	1,050	2,119	-0.8	11,039	17.2%

Sources: Colorado Geological Survey Mineral and Minerals Fuel Activity Reports, Colorado Oil and Gas Conservation Commission, Department of Minerals and Geology, and the *2012 Colorado Business Economic Outlook*.

Federal Facilities

Federal government employment has been relatively stable in Colorado over the past decade, with the state expected to end 2011 with approximately 54,500 federal workers. The concentration of federal employment in Colorado is similar to that of the nation, but many of Colorado's facilities, notably located in the Metro Denver region, help drive research. Total employment at federally funded research facilities in Colorado is estimated at nearly 8,000 in FY2010, according to a University of Colorado study titled *CO-LABS Impact Study: Impact of Federal Research Laboratories in Colorado 2009-2010.* Some of these major research facilities include the National Renewable Energy Laboratory, the National Oceanic and Atmospheric Administration, the National Institute of Standards and Technology, and the National Telecommunications and Information Administration. Other major federal facilities include the Department of Defense, the U.S. Postal Service, and the Department of the Interior. See Appendix 1 for a full list of the federal presence in the Metro Denver region.

TABLE 39: FEDERALLY FUNDED RESEARCH FACILITIES IN COLORADO

- Bureau of Reclamation Technical Services Center
- Centers for Disease Control and Prevention Division of Vector-Borne Infectious Disease
- Cooperative Institute for Research in the Atmosphere (CIRA)
- Cooperative Institute for Research in Environmental Sciences (CIRES)
- Federal Railway Administration Transportation Technology Center
- JILA
- Laboratory for Atmospheric and Space Physics (LASP)
- National Center for Atmospheric Research (NCAR)
    - Computational and Information Systems Laboratory
    - Earth Observing Laboratory
    - Earth and Sun Systems Laboratory
    - Research Applications Laboratory
- National Ecological Observatory Network (NEON)
- National Oceanic and Atmospheric Administration (NOAA)
    - Earth System Research Laboratory (ESRL)
    - Chemical Sciences Division
        - Global Monitoring Division
        - Global Systems Division
        - Physical Sciences Division
    - National Geophysical Data Center
    - Space Weather Prediction Center (SWPC)
    - National Weather Service
- Weather Forecast Offices (WFO)
- National Institute of Standards and Technology (NIST)
- National Renewable Energy Laboratory (NREL)
- National Telecommunications and Information Administration (NTIA)
- Renewable and Sustainable Energy Institute (RASEI)
- University Corporation for Atmospheric Research (UCAR)
- U.S. Department of Agriculture – Rocky Mountain Research Station (RMRS)
- U.S. Department of Agriculture – Agricultural Research Service (ARS)
    - Rangeland Resources Unit
    - Soil Plant Nutrient Research Unit
    - Water Management Research Unit
    - Crops Research Lab, Sugarbeet Unit
    - Agricultural Systems Research Unit
    - Central Great Plains Resources Management Unit
    - Genetic Resources Preservation Research Unit
- U.S. Department of Agriculture – National Wildlife Research Center (NWRC)
- U.S. Geological Survey (USGS)
    - Colorado Water Science Center
    - Earth Surfaces Process Team
    - Energy Resources Team
    - Ft. Collins Biological Science Center
    - Geologic Hazards Team
    - Mineral Resources Science Center
    - Rocky Mountain Geographic Science Center
    - Water Quality Testing Laboratory
- U.S. Air Force Academy Research Centers and Institutes

TABLE 40: MAJOR FEDERAL FACILITIES BY COUNTY

Arapahoe
Department of Defense - Buckley Air Force Base
U.S. Postal Service
Department of Justice - Drug Enforcement Administration
Department of Defense - Tricare Management Activity
Office of Personnel Management – Independent National Agency

Boulder
U.S. Postal Service
Department of Commerce - National Oceanic and Atmospheric Administration
Department of Commerce - National Institute of Standards and Technology
U.S. Department of Transportation - Federal Aviation Administration
Department of Commerce - National Telecommunications and Information Administration

Broomfield
U.S. Postal Service
Department of Treasury - Internal Revenue Service
Department of Defense - Tricare Management Activity

Denver
U.S. Postal Service
Department of Veterans Affairs - VA Medical Center
Department of Defense - Defense Finance and Accounting Service
Department of Homeland Security - Transportation Security Administration
Department of Treasury - Internal Revenue Service
U.S. Environmental Protection Agency – Region 8 Laboratory
Department of Veterans Affairs - VA Administrative Office
Administrative Office of the U.S. Court - U.S. District Court
Department of Treasury - U.S. Mint
Department of Housing and Urban Development – Rocky Mountain Regional Office

Douglas
U.S. Postal Service
Department of Treasury - Internal Revenue Service
Department of Defense - Tricare Management Activity
Department of Defense - Defense Information Systems Agency
Department of Homeland Security - Emergency Preparedness and Response

Jefferson
Department of the Interior - U.S. Geological Survey
Department of the Interior - Bureau of Reclamation
U.S. Department of Energy - National Renewable Energy Laboratory
Department of the Interior - Office of the Secretary
Department of the Interior - National Park Service
Department of the Interior - Bureau of Land Management
U.S. Postal Service
Department of the Interior - Minerals Management Service
Department of the Interior - Fish and Wildlife Service
U.S. General Services Administration
Department of Agriculture - Forest Service
Department of Veterans Affairs - Regional Office
U.S. Department of Energy - Western Area Power Administration
U.S. Department of Transportation - Federal Highway Administration, Central Federal Lands

EXAMPLES OF BENEFICIAL ECONOMIC DEVELOPMENT

The creation of a satellite USPTO promises to bring high-paying, innovatively important jobs to Colorado. The facility would initially lead to construction and tenant improvements, but economic development around the site would include the sprouting of support services for employees (e.g., restaurants) for clients (e.g., law firms).

Successful strategic economic development is evident around federal and nonfederal sites throughout the Metro Denver region. Some of the most recognizable include the redevelopment of Fitzsimons and the Anschutz Medical Campus, leading to profound investment and the rebirth of economic vitality in north Aurora. Other examples include development around Coors Field in LoDo, the development of the Denver Tech Center (DTC), FasTracks, and DIA. The following two reports on Vestas and United Launch Alliance describe successful targeted economic development.

Vestas

Colorado lost 80,000 jobs when the dot-com bubble burst in 2003. In response, business leaders and economic developers created the Metro Denver Economic Development Corporation (EDC), a regional partnership where local partners promote the benefits of Colorado first, followed by the region and then the individual community. Energy was identified as one of nine industry clusters that drive the economy.

In 2006, Bill Ritter was elected governor of Colorado. His top priority: "To build a New Energy Economy and establish Colorado as a leader in renewable energy." Around that time, Vestas Wind Systems began searching for a U.S. manufacturing location. Although Colorado had few incentives compared to other states, it had a history of regional partnerships.

The Royal Danish Consulate contacted five states in United States and Canada on behalf of Vestas; 72 sites were submitted and 40 made the first cut. The company visited 15 sites in four states in October 2006. The search narrowed to two states, and Windsor, Colorado, was selected for the first U.S. Vestas blade factory. According to Kjær Lundø Jakobsen, Vice President, Business Development, Vestas Blades A/S, the Great Western Industrial Park in Windsor was selected because it offered:

- A shortline railroad that connects to the Burlington Northern Santa Fe and Union Pacific railroads,
- Workforce quality and size,
- Higher education and research in region,
- Professional response,
- A single point of contact, and
- "The bureaucracy in Colorado is business minded."

At the ground breaking eight months later, Vestas announced an expansion to double the size of the plant. In January 2008, Vestas proposed an expansion package of three more factories in Colorado and asked the Metro Denver EDC and the Colorado Office of Economic Development and International Trade to "Be like Avis"—try harder.

In April 2008, negotiations for the Windsor expansion site fell apart. Vestas asked the Metro Denver EDC to start over with a new search—not an easy task since Vestas had already seen all of the large industrial sites with rail. Then "dumb luck" helped out. RTD had arranged to buy land as part of its proposed deal to move key Union Pacific Railroad operations from Denver to Fort Lupton. RTD planned to use vacated Union Pacific property in central Denver for the FasTracks train to DIA and a commuter-rail maintenance center. To get a head start on the possible relocation, Union Pacific started acquiring key properties in

the Fort Lupton/Brighton area, with RTD pledging to reimburse the freight railroad for the purchases. In January, RTD said a Union Pacific study put the full cost of the relocation project at about $700 million — more than RTD could afford, which killed the relocation. However, RTD was willing to accept an unsolicited offer to purchase some of the property — land RTD did not need or want — for the price paid. Additionally, the City of Brighton agreed to sell an adjacent parcel that it owned.

Meanwhile, the Vestas Q1 2008 financial report announced plans to build the world's largest tower factory "somewhere in Colorado" and the media frenzy began.

In July 2008, the story about the RTD and City of Brighton land sale leaked before the deal was done. Relationships and trust helped dodge the bullet.

In August, Vestas announced the decision to build a second blade manufacturing facility and a nacelle assembly plant in Brighton, which together will create an estimated 1,500 new jobs. A week later, Vestas announced that Pueblo would be the home of the largest tower manufacturing plant in the world, requiring 550 new workers. Together, these facilities annually would produce 3,600 blades, 1,400 nacelles, and 1,000 towers. Site selection transitioned to development assistance.

Four Vestas plants were located in three communities along Colorado's Front Range: Windsor - blade factory; Brighton - blade and nacelle factories; and Pueblo - tower factory. The result: 2,750 new manufacturing jobs and a $700 million investment.

Numerous Vestas suppliers are also expanding to Colorado, including Creative Foam and Hexcel. Creative Foam, a designer and manufacturer of foams and plastics for the automotive, medical, and composite markets, announced in January 2009 that it was leasing 70,000 square feet in Longmont. Hexcel, a Connecticut-based producer of carbon fiber and other advanced composite materials, is investing $75 million and will hire 200 employees at an average salary of $85,000.

Compared to the Colorado average unemployment rate of 5.3% in October 2008, Pueblo County's rate was 6.7%, and Adams County, home to most of the City of Brighton, had a rate of 6.1%. The 2,000 new Vestas jobs in these communities had a transformational impact on the local economies, and the 2,750 jobs created by Vestas throughout the state helped Colorado to fare relatively better than the rest of the nation during the economic downturn. Additionally, suppliers to the Vestas production facilities are seeking sites in and near them, so the multiplier effect will be significant. Thanks to these Vestas investments, Colorado and these three communities are now "on the map" for the burgeoning renewable energy industry.

Vestas' projects were possible because of Colorado's historic collaboration between multiple entities and organizations — public and private, federal, state, and local — that brought financial and technical assistance to bear throughout the site selection and development process. Colorado is a state with a small government ethos that does not allow for the large incentive awards offered by competing states. Collaboration, creativity, and customer service were crucial to attracting the world's leading manufacturer in a widely coveted industry. Governor Ritter made building the "New Energy Economy" a cornerstone of his administration. Vestas' Colorado campus presented an opportunity to transform the Governor's "new energy economy" in Colorado.

Partners include:

- Colorado Office of Economic Development and International Trade
- Metro Denver EDC
- Upstate Colorado Economic Development
- Pueblo Economic Development Corporation
- Brighton Economic Development Corporation
- Town of Windsor
- City of Brighton
- Weld County
- City of Pueblo
- Pueblo County
- Pueblo Urban Renewal Authority
- Colorado Department of Public Health and Environment
- Colorado Department of Local Affairs, Regional Transportation District, Colorado Department of Transportation
- Western Area Power Administration
- United Power
- Black Hills Energy
- Xcel Energy
- Tri-State Generation and Transmission Association
- Pueblo Board of Water Works
- Union Pacific Railroad
- Burlington Northern Railroad
- OmniTrax/Great Western Railway
- Great Western Development Company
- Pueblo Community College
- Others

State incentives include:

- Economic Development Commission Job Creation Incentives
- Governor's Energy Office Clean Energy Fund
- Colorado First Customized Job Training Grants
- Community Development Block Grant (state allocation)
- Department of Local Affairs' Energy Impact Assistance Fund
- State Enterprise Zone Tax Credits
- State Economic Development Project Manager assigned full time to assist Vestas on all Colorado projects

Federal incentives include an Economic Development Authority Grant.

Local incentives include:

- Property tax abatement (city and county)
- Job creation and training grants
- Local sales tax abatement (construction materials and equipment)
- Development fee waivers
- Tax Increment Financing
- In-kind contributions of utility and roads infrastructure
- Expedited state and local permitting (top priority review)

Other assistance includes help with immigration and visa matters.

United Launch Alliance, LLC

In December 2006, the Lockheed Martin Corporation and The Boeing Company announced an agreement to combine the companies' Atlas and Delta launch vehicle businesses under a 50/50 joint venture coined United Launch Alliance (ULA). ULA provides launch services for the U.S. government.

Prior to ULA's official formation, the Metro Denver EDC worked extensively with Boeing and Lockheed Martin to help relocate approximately 400 Boeing employees from Huntington Beach, California, to

Metro Denver. The new aerospace company ultimately selected Centennial, Colorado, for its corporate headquarters, and over the next several years hired additional employees to accommodate the company's further growth.

In 2009, ULA received $2,907,000 in incentive credits for the creation of 646 jobs from May through October 2007. At the time of job creation, the average annual wage for these positions was $103,610. Due to the high-paying nature of aerospace jobs, the estimated economic impact of ULA is more than $2 billion over the company's five years of operation in Metro Denver.

ULA also made significant real estate investments in the region, spending $20 million refurbishing an existing 160,000-square-foot leased facility. A few years later, ULA expanded its headquarters campus to include three office buildings totaling 466,000 square feet in Centennial, representing one of the nation's largest office lease deals of 2010.

Through the company's generous outreach program, ULA contributes approximately $1 million annually in funding, in-kind donations, and volunteerism hours. Recipients include STEM (science, technology, engineering, and math) and other educational programs, numerous Metro Denver community organizations, and nonprofits that support military personnel and their families.

The location of United Launch Alliance in Metro Denver catapulted Colorado to the No. 2 aerospace economy in the nation. Today, ULA employs 1,700 of its 3,600 workforce in Metro Denver.

CONCLUSION

Adding a satellite patent office in Colorado will prove mutually beneficial to the USPTO and to Colorado. For the state, a satellite office will mean jobs and economic activity, as well as another innovation resource to add to the state's entrepreneurial base. Direct spending of $296 million over five years will add $342 million to state GDP and increase employment in the state by an average of 690 jobs over five years. The state also stands to gain through economic and community development. With the creation of business parks and redevelopment of targeted areas, single companies can be catalysts for cluster growth and community improvement.

In return, Colorado has much to offer the USPTO. Colorado is an economically diverse, growing state with a broad repertoire of assets that is home to high-tech companies and a highly educated workforce. The state boasts of one of the nation's highest rates of bachelor's, graduate, and professional degrees and a high concentration of engineering, life sciences, computer, mathematical, management, and financial occupations. With a collaborative environment comprised of private industry, research universities, and federal research laboratories, employees in these occupations work in advanced technology industry clusters, ranging from aerospace and biotechnology to software and telecom. The state's physical infrastructure includes DIA, the fifth-busiest airport in the nation, nearly 1,000 miles of interstate highways, large broadband networks, and recreational attractions that include national parks and ski resorts. As a resource-rich state, Colorado exports coal, oil, natural gas, and minerals nationally and globally.

Overall, Colorado economically has much to gain from a USPTO satellite office, and given the state's economic, social, and demographic composition, Colorado is a natural home to such an important innovation facility.

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APPENDIX 1: METRO DENVER FEDERAL FACILITIES

- Administrative Office of the U.S. Court - U.S. District Court
- Advisory Council on Historic Preservation – Independent National Agency
- Congressional Office - Representative Coffman
- Congressional Office - Representative DeGette
- Congressional Office - Representative Perlmutter
- Congressional Office - Representative Polis
- Congressional Office - Senator Bennet
- Congressional Office - Senator Udall
- Consumer Product Safety Commission – Independent National Agency
- Corporation for National Community Service - AmeriCorps and Senior Corps
- Denver Federal Executive Board - Denver Metro Combined Federal Campaign
- Equal Employment Opportunity Commission – Independent National Agency
- Farm Credit Administration – Independent National Agency
- Federal Communications Commission – Independent National Agency
- Federal Labor Relations Authority – Independent National Agency
- Federal Mediation and Conciliation Service – Independent National Agency
- Federal Mine Safety and Health Review Commission – Independent National Agency
- U.S. General Services Administration
- National Archives and Records Administration – Rocky Mountain Region
- National Labor Relations Board - Region 27
- National Science Foundation – Independent National Agency
- Selective Service System - Region III Headquarters
- U.S. Commission on Civil Rights – Independent National Agency
- U.S. Dept. of Agriculture - Food and Nutrition Service
- U.S. Dept. of Agriculture - Food Safety and Inspection Service
- U.S. Dept. of Agriculture - Forest Service
- U.S. Dept. of Agriculture - National Agricultural Statistics Service
- U.S. Dept. of Agriculture - Natural Resources Conservation Services
- U.S. Dept. of Agriculture - Rural Development Office
- U.S. Dept. of Commerce - Bureau of the Census
- U.S. Dept. of Commerce - Economic Development Administration
- U.S. Dept. of Commerce - National Institute of Standards and Technology
- U.S. Dept. of Commerce - National Oceanic and Atmospheric Administration
- U.S. Dept. of Commerce - National Telecommunications and Information Administration
- U.S. Dept. of Commerce - Office of the Inspector General
- U.S. Dept. of Defense - Buckley Air Force Base
- U.S. Dept. of Defense - Defense Audit Contract Agency
- U.S. Dept. of Defense - Defense Contract Management Agency of Denver
- U.S. Dept. of Defense - Defense Finance and Accounting Service
- U.S. Dept. of Defense - Defense Information Systems Agency
- U.S. Dept. of Defense - Tri-care Management Activity
- U.S. Dept. of Education - Regional Office
- U.S. Dept. of Energy - Golden Field Office
- U.S. Dept. of Energy - National Renewable Energy Laboratory
- U.S. Dept. of Energy - Rocky Flats Project Office
- U.S. Dept. of Energy - Western Area Power Administration
- U.S. Dept. of Health and Human Services - Administration for Children and Families
- U.S. Dept. of Health and Human Services - Administration on Aging
- U.S. Dept. of Health and Human Services - Assistant Secretary for Health
- U.S. Dept. of Health and Human Services - Center for Disease Control and Prevention
- U.S. Dept. of Health and Human Services - Centers for Medicare and Medicaid Services
- U.S. Dept. of Health and Human Services - Food and Drug Administration
- U.S. Dept. of Health and Human Services - Health Resources and Service Admin.
- U.S. Dept. of Health and Human Services - Office of the Secretary
- U.S. Dept. of Health and Human Services - Program Support Center
- U.S. Dept. of Health and Human Services - Rocky Mountain Regional CASU
- U.S. Dept. of Health and Human Services - Toxic Substances and Disease Registry
- U.S. Dept. of Homeland Security - Citizenship and Immigration Services
- U.S. Dept. of Homeland Security - Customs and Border Protection
- U.S. Dept. of Homeland Security - Emergency Preparedness and Response
- U.S. Dept. of Homeland Security - Immigration and Customs Enforcement
- U.S. Dept. of Homeland Security - Transportation Security Administration
- U.S. Dept. of Homeland Security - U.S. Secret Service
- U.S. Dept. of Housing and Urban Development – Rocky Mountain Regional Office
- U.S. Dept. of Justice - Bureau of Alcohol, Tobacco, Firearms, and Explosives
- U.S. Dept. of Justice – Community Relations Service
- U.S. Dept. of Justice - Drug Enforcement Administration
- U.S. Dept. of Justice - Federal Bureau of Investigation
- U.S. Dept. of Justice - Federal Bureau of Prisons
- U.S. Dept. of Justice - U.S. Marshals Service
- U.S. Dept. of Justice - U.S. Trustee Program
- U.S. Dept. of Labor - Bureau of Labor Statistics
- U.S. Dept. of Labor - Division of Energy Employment Occupational Illness Comp.
- U.S. Dept. of Labor - Employment and Training Administration
- U.S. Dept. of Labor - Employment Standards Administration
- U.S. Dept. of Labor - Mine Safety and Health Administration
- U.S. Dept. of Labor - Occupational Safety and Health Administration
- U.S. Dept. of Labor - Office of Public Affairs
- U.S. Dept. of Labor - Office of the Assistant Secretary for Administration and Mgmt
- U.S. Dept. of Labor - Office of the Inspector General
- U.S. Dept. of Labor - Office of the Secretary
- U.S. Dept. of Labor - Office of the Secretary of Labor
- U.S. Dept. of Labor - Office of the Solicitor
- U.S. Dept. of Labor - Veterans Employment Training Service
- U.S. Dept. of Labor - Women's Bureau
- U.S. Dept. of the Interior - Bureau of Land Management
- U.S. Dept. of the Interior - Bureau of Reclamation
- U.S. Dept. of the Interior - Fish and Wildlife Service
- U.S. Dept. of the Interior - Minerals Management Service
- U.S. Dept. of the Interior - National Park Service
- U.S. Dept. of the Interior - Office of Surface Mining Reclamation and Enforcement
- U.S. Dept. of the Interior - Office of the Inspector General
- U.S. Dept. of the Interior - Office of the Secretary
- U.S. Dept. of the Interior - Office of the Solicitor
- U.S. Dept. of the Interior - U.S. Geological Survey
- U.S. Dept. of Transportation - Federal Aviation Administration
- U.S. Dept. of Transportation - Federal Highway Administration, Central Fed. Lands
- U.S. Dept. of Transportation - Federal Highway Administration, Colorado Division
- U.S. Dept. of Transportation - Federal Railroad Administration
- U.S. Dept. of Transportation - Federal Transit Administration
- U.S. Dept. of Transportation - National Highway Traffic Safety Administration
- U.S. Dept. of Transportation - Office of the Inspector General
- U.S. Dept. of Treasury - Internal Revenue Service
- U.S. Dept. of Treasury – Treasury Inspector General for Tax Administration
- U.S. Dept. of Treasury - U.S. Mint at Denver
- U.S. Dept. of Veterans Affairs - VA Denver Distribution Center
- U.S. Dept. of Veterans Affairs - VA Ft. Logan National Cemetery
- U.S. Dept. of Veterans Affairs - VA Medical Center
- U.S. Dept. of Veterans Affairs - VA Administrative Office
- U.S. Dept. of Veterans Affairs - Regional Office
- U.S. Environmental Protection Agency – Region 8 Laboratory
- U.S. Environmental Protection Agency - Region 8 Office
- U.S. Government Accountability Office - Independent National Agency
- U.S. Government Printing Office - Regional Printing Procurement Office
- U.S. Merit Systems Protection Board - Denver Field Office
- U.S. Office of Personnel Management - Western Management Development Center
- U.S. Peace Corps - Regional Office
- U.S. Postal Service
- U.S. Railroad Retirement Board - Denver District Office
- U.S. Securities and Exchange Commission - Central Regional Office
- U.S. Small Business Administration - Denver Regional Office
- U.S. Social Security Administration - Local Offices
- U.S. Social Security Administration - Regional Communications Office

APPENDIX 2: SUMMARY OF KEY OCCUPATIONS

The following occupation tables focus on key occupations that would fill USPTO positions, including Management, Business and Financial Operations, Computer and Mathematical, Architecture and Engineering, and Life Physical and Social Science. These tables summarize occupational employment for the state and the Metro Denver area, the location quotients (or relative concentrations of employment), as well as salary comparisons with the national average.

TABLE 41: MANAGEMENT OCCUPATIONS, 2010

Occupation	Colorado Employment	Metro Denver Employment[a]	Colorado LQ	Denver Metro LQ[a]	Colorado Wages vs. National	Denver Metro Wages vs. National
Chief Executives	1,390	940	0.3	0.3	99.54%	112.05%
General and Operations Managers	39,790	25,600	1.4	1.4	101.14%	111.53%
Legislators	970	270	0.9	0.4	102.03%	107.23%
Advertising and Promotions Managers	370	310	0.7	0.9	103.02%	NA
Marketing Managers	1,980	1,500	0.7	0.9	101.79%	104.21%
Sales Managers	3,360	2,550	0.6	0.8	101.74%	107.04%
Public Relations and Fundraising Managers	630	460	0.7	0.8	105.65%	108.16%
Administrative Services Managers	1,950	1,230	0.5	0.5	107.05%	113.61%
Computer and Information Systems Managers	4,550	3,760	0.9	1.2	101.80%	102.45%
Financial Managers	4,220	3,210	0.5	0.6	103.98%	108.09%
Industrial Production Managers	1,010	600	0.4	0.4	103.65%	105.18%
Purchasing Managers	670	550	0.6	0.8	112.81%	114.11%
Transportation Storage, Distribution Managers	1,100	780	0.7	0.8	109.55%	110.14%
Compensation and Benefits Managers	220	140	0.4	0.4	104.72%	108.54%
Human Resources Managers	750	540	0.7	0.8	102.52%	107.60%
Training and Development Managers	270	180	0.6	0.6	102.53%	106.70%
Construction Managers	3,300	2,070	1.0	1.0	96.72%	100.67%
Education Admins Preschool, Childcare	620	380	0.7	0.7	80.48%	81.38%
Education Admins Elementary, Secondary	3,810	1,930	1.0	0.8	89.92%	94.02%
Education Administrators Postsecondary	1,800	1,010	1.0	0.9	96.88%	NA
Education Administrators All Other	470	120	1.0	0.4	106.79%	105.74%
Architectural and Engineering Managers	2,850	2,000	1.0	1.1	105.81%	110.90%
Food Service Managers	1,720	940	0.5	0.5	104.52%	109.17%
Gaming Managers	70	0	1.3	0.0	93.89%	0.00%
Lodging Managers	450	190	0.9	0.6	111.98%	113.47%
Medical and Health Services Managers	3,110	1,660	0.6	0.6	101.85%	104.72%
Natural Sciences Managers	1,010	730	1.3	1.5	97.30%	101.30%
Postmasters and Mail Superintendents	370	60	0.9	0.2	96.88%	113.40%
Prop Real Estate, Community Assoc Managers	1,360	960	0.5	0.6	102.53%	104.11%
Social and Community Service Managers	1,190	620	0.6	0.5	105.76%	108.26%
Emergency Management Directors	180	60	0.9	0.5	113.96%	130.73%
Managers All Other	5,860	3,950	1.01	1.10	100.80%	108.11%

[a]Includes the Denver-Aurora MSA and the Boulder MSA.

Source: Bureau of Labor Statistics, Employment and Wages from Occupational Employment Statistics (OES) survey.

TABLE 42: BUSINESS AND FINANCIAL OPERATIONS OCCUPATIONS, 2010

Occupation	Colorado Employment	Metro Denver Employment[a]	Colorado LQ	Denver Metro LQ[a]	Colorado Wages vs. National	Denver Metro Wages vs. National
Agents of Artists, Performers, Athletes	150	100	0.7	0.8	68.25%	NA
Buyers and Purchasing Agents Farm Products	110	60	0.6	0.6	100.79%	106.56%
Wholesale, Retail Buyers Except Farm Products	1,240	890	0.7	0.8	91.95%	94.07%
Other Purchasing Agents	5,620	3,920	1.2	1.4	106.07%	107.93%
Claims Adjusters Examiners and Investigators	3,800	2,190	0.9	0.8	103.97%	110.62%
Insurance Appraisers Auto Damage	NA	NA	NA	NA	89.38%	88.01%
Compliance Officers	3,320	2,290	1.0	1.1	103.60%	108.33%
Cost Estimators	4,330	2,800	1.4	1.4	98.36%	100.59%
HR Training, Labor Relations Specialists*	6,760	4,770	1.0	1.1	112.16%	117.39%
Logisticians	1,950	1,220	1.1	1.1	100.45%	98.24%
Management Analysts	8,790	6,840	1.0	1.2	94.85%	93.87%
Meeting Convention and Event Planners*	1,250	860	1.3	1.4	101.13%	107.71%
Comp Benefits, Job Analysis Specialists	1,430	1,020	0.8	0.9	102.47%	107.09%
Training and Development Specialists	3,900	2,970	1.1	1.4	102.86%	105.54%
Market Research, Marketing Specialists*	3,240	2,480	0.7	0.9	102.05%	104.04%
Business Operations Specialists All Other*	36,530	25,750	2.2	2.5	100.31%	103.12%
Accountants and Auditors	28,530	21,170	1.6	1.9	102.12%	105.37%
Appraisers and Assessors of Real Estate	1,400	660	1.3	1.0	103.47%	119.42%
Budget Analysts	1,230	920	1.2	1.5	103.57%	104.95%
Credit Analysts	760	550	0.7	0.8	109.77%	115.75%
Financial Analysts	3,830	3,090	1.0	1.3	99.49%	NA
Personal Financial Advisors	NA	NA	NA	NA	72.86%	NA
Insurance Underwriters	1,280	860	0.8	0.9	96.00%	100.87%
Financial Examiners	380	300	0.8	1.0	101.15%	101.99%
Credit Counselors	NA	0	NA	NA	115.06%	NA
Loan Officers	5,620	4,030	1.2	1.4	105.55%	106.44%
Tax Examiners, Collectors, Revenue Agents	760	630	0.7	0.9	118.22%	121.34%
Tax Preparers	590	NA	0.6	NA	113.57%	NA
Financial Specialists All Other	2,350	1,830	0.90	1.13	106.90%	106.47%

[a]Includes the Denver-Aurora MSA and the Boulder MSA.
Source: Bureau of Labor Statistics, Employment and Wages from Occupational Employment Statistics (OES) survey.

TABLE 43: COMPUTER AND MATHEMATICAL OCCUPATIONS, 2010

Occupation	Colorado Employment	Metro Denver Employment[a]	Colorado LQ	Denver Metro LQ[a]	Colorado Wages vs. National	Denver Metro Wages vs. National
Computer and Information Research Scientists	360	300	0.9	1.1	98.46%	100.24%
Computer Systems Analysts	9,150	7,090	1.1	1.4	104.14%	104.62%
Computer Programmers	4,030	2,980	0.7	0.8	104.66%	105.94%
Software Developers Applications	19,960	16,010	2.4	3.1	100.62%	100.51%
Software Developers Systems Software	13,810	10,180	2.1	2.6	99.46%	98.94%
Database Administrators	2,430	1,970	1.4	1.8	96.95%	95.25%
Network/ Computer Systems Administrators*	9,320	6,830	1.6	1.9	107.67%	111.20%
Computer Support Specialists	14,730	10,800	1.5	1.8	112.14%	116.72%
Info Security, Web Developers, Network Architects	4,350	3,220	1.1	1.3	104.42%	109.42%
Computer Occupations All Other*	6,360	4,610	2.0	2.4	99.87%	101.29%
Actuaries	NA	NA	NA	NA	109.99%	110.78%
Mathematicians	40	0	0.8	0.0	104.49%	0.00%
Operations Research Analysts	1,420	NA	1.3	NA	103.68%	NA
Statisticians	250	170	0.65	0.71	98.91%	95.10%

[a]Includes the Denver-Aurora MSA and the Boulder MSA.
Source: Bureau of Labor Statistics, Employment and Wages from Occupational Employment Statistics (OES) survey.

TABLE 44: ARCHITECTURE AND ENGINEERING OCCUPATIONS, 2010

Occupation	Colorado Employment	Metro Denver Employment[a]	Colorado LQ	Denver Metro LQ[a]	Colorado Wages vs. National	Denver Metro Wages vs. National
Architects Except Landscape and Naval	2,830	2,180	1.9	2.4	97.26%	98.08%
Landscape Architects	470	NA	1.7	NA	106.76%	NA
Cartographers and Photogrammetrists	690	490	3.5	4.0	114.22%	119.31%
Surveyors	1,240	690	1.7	1.5	95.13%	99.24%
Aerospace Engineers	2,410	1,720	1.8	2.1	102.64%	105.32%
Agricultural Engineers	NA	NA	NA	NA	102.93%	106.30%
Biomedical Engineers	70	60	0.3	0.4	91.27%	93.05%
Chemical Engineers	550	310	1.1	1.0	105.50%	119.80%
Civil Engineers	7,330	4,760	1.7	1.8	96.66%	99.78%
Computer Hardware Engineers	2,460	1,210	2.2	1.7	104.51%	107.22%
Electrical Engineers	NA	NA	NA	NA	99.45%	NA
Electronics Engineers Except Computer	NA	NA	NA	NA	101.81%	NA
Environmental Engineers	1,250	800	1.5	1.5	102.33%	106.77%
Health and Safety Engineers Except Mining	610	NA	1.5	NA	96.57%	97.15%
Industrial Engineers	2,680	1,720	0.8	0.8	108.68%	110.88%
Materials Engineers	500	270	1.3	1.2	100.41%	96.40%
Mechanical Engineers	4,520	3,410	1.1	1.4	111.55%	114.49%
Mining, Geological Engineers, Incl Safety	680	360	6.4	5.5	107.48%	111.52%
Petroleum Engineers	1,020	770	2.1	2.6	100.07%	103.97%
Engineers All Other	2,520	1,890	1.1	1.3	104.88%	105.67%
Architectural and Civil Drafters	2,060	NA	1.4	NA	102.93%	NA
Electrical and Electronics Drafters	620	510	1.3	1.7	103.93%	105.06%
Mechanical Drafters	680	390	0.6	0.6	107.03%	112.27%
Drafters All Other	280	220	1.1	1.4	110.71%	113.59%
Aerospace Engineering, Ops Technicians	320	280	2.2	3.1	106.05%	106.69%
Civil Engineering Technicians	1,390	830	1.1	1.0	101.71%	100.10%
Electrical Engineering Technicians	2,570	1,720	1.0	1.1	97.34%	98.03%
Electro-Mechanical Technicians	190	110	0.7	0.7	112.22%	105.42%
Environmental Engineering Technicians	230	130	0.7	0.7	96.54%	95.28%
Industrial Engineering Technicians	590	330	0.6	0.5	96.97%	95.45%
Mechanical Engineering Technicians	760	570	1.0	1.2	106.59%	112.40%
Other Engineering Except Drafters	1,080	660	1.0	0.9	96.85%	97.59%
Surveying and Mapping Technicians	1,460	610	1.60	1.08	116.35%	137.04%

[a]Includes the Denver-Aurora MSA and the Boulder MSA.
Source: Bureau of Labor Statistics, Employment and Wages from Occupational Employment Statistics (OES) survey.

TABLE 45: LIFE PHYSICAL AND SOCIAL SCIENCE OCCUPATIONS, 2010

Occupation	Colorado Employment	Metro Denver Employment[a]	Colorado LQ	Denver Metro LQ[a]	Colorado Wages vs. National	Denver Metro Wages vs. National
Food Scientists and Technologists	130	70	0.7	0.6	93.39%	103.29%
Soil and Plant Scientists	250	50	1.2	0.4	91.60%	91.37%
Biochemists and Biophysicists	440	NA	1.1	NA	101.33%	NA
Microbiologists	460	NA	1.5	NA	103.44%	NA
Zoologists and Wildlife Biologists	530	170	1.8	0.9	99.14%	88.26%
Biological Scientists All Other	1,040	NA	2.0	NA	102.51%	NA
Conservation Scientists	960	210	3.0	1.1	101.98%	112.76%
Foresters	210	30	1.3	0.3	102.26%	107.15%
Epidemiologists	50	30	0.6	0.6	91.43%	88.44%
Medical Scientists Except Epidemiologists	590	350	0.4	0.4	94.23%	100.29%
Physicists	500	NA	1.7	NA	99.31%	NA
Atmospheric and Space Scientists	1,100	NA	7.5	NA	113.07%	NA
Chemists	1,560	1,230	1.1	1.5	95.23%	99.25%
Materials Scientists	130	NA	0.9	NA	97.57%	93.42%
Environmental Scientists, Specialists, Incl Health	2,090	1,540	1.5	1.8	112.30%	115.02%
Geoscientists Except Hydrologists, Geographers	1,830	1,510	3.5	4.7	103.46%	109.31%
Hydrologists	470	330	4.0	4.5	115.63%	117.61%
Physical Scientists All Other	650	NA	1.6	NA	95.31%	NA
Economists	130	80	0.6	0.6	87.19%	87.24%
Survey Researchers	NA	NA	NA	NA	75.70%	114.25%
Clinical Counseling and School Psychologists	2,520	1,620	1.5	1.5	122.59%	119.14%
Psychologists All Other	190	60	1.0	0.5	78.19%	95.87%
Urban and Regional Planners	850	520	1.3	1.3	100.91%	103.91%
Anthropologists and Archeologists	180	0	2.1	0.0	93.66%	0.00%
Historians	40	0	0.7	0.0	132.88%	0.00%
Political Scientists	70	60	0.9	1.3	61.44%	60.15%
Social Scientists and Related Workers All Other	690	450	1.4	1.5	93.81%	92.75%
Agricultural and Food Science Technicians	110	50	0.4	0.3	111.58%	126.58%
Biological Technicians	NA	100	NA	0.1	97.27%	109.56%
Chemical Technicians	1,050	470	1.0	0.8	106.61%	91.86%
Geological and Petroleum Technicians	660	430	2.9	3.0	102.95%	111.77%
Social Science Research Assistants	50	0	0.1	0.0	102.24%	0.00%
Environmental Sci, Protection Techs, Incl Health	540	290	1.1	1.0	115.84%	124.23%
Forensic Science Technicians	270	180	1.3	1.4	102.98%	104.02%
Forest and Conservation Technicians	1,180	0	2.2	0.0	96.53%	0.00%
Life Physical, Social Science Techs All Other	1,010	610	1.07	1.05	102.35%	101.71%

[a]Includes the Denver-Aurora MSA and the Boulder MSA.

Source: Bureau of Labor Statistics, Employment and Wages from Occupational Employment Statistics (OES) survey.

Appendix 7 – Suggested Sample Properties

Introduction to the sample sites - The Metro Denver Economic Development Corporation (Metro Denver EDC)

Sample properties by Metro Denver area city:
Aurora
Denver
Centennial
Greenwood Village
Lone Tree

The Metro Denver Economic Development Corporation (Metro Denver EDC) is a partnership of businesses and economic development professionals representing the seven county Metro Denver area along with Larimer and Weld Counties in Northern Colorado to provide a single point of contact, along with comprehensive and up-to-date information, to companies considering the area for expansion or relocation.

Together we provide a seamless connection to properties, influential business people throughout the region, and to local and state governments. As you proceed, Metro Denver EDC can provide a site search, custom demographic, workforce, or other data as well as arrange for property tours, meetings with area companies, or anything else that will help evaluate the area. Everything we do is confidential until the company tells us otherwise, and all services are provided at no cost to the prospect company.

On behalf of the Metro Denver EDC and our local partners, the following properties have been identified as potential USPTO locations in Metro Denver. Since this is not currently a search for specific properties on the part of the USPTO, the sites and buildings submitted are a representative sample of the properties currently available throughout Metro Denver. It is by no means a complete list. The following specifications were used to conduct the search: location on existing or planned light rail line; 100,000 SF (+/-) Class A or B office space; ability to secure the space (controlled access); existing building or build-to-suit. The properties are listed in order under the Metro Denver area city in which they are located as shown below; brokers' brochures follow.

Aurora

- Cherry Creek Place II, 3190 South Vaughn Way – existing, 204,000 SF available, LEED Silver
- High Point, Dunkirk & High Point Boulevard – build-to-suit
- Colorado Science + Technology Park at Fitzsimmons, East Montview Boulevard between North Peoria Street & Fitzsimons Parkway – build-to-suit

Denver

- Wells Fargo Center, 1700 Lincoln Street – existing, 270,000 SF available, LEED Gold
- 17th Street Plaza, 1225 17th Street – existing, 130,155 SF available, LEED Gold
- Stapleton, 2980 Syracuse Street – proposed 125,000 SF, LEED Gold Pre-Certified

Centennial

- Former United Launch Alliance HQ, 9100 East Mineral Circle – existing, 160,000 SF available

Greenwood Village

- Village Center Station II, 6370 S Fiddlers Green Circle – proposed, 150,000 SF

Lone Tree

- Ridgeview, near I-25 & RidgeGate Parkway – planned, 120,000 SF

FOR LEASE > OFFICE SPACE

Cherry Creek Place II

3190 SOUTH VAUGHN WAY, AURORA, CO 80014

Building Features

- Building Size: 204,019 RSF, 100% Available
- Divisible to: 34,000 RSF
- Floors: Six (6)
- Floorplate: Approximately 34,000 RSF (17,000 RSF Per Side)
- Rate: Negotiable
- Parking: 3.9:1000 (Abundant Covered and Surface)
- YOC: 1981, Renovated in 2008

- Largest Contiguous Block Available in SE Denver
- High Image Location
- Outstanding Western Views
- Easy Access to I-225, I-25 and Parker Road
- Numerous Surrounding Amenities Including Restaurants, Fitness Center, Banking, Retail, Running and Cycling Trails
- Building Signage Available
- Certified LEED Silver
- Signage
- 350 KW Generator
- Flexible and Efficient Floorplans

AGENT: ROBERT WHITTELSEY, SIOR
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303 283 4563
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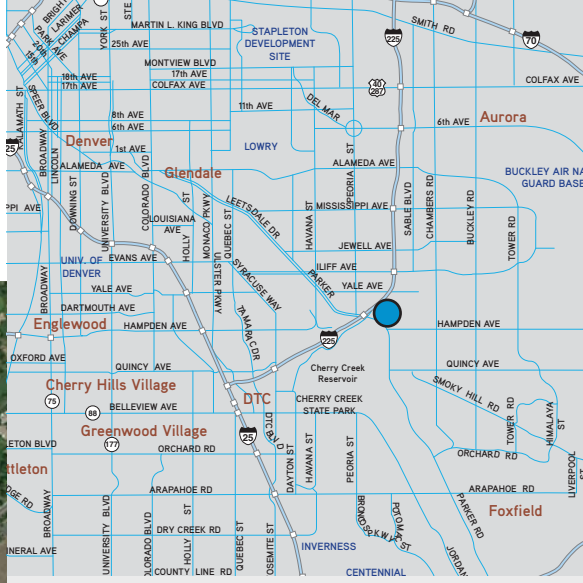
katy.bryan@colliers.com

COLLIERS INTERNATIONAL
4643 S. Ulster St., Suite 1000
Denver, CO 80237
www.colliers.com

Cherry Creek Place II > Aerial



1ST FLOOR

2ND FLOOR

3RD FLOOR

4TH FLOOR

5TH FLOOR

6TH FLOOR

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No warranty or representation is made as to the accuracy of the foregoing information. Terms of sale or lease and availability are subject to change or withdrawal without notice.

FOR SALE
FOR LEASE
BUILD-TO-SUIT

Dunkirk & High Point Blvd

Class-A Office
Flex/R&D Campus

~15 acres

25,000 - 100,000 sf

6 Bulidings

HIGH POINT

Denver, Colorado

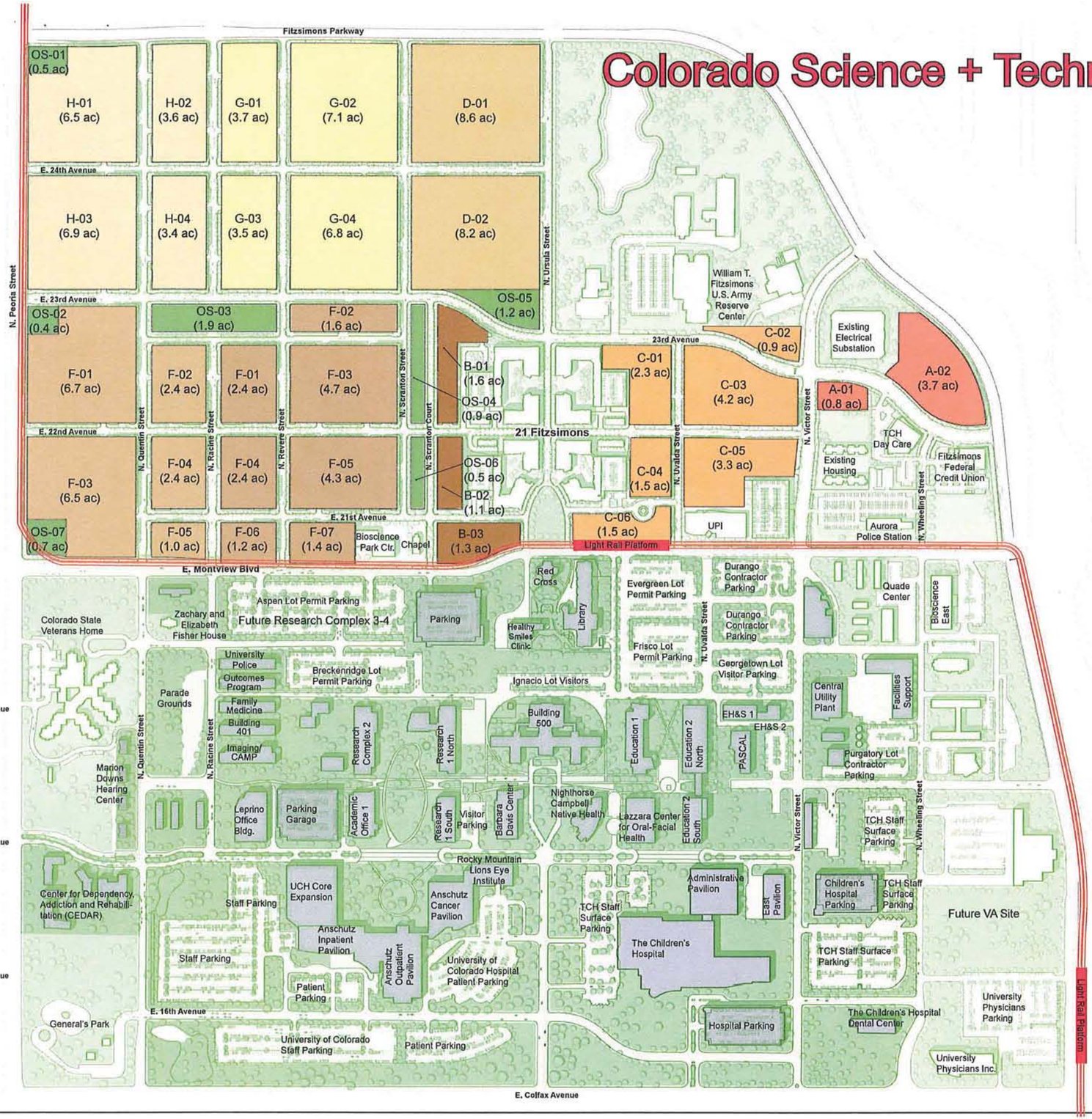
www.High Point Colorado.com

Class-A Office & Flex/R&D Campus

1 - Class-A Office	25,000 - 50,000 sf	2-story
2 - Class-A Office	25,000 - 50,000 sf	2-story
3 - Class-A Office	75,000-100,000 sf	3 or 4-story
4 - Class-A Office	75,000-100,000 sf	3 or 4-story
5 - Flex/Industrial	30,000 - 40,000 sf	1-story
6 - Flex/Industrial	30,000 - 40,000 sf	1-story

This site plan represents a conceptual configurations of commercial development. The plan can change without notice. Not to scale.

Colorado Science + Technology Park at Fitzsimons



- Open Space (OS)
- District A
- District B
- District C
- District D
- District E
- District F
- District G
- District H
- Anschutz Medical Campus
- Other
- Light Rail

N

0' 400' 1000' 1350'

5 MINUTE WALK

colorado science + technology park at fitzsimons

FORESTCITY science + technology group

20 September 2010

ELKUS | MANFREDI ARCHITECTS

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Properties

colorado science + technology park at fitzsimons
www.fitzscience.com

Map and Driving Directions

SCIENCE + TECHNOLOGY

FORESTCITY science + technology group

Home > Properties > Work > Science + Technology > **Properties**

COLORADO SCIENCE + TECHNOLOGY PARK AT FITZSIMONS

Located in the Fitzsimons Life Science District
12635 E. Montview Blvd.
Aurora, CO 80045
Phone: 720-941-7100
http://fitzscience.com

The Fitzsimons Life Science District, located in Aurora, is the center of Colorado's bioscience community and is one of the largest bioscience developments in the country. Here, everything you need to nurture an idea is close at hand. You'll be able to walk to world-class research, resources and facilities, as well as to parks and other features designed to inspire collaboration.

With 184 acres of developable land and a full range of buy, lease and build-to-suit opportunities, the Fitzsimons Life Science District lets you find - or create from scratch - the perfect place for your organization.

Anchors

The University of Colorado Denver at the Anschutz Medical Campus
The University of Colorado Hospital at the Anschutz Medical Campus
The Children's Hospital
Department of Veteran's Affairs
Fitzsimons Redevelopment Authority

Amenities

Direct adjacency to the Anschutz Medical Campus with access to world-class research, resources and facilities; 21 Fitzsimons luxury apartments; banks; retail; a hotel; child care; 20 minutes to Denver International Airport and downtown Denver.

Related Properties

University Park at MIT
Translational Research Lab at University of Pennsylvania
Science + Technology Park at Johns Hopkins
Illinois Science + Technology Park

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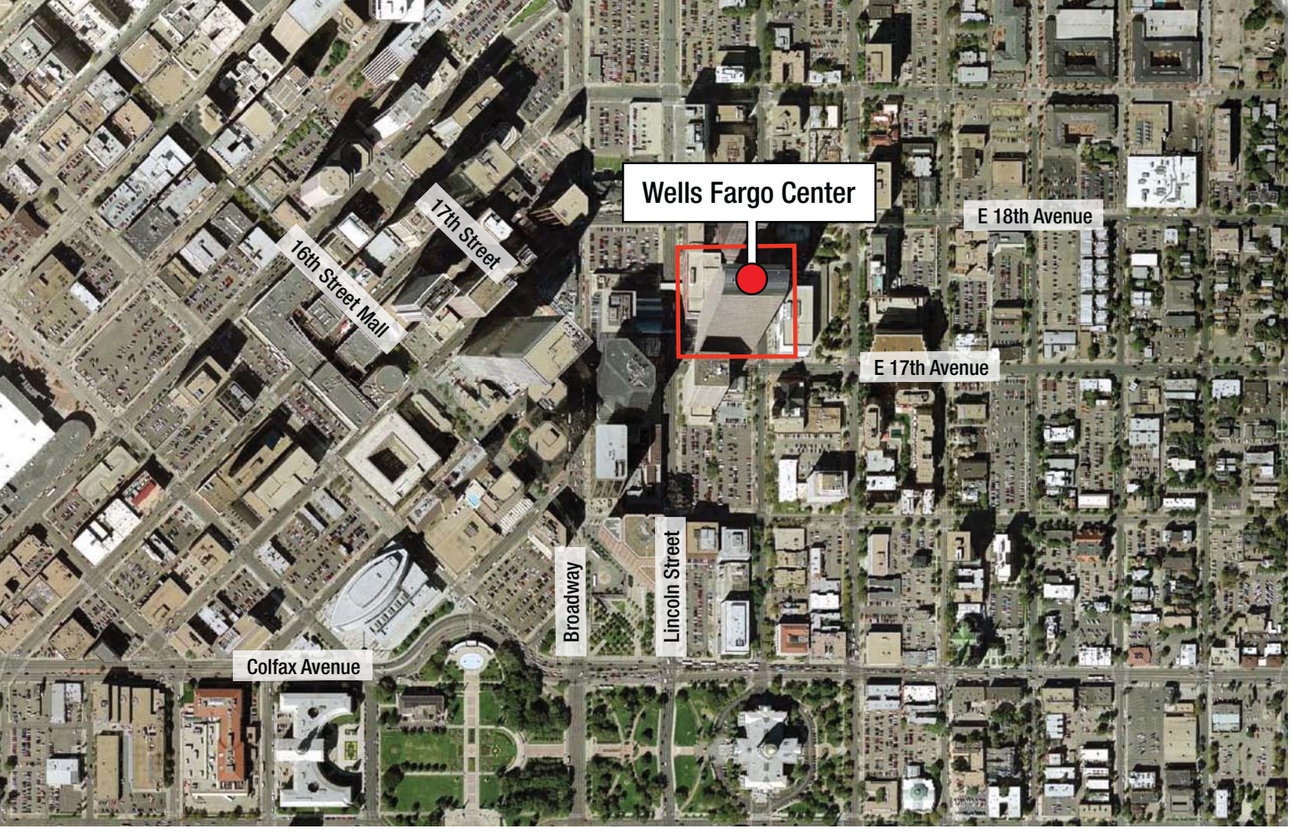
Wells Fargo Center

Denver, CO

MPG
OFFICE TRUST



PROPERTY HIGHLIGHTS

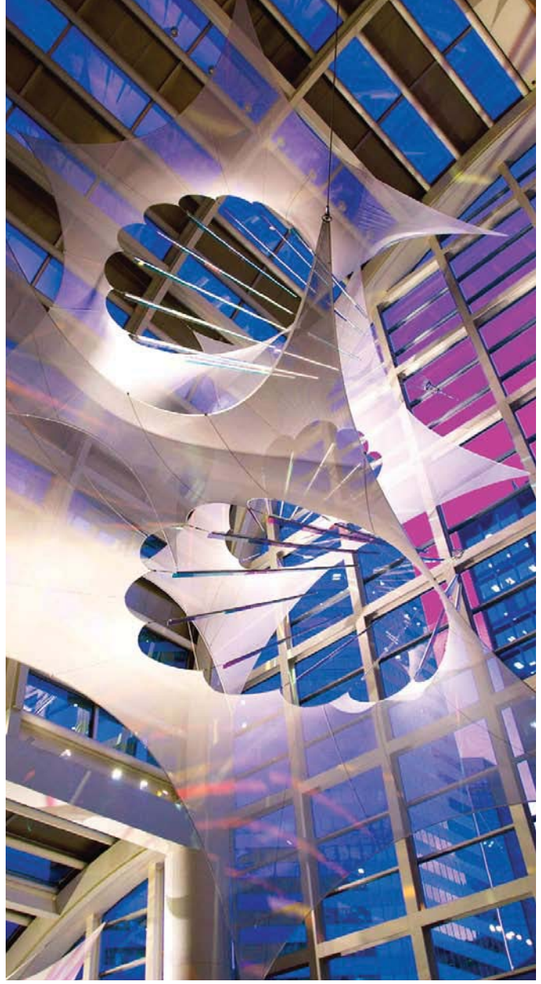
The award-winning Wells Fargo Center is the most recognizable, visible building in Denver. The 52-story building features a uniquely articulated granite façade topped by a double-curved roof made entirely of glass, making it a true landmark in the Downtown Denver skyline. Wells Fargo Center features the following fine attributes:

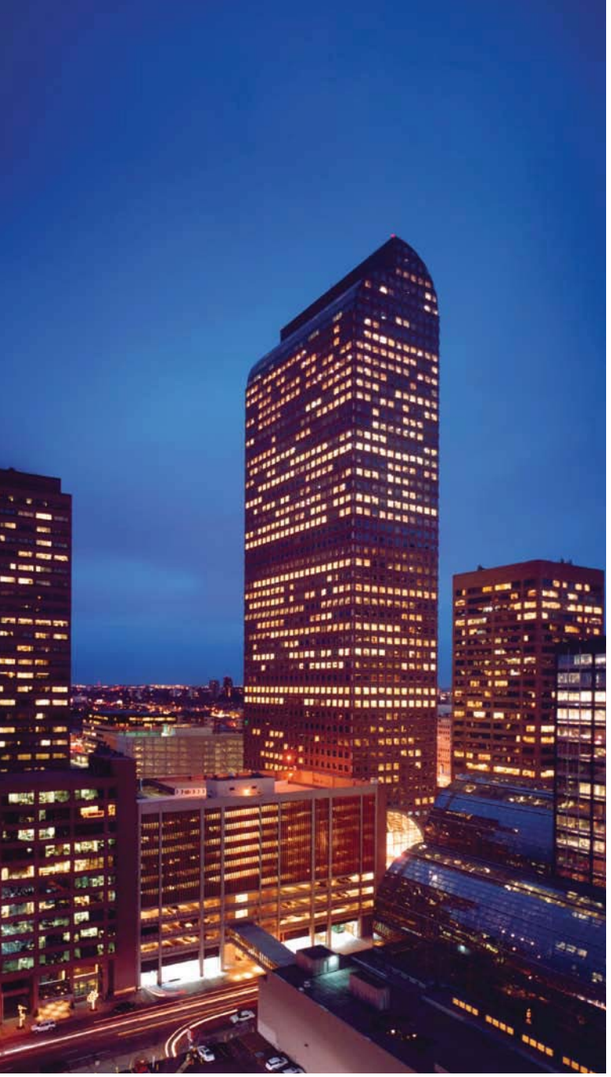
- Building architecture by renowned architect Philip Johnson
- Approximately 1.2 million square feet of Class AA office space
- Granite and grey glass exterior with a glass-enclosed pavilion soaring over 100 feet high
- Spectacular panoramic views
- Immediate access to downtown Denver's world-class amenity base
- 12-Level parking structure connected to the office tower via an underground tunnel
- 24-Hour manned security with automated card key access controls

AMENITIES

Wells Fargo Center offers on-site amenities for tenant and visitor convenience as well as an array of retail, restaurants and entertainment nearby:

- Tuscany Coffee located in the Lincoln Street lobby and 212 Sandwich & Deli located on Sherman Street
- 24-Hour on-site, fully equipped exercise facility offering a full range of cardiovascular and weight equipment, as well as men's and women's showers and locker rooms
- Starbucks, Master Travel, Russell's and Ameri-Copy Services are conveniently located nearby
- On-site conference room offering state-of-the-art video conferencing service
- Close proximity to premier entertainment and retail complex—the Denver Pavilions—featuring 40 stores, five restaurants, two nightclubs, a bowling alley and a 15 screen theatre

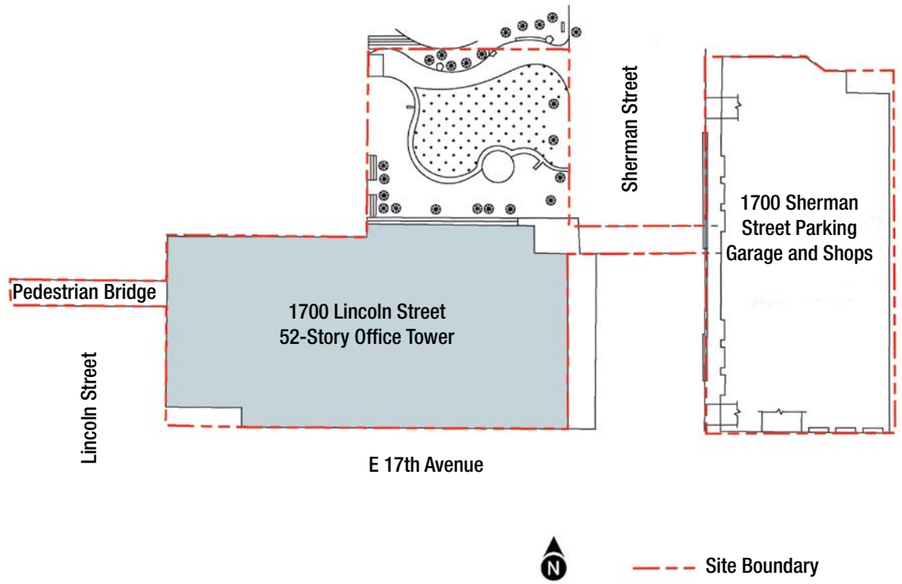




LOCATION

Wells Fargo Center is situated in the heart of the region with close proximity to major freeways, Denver's expanding light rail system, and the largest concentration of shopping, hotels, dining and entertainment in Colorado:

- Direct access to Interstate 25 and Interstate 70
- Walking distance to the State Capital and other government agencies
- Two blocks from RTD Civic Center Station
- Close proximity to the Denver Art Museum, Denver's most celebrated cultural icon
- 16th Street Mall shuttle access to Coors Field, home to baseball's Colorado Rockies, and Pepsi Center, home to hockey's Colorado Avalanche and basketball's Denver Nuggets
- Light rail connection to Invesco Field at Mile High, home to football's Denver Broncos



AVAILABLE SPACE AT WELLS FARGO CENTER

JULY 2011

1700 LINCOLN STREET, DENVER CO 80203

SUITE	RSF	AVAILABILITY	COMMENTS
2000	23,678	Immediate	Full floor opportunity in white box condition
1300	23,161	Immediate	Office intensive full floor with high-end finishes
3050	12,973	Immediate	West-facing half-floor with office intensive build-out
1550	12,518	Immediate	Second generation open space with elevator identity
4550	10,768	Immediate	Fully demolished; white box with new ceiling
2220	9,682	Immediate	White box with new ceiling; all open area
2920/2910	5,526	Immediate	Elevator identity spec suite with nine exterior offices
4750	4,709	Immediate	Premier SW corner with high-end finishes & views
2920	3,263	Immediate	Spec Suite with five offices and elevator identity
2910	2,263	Immediate	Ideal Spec Suite space for small tenant

3500	24,555	April 2012	This block is currently listed for sublease by Newmont
3600	24,555	April 2012	Mining Company. These spaces are available for
3700	24,552	April 2012	negotiation on a sublease or direct basis for delivery
4025	12,878	April 2012	on or prior to April 2012.
3970	12,617	April 2012	

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MPG OFFICE TRUST


1225 SEVENTEENTH STREET

The building's architecture provides a timeless design while its operating systems and services are among the most sophisticated available today in the Denver CBD. The Skidmore, Owings & Merrill project features their signature, efficient, column-less floorplates and a striking exterior appearance.

ELEGANT-FINISH LOBBY

Entry to the tower is through a recently remodeled spectacular 28 foot high lobby. The lobby features an expansive two-story open area with polished travertine walls, flame cut polished rose granite floors, cherry wood columns, pendant and covered lighting, a new state-of-the-art security station and touch screen directory.

STATE-OF-THE-ART ELEVATORS

Seventeen high speed passenger elevators featuring spacious and elegant cabs completely renovated and modernized in 2008.

TENANT EXPERIENCE

Unobstructed, panoramic views of mountains and cityscape as well as a premier roster of Denver's finest tenants.

NUMEROUS ON-SITE AMENITIES

Seventeenth Street Plaza features daytime concierge and full-service 24-hour courtesy staff on-site, secured underground parking with a 1:1,000 s.f. ratio, gourmet coffee shop, New York-style deli, recently updated workout facility including showers and lockers and dry cleaning service.

CENTRALLY LOCATED IN THE CBD

Seventeenth Street Plaza is one of downtown Denver's most sought after business addresses. Its location in the heart of the financial district and gateway to the fashionable Lower Downtown (LoDo) shopping, entertainment and dining district, makes it the ideal location for any company.

CENTRAL LOCATION

Located on Seventeenth Street between Lawrence and Larimer Streets.

TRANSPORTATION

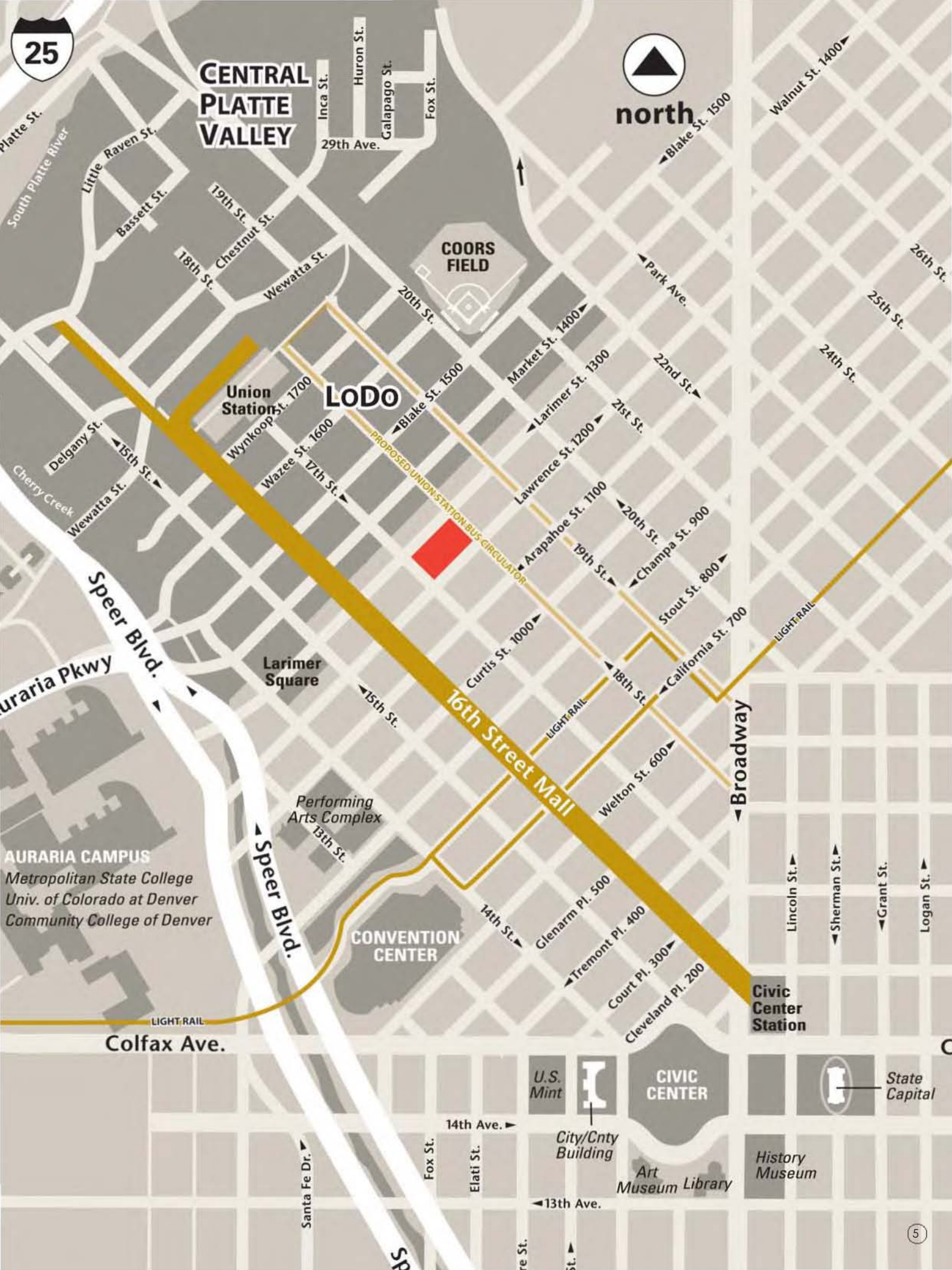
It's central location allows for direct accessibility to mass and automotive transportation: one block to RTD Market Street Bus Station, one block from Sixteenth Street Mall Shuttle, convenient and quick access to all main arterial highways and easy freeway access, proximal location to future Eighteenth Street Circulator bus and metro-wide light rail system. Future light rail hub will be at Union Station, 4 blocks away.

AMENITIES

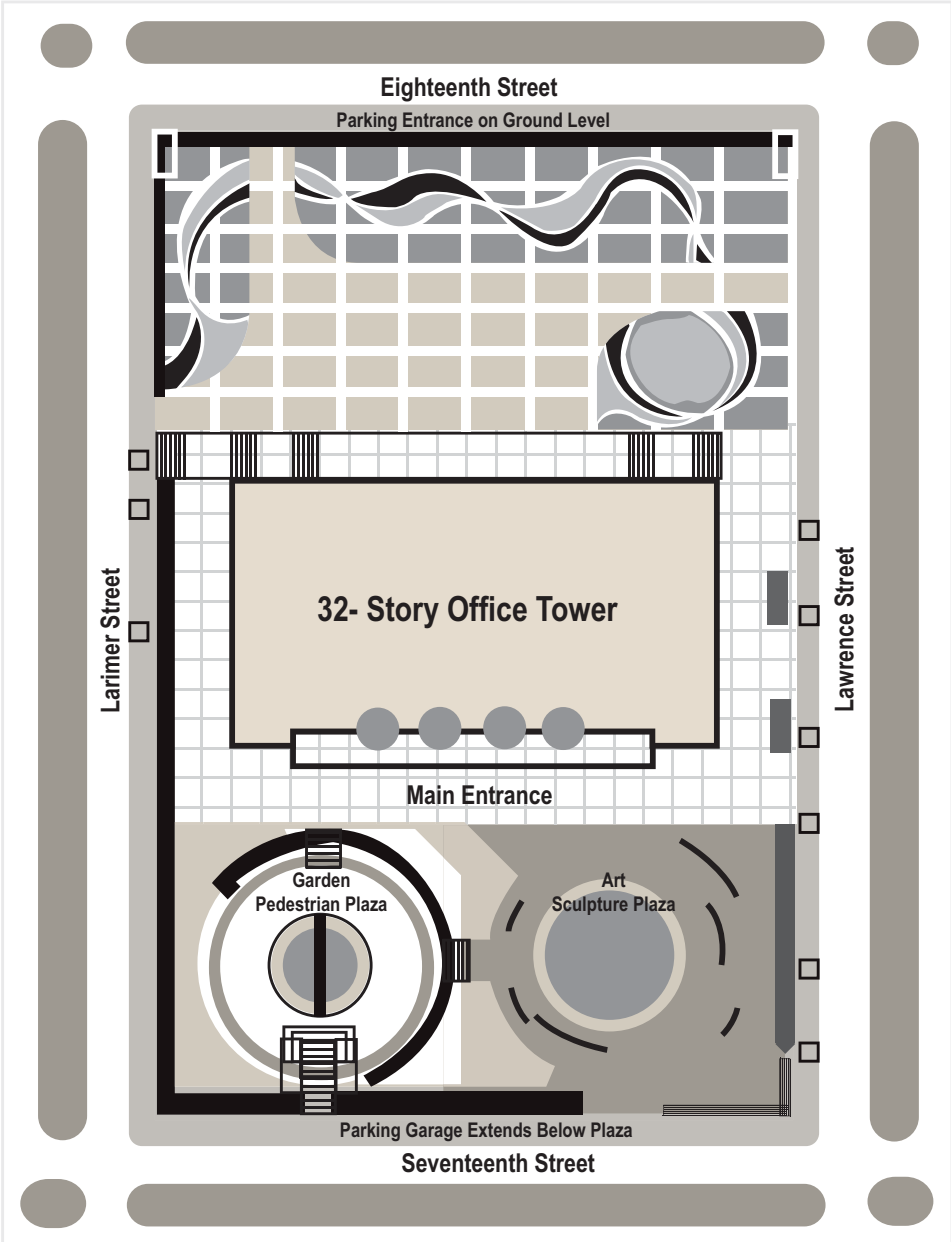
Surrounded by numerous amenities including retail, restaurants, hotels, health clubs, banks and exclusive residential properties for the tenant's convenience.

NEARBY VENUES

An easy walk to Denver Center for the Performing Arts, Denver Pavilions, the Pepsi Center, Coors Field and other major Denver attractions and museums and only 25-minutes drive away from Denver International Airport.


25
CENTRAL PLATTE VALLEY
Huron St.
Inca St.
Galapago St.
Fox St.
29th Ave.
north
Walnut St. 1400
Blake St. 1500
Platte St.
South Platte River
Little Raven St.
Bassett St.
19th St.
Chestnut St.
18th St.
Wewatta St.
COORS FIELD
Park Ave.
26th St.
25th St.
24th St.
20th St.
Market St. 1400
Larimer St. 1300
22nd St.
Union Station
LoDo
Wynkoop St. 1700
Blake St. 1500
Delgany St.
15th St.
Wazee St. 1600
17th St.
PROPOSED UNION STATION BUS CIRCULATOR
Lawrence St. 1200
21st St.
Cherry Creek
Wewatta St.
Arapahoe St. 1100
20th St.
19th St.
Champa St. 900
Stout St. 800
Speer Blvd.
Curtis St. 1000
California St. 700
LIGHT RAIL
Larimer Square
18th St.
15th St.
16th Street Mall
LIGHT RAIL
Welton St. 600
Broadway
Performing Arts Complex
13th St.
AURARIA CAMPUS
Metropolitan State College
Univ. of Colorado at Denver
Community College of Denver
Speer Blvd.
Glenarm Pl. 500
14th St.
Tremont Pl. 400
Court Pl. 300
Cleveland Pl. 200
CONVENTION CENTER
Civic Center Station
Lincoln St.
Sherman St.
Grant St.
Logan St.
LIGHT RAIL
Colfax Ave.
U.S. Mint
CIVIC CENTER
State Capital
14th Ave.
City/Cnty Building
Fox St.
Elati St.
Santa Fe Dr.
Art Museum
Library
History Museum
13th Ave.

SITE PLAN



CLASS AA GROUNDS

Building is surrounded by two settings; a beautifully landscaped outdoor plaza and sculpture garden facing Seventeenth Street, while an outdoor mezzanine including manicured putting green and flower garden, perfect for employee and client entertainment, overlooks Eighteenth Street.

PARKING

Abundant daily and monthly parking facilities within 2 block radius.

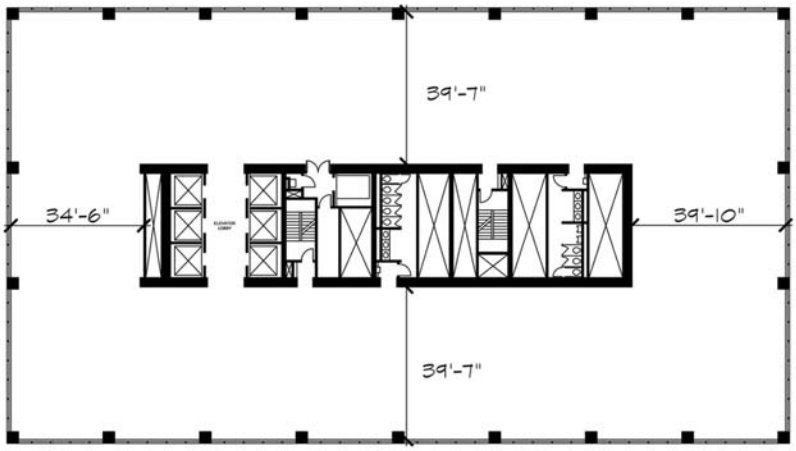
LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN

Seventeenth Street Plaza has become the first multi-tenant property
in the Rocky Mountain Time Zone to earn LEED®-EB O&M Gold Certification.

ENERGY EFFICIENCY

Seventeenth Street Plaza has earned an ES rating every year
since 2003 for improving and optimizing the building's efficiency.
Currently the buildings ENERGY STAR® ranking places it in the top 6 percent in the nation.

EFFICIENT FLOORPLATES

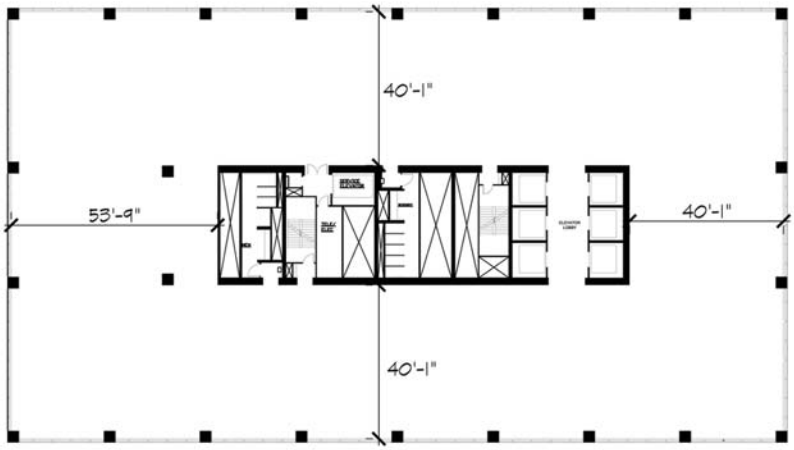


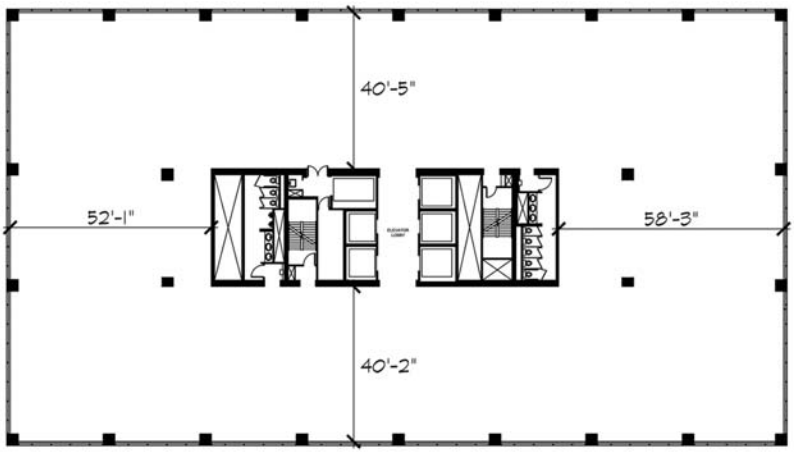
FLOORS 3-13

- Average 20,700 rentable square feet per floor.
- 7 - 8% single tenant loss factor / 12% - 15% multi-tenant loss factor.
- Center core configuration.
- 5 ft. mullion spacing and column free floor plates allow for efficient space planning.
- Ideal core-to-window dimensions.

FLOORS 14-23

- Averages 21,400 rentable square feet per floor.
- Open area office requirements permit 123 employees or 174 rsf per person.
- Office intensive requirements permit 88 employees or 243 rsf per person.
- Full floor plans permit up 44 perimeter offices which includes a window line conference room.





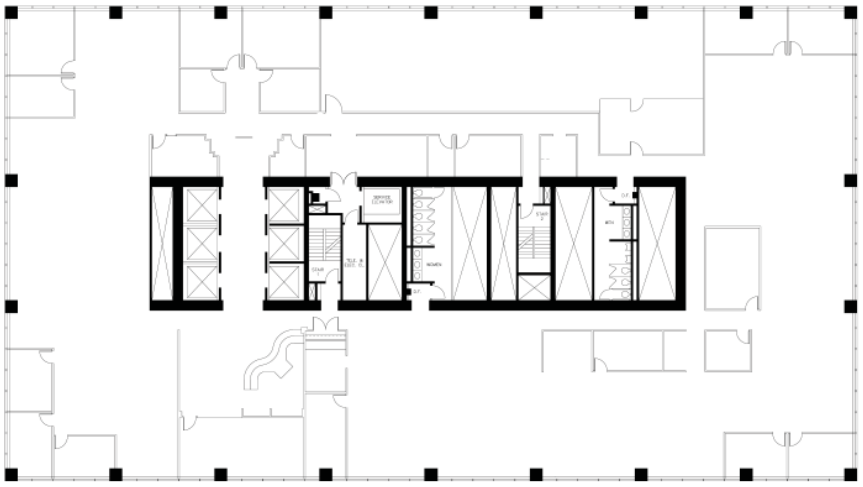
FLOORS 24-32

- Averages 22,000 rentable square feet per floor.
- Full height windows provide abundant natural light.
- Numerous opportunities for impressive entry and boardroom with mountain views.
- Above standard common area finishes for multi-tenant floors.

Seventeenth Street Plaza

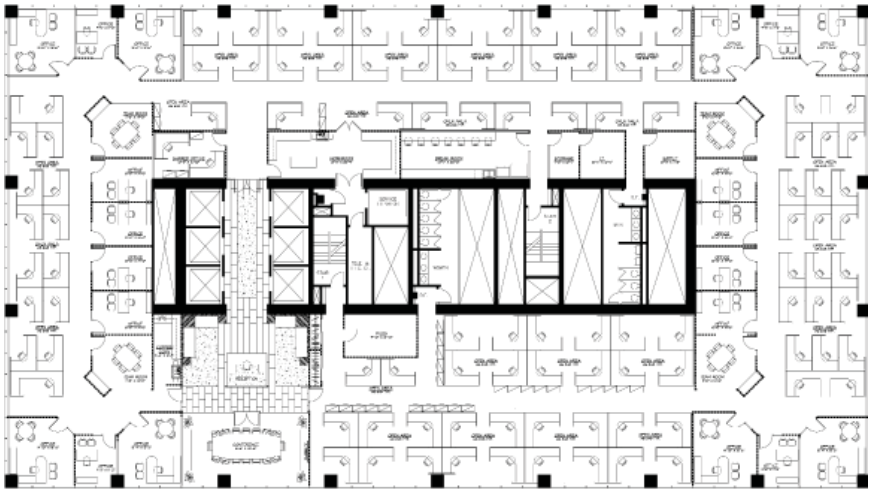
Eighth Floor - Suite 800

Existing Floorplan



- 20,752 square feet
- Center core configuration
- Five foot mullion spacing
- Ideal core to window dimensions
- Column free floors

Open Office Floorplan



- 20,752 square feet
- Open office permits 123 employees or 174 rsf per person
- Abundant natural light
- Full height windows
- Mountain views

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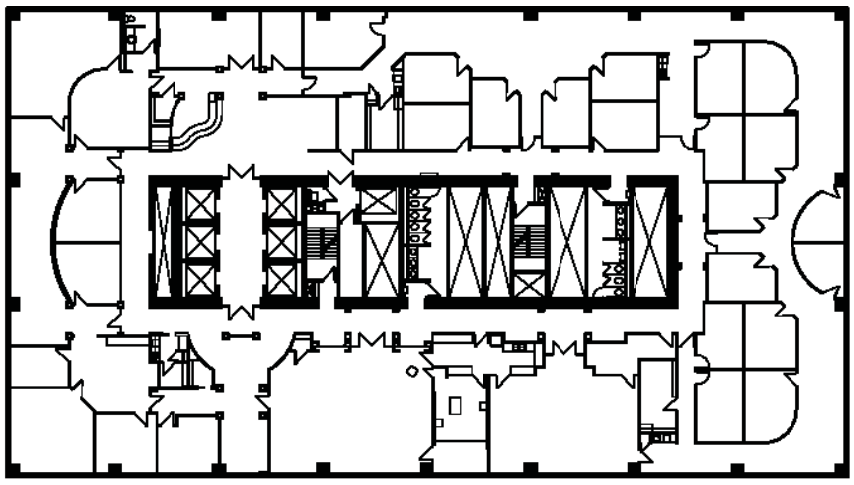
Seventeenth Street Plaza

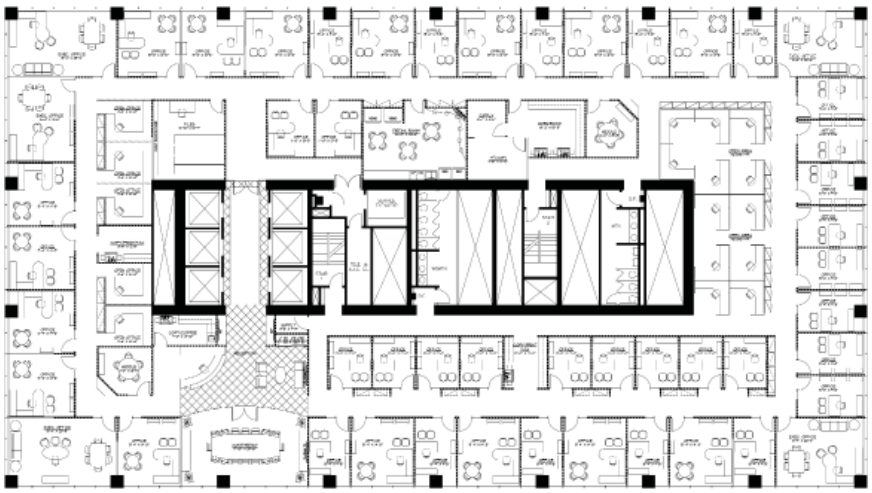
Ninth Floor - Suite 900

Existing Floorplan



- 20,752 square feet
- 27 private offices
- 2 large conference rooms
- AV room
- Executive bathroom
- Open area
- Closet & storage
- Column free floor

Office Intensive Floorplan



- 20,752 square feet
- Office intensive permits 88 employees or 243 rsf per person
- Perimeter office capability permits up to 44 offices
- Abundant natural light
- Full height windows
- Mountain views

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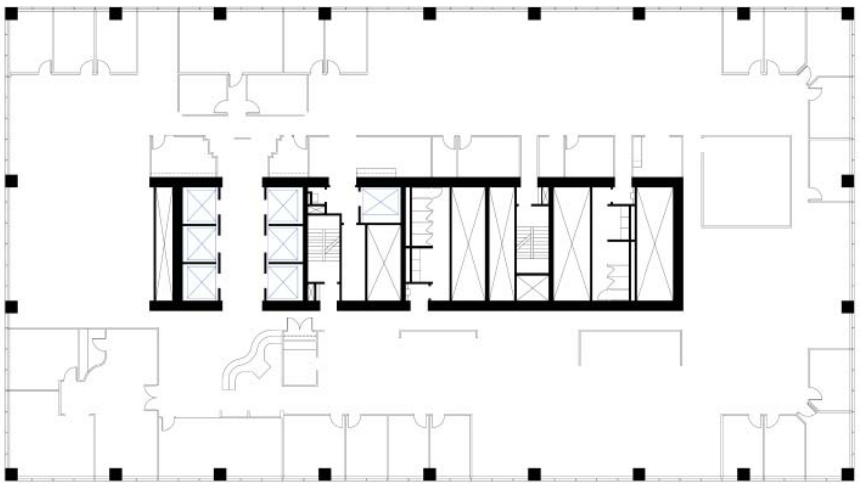
Seventeenth Street Plaza

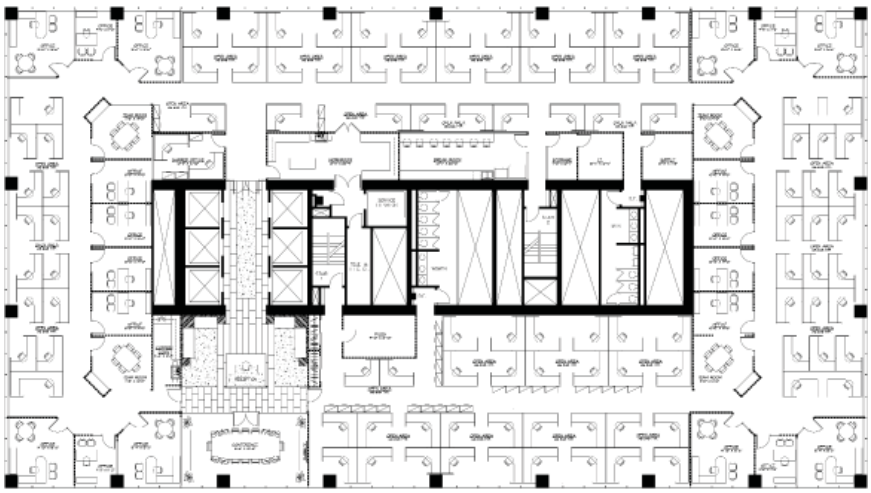
Tenth Floor - Suite 1000

Existing Floorplan



- 20,752 square feet
- Center core configuration
- Five foot mullion spacing
- Ideal core to window dimensions
- Column free floors

Open Office Floorplan



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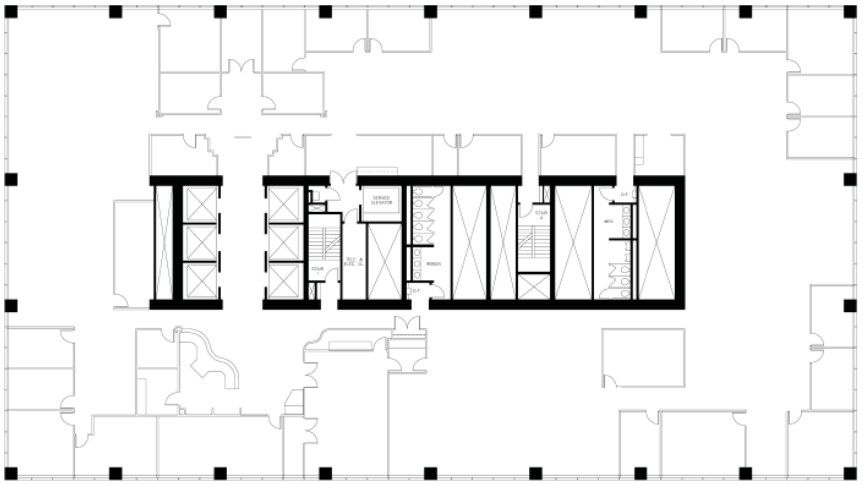
Seventeenth Street Plaza

Eleventh Floor - Suite 1100

Existing Floorplan



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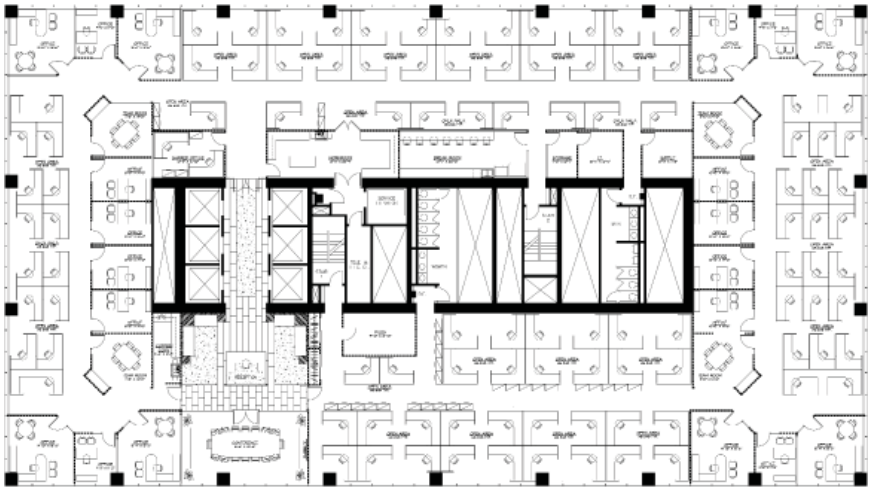
- Column free floors

Open Office Floorplan



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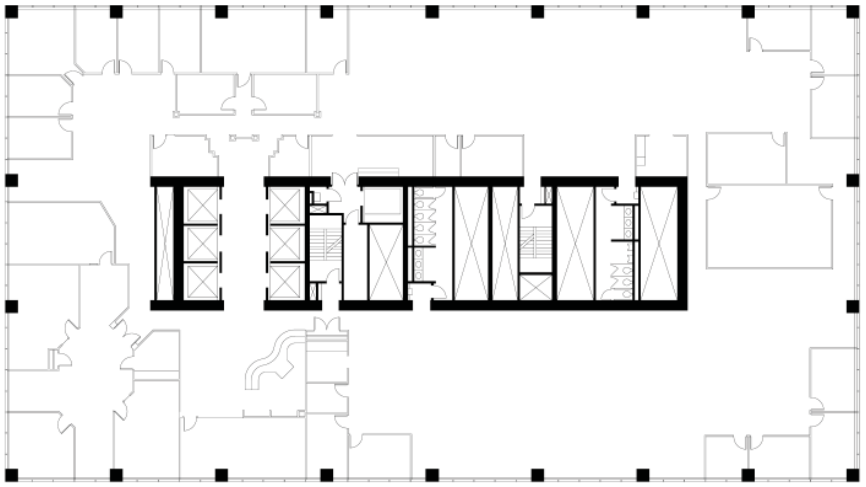
Seventeenth Street Plaza

Twelfth Floor - Suite 1200

Existing Floorplan



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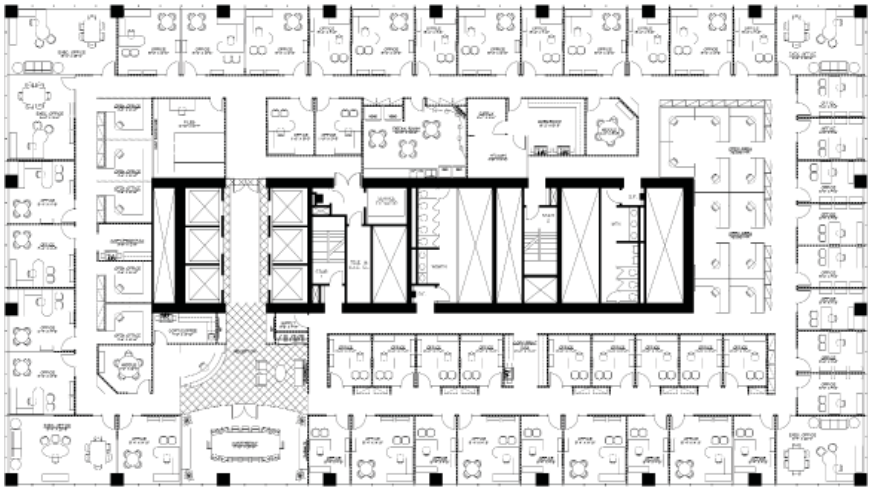
- Center core configuration
- Five foot mullion spacing
- Ideal core to window dimensions
- Column free floors

Office Intensive Floorplan



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Stapleton. The High Performance Workplace.

Centrally positioned between Downtown and Denver International Airport, 2980 Syracuse Street provides abundant free parking, bus transit options and a future light rail system.

2980 SYRACUSE STREET

Denver, Colorado

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STAPLETON™ GRUBB & ELLIS. From Insight to Results FORESTCITY

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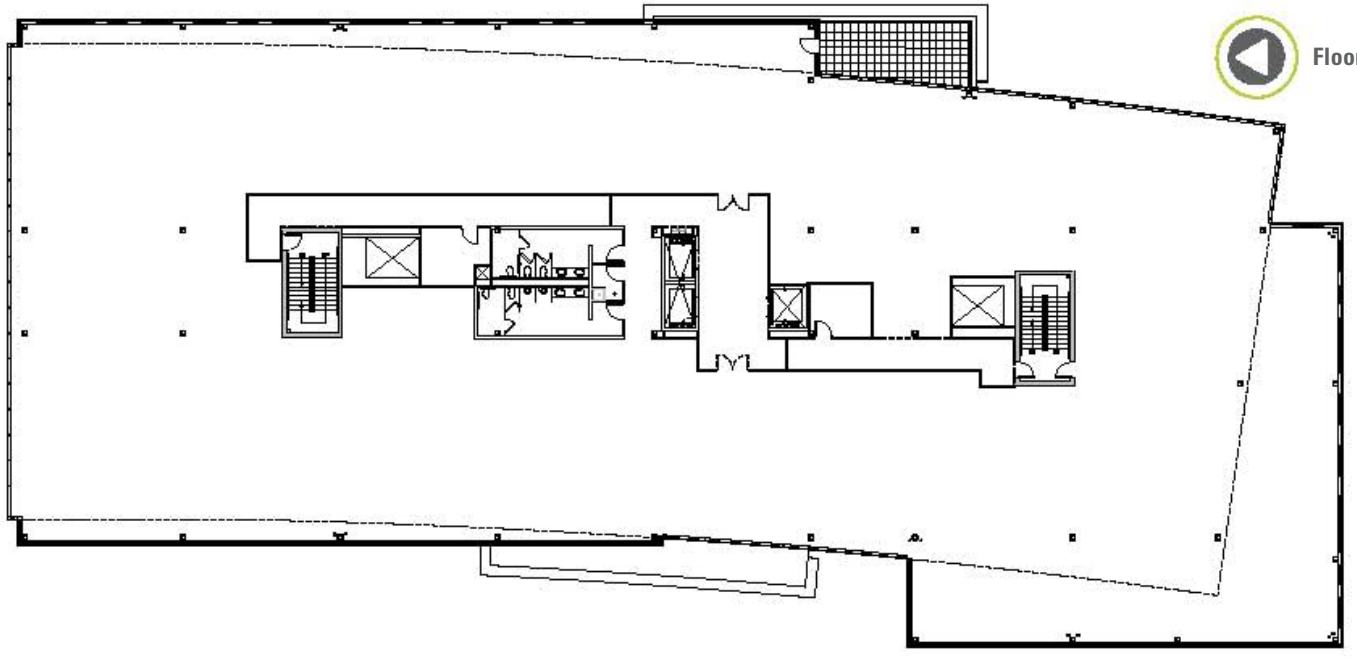


Floor Plate

Stapleton. The High Performance Workplace.

Location

2980 Syracuse Street is located in the heart of Stapleton, the top-selling master-planned community located just minutes from Denver, where there are 10,000 new residents, numerous retailers, restaurants and businesses all within walking distance.

The property is conveniently located adjacent to East 29th Avenue Town Center, Quebec Square retail center and The Shops at Northfield retail center. In Autumn 2009, Stapleton unveiled the 80-acre Central Park, just blocks away from 2980 Syracuse Street, giving Denver its third largest park.

Building Highlights

- LEED© Gold Pre-Certified
- 125,000 SF
- 5-story Class A office building
- Efficient 25,000 SF floor plates
- Two-story grand atrium
- Free parking (4.4 : 1,000 SF)

Premier Location

- Close proximity to I-70 and I-270, 15 minutes to downtown Denver, 15 minutes to DIA
- Floor-to-ceiling windows with spectacular views
- Adjacent to E. 29th Ave. Town Center. Minutes to Quebec Square and Central Park

Property Description

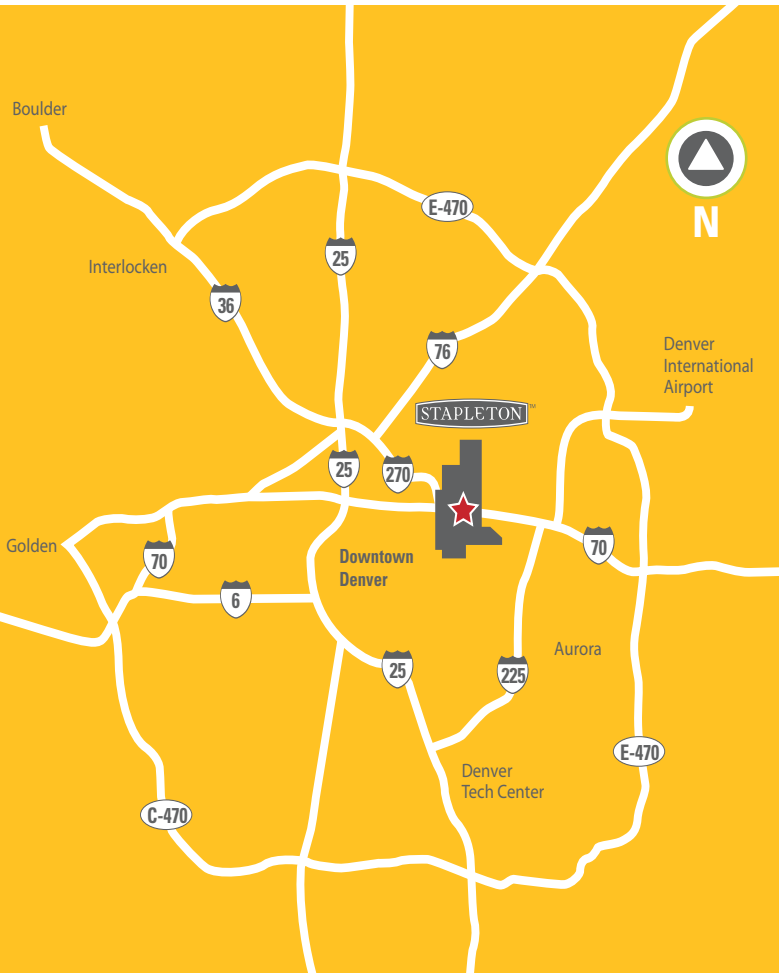
- 125,000 SF, Divisible to 25,000 SF
- Efficient floor plates
  7% load factor (12% for multi-tenant)
- Roof decks
- 9'6" ceiling height
- Evaporative cooled roof-top HVAC units
- Solar-assisted domestic hot water system
- Low-flow water systems
- On-site locker rooms
- Energy efficient glass
- Energy Management Systems throughout

LEED© Gold Pre-Certified

2980 Syracuse Street is being built to LEED Certified Gold Standard, promoting sustainability and efficiency.

Site Plan

Stapleton. The High Performance Workplace.



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Forest City Enterprises, Inc., the master developer of the former Stapleton International Airport in Denver, is pleased to offer the following site overview for the United States Patent and Trade Satellite Office (USPTO). Since development began in 2001, Stapleton has been recognized as one of the premier urban infill, mixed-used projects in the country. At Stapleton, the USPTO can avail itself of both the business elements necessary to fulfill its mission and the employee-friendly environment that workers want. Stapleton's location in unrivaled; it is just 15 minutes from downtown Denver and 15 minutes from Denver International Airport (DIA) via car, bus or the new commuter rail line that will open in January 2016. From a business perspective, Stapleton offers ultimate site, building and parking flexibility, expansion options, robust infrastructure, and new, convenient transit connections. For employees, Stapleton provides the lifestyle and amenities that employees want and demand: parks, running trails, recreation centers, housing, shopping and other amenities – all in close proximity for USPTO's employees to enjoy.

About Forest City: Forest City Enterprises, Inc., is an NYSE-listed national real estate company with $11.8 billion in total assets. The Company is principally engaged in the ownership, development, management and acquisition of commercial and residential real estate and land throughout the United States.

Founded in 1920 and based in Cleveland, Ohio, Forest City's diverse portfolio includes hundreds of premier properties located throughout the United States. We are especially active in our Core Markets – the New York City metropolitan area, Boston, Greater Washington, D.C./Baltimore, Denver, California, and Chicago – where we have overcome high barriers to entry and developed a unique franchise. Forest City has a six million square foot office portfolio and considerable experience working with GSA. Recent Forest City GSA projects include: development of Southeast Federal Center in Washington DC (42 acres), Drug Enforcement Administration (DEA) office building in Albuquerque (33,000 SF), Internal Revenue Service (IRS) lease in Brooklyn (120,000 SF) and FBI regional headquarters office building in Denver (220,000 SF).

About Stapleton: Forest City's redevelopment of the former Stapleton International Airport in Denver is a model of mixed-use and diversity, sustainability and smart growth. It is an excellent example of how Forest City's strategy thrives in large-scale, mixed-use developments by using creativity, diversification and consistency to make a difference in cities like Denver. Stapleton is one of the largest urban infill and development projects in the United States, covering over 4,100 acres. It offers a diverse urban tapestry of homes, shops, offices, parks and schools, all centrally located minutes from downtown Denver. To date, Stapleton has approximately 4,000 homes, 500 apartments, 2 million square feet of retail, 1 million square feet of office/industrial, and 500 acres of parks and open space. In 2007, the GSA selected Stapleton to be the home of a new 220,000 square-foot regional headquarters for the Federal Bureau of Investigation (FBI). The FBI occupied the newly-constructed, LEED-certified building in 2010.

Site and Building Location: Stapleton can provide numerous site options for the USPTO but for the purposes of this initial overview, we are proposing a site that is near the new Central Park Station; a commuter rail stop on the FasTracks East line from Downtown Denver to DIA. The East line is currently under construction and will be completed in January 2016. This proposed site near Central Park Station will provide the USPTO's employees another easy option to access DIA (nonstop service to more than 160 domestic and international destinations) and downtown Denver.

The site itself provides ultimate flexibility for the USPTO:

- The site can accommodate a 100,000+/- SF building with the ability to provide Department of Defense (DoD) 82' security setback requirement, if necessary
- Expansion land for another 100,000 SF building (connected or not connected)
- On-site surface parking (or structured, if desired)
- Private and public entrances, if necessary

The proposed USPTO site is adjacent to the new FBI regional headquarters building. The headquarters building neighbors the restaurants and amenities of Quebec Square and is within walking distance of the new commuter rail stop. Zoning for this site is M-I-MX-5, a flexible zoning designation, ideal for the USPTO.

Aggressive pricing terms: We would invite the opportunity to learn more about the USPTO's requirements and to further discuss competitive pricing terms. Stapleton offers the lowest cost transit-oriented development land in the Denver metro area. Land sales for these areas at Stapleton range from $7.50/sf to $16.00/sf.

Transportation & Access: In October 2011, a new interchange was completed and opened on Interstate 70 at Central Park Blvd. The interchange provides new east and west access to Interstate 70 from Stapleton as well as realignment for the connection of Interstate 70 and Interstate 270. The new alignments will provide additional, direct access to the Shops at Northfield at Stapleton and exceptional access to new development to the north and south of the interstate. Additionally, the proposed PTO site is less than a mile away from the new interchange and thus, easy access to I-70, I-270 and I-225.

Infrastructure: Stapleton is served by two substations with high capacity. Stapleton has additional land, sufficient capacity and dual power feeds should the USPTO seek a nearby data center. The area can also be served by two central plants for fiber.

Central Location: Located within close proximity to both downtown Denver and DIA, Stapleton's central location allows businesses to draw from the entire metro area employee base. Stapleton is located in the City and County of Denver providing for the prestigious Denver address. Stapleton is already home to U.S. Bank, FBI Regional headquarters, Noble Sysco, Denver Transit Partners and the North American headquarters for SMA Solar.

Stapleton is bordered to the east by the Anschutz Medical Campus and Colorado Science and Technology Park at Fitzsimons. The Anschutz Medical Campus is the world's only completely new education, research and patient care facility and the largest academic health center from Chicago to the West Coast, north of Texas. In 2008, intellectual property originating at the University of Colorado led to 237 invention disclosures, 188 U.S. patent applications filed, 28 U.S. patents granted, 58 exclusive and non-exclusive options and licenses, and the formation of 11 start-up companies.

Amenities and Parks: Home to Quebec Square, Northfield and E. 29th Ave. Town Center, Stapleton has over 2.1 million square feet of retail amenities that are second to none. Hotel rooms are bountiful, with over 2,000 hotel rooms within a one-mile radius of the proposed USPTO site and almost double that amount within a 5-mile radius. Stapleton currently boasts 24 parks and open spaces totaling 822 acres, offering direct access to more open space (and 25 miles of hiking/biking trails) than any other location in Metro Denver. Stapleton has housing options that range from executive to entry level, providing a live/work/play atmosphere that has received numerous awards and recognition. Additionally, a new, state of the art health club has recently opened at Stapleton.

Cassidy Turley / Fuller Real Estate

9100 East Mineral Circle

Englewood, Colorado

160,000 SF Headquarters Building

This property has been the previous headquarters location of Cyprus Amax Minerals, Rythms Net Connections and United Launch Alliance and is one of Denver's premier single user office facilities. Featuring unsurpassed mountain views, Class A finishes throughout and highly efficient and sizable floor plates, this building affords a truly unique lease and purchase opportunity.

For more information, please contact:

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Dan Miller, Senior Vice President
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Denver, Colorado 80202

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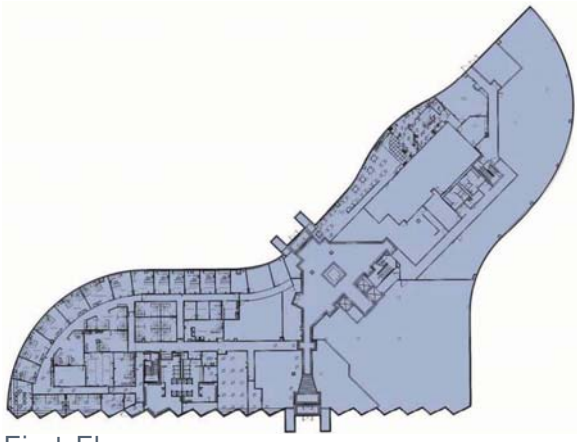
Cassidy Turley / Fuller Real Estate

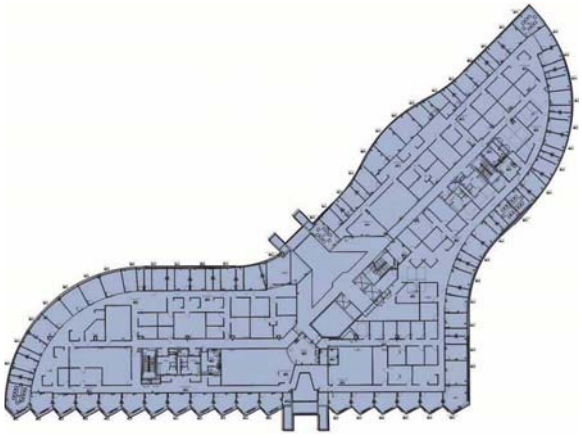
Building Summary

County:	Arapahoe County
Site Area:	8.21 Acres (357,628 SF)
Net Rentable Area:	160,572 SF
Year Built:	1989, renovated in 2000
Stories:	4 Stories
Parking:	3.0/1,000 SF (492 surface parking spaces). Additional street parking is available at no charge. Landlord has reviewed initial conceptual plans to create additional parking to increase this ratio.
Security:	There are key card systems present at the entrances to the building and within the stairwells. Security camera observation bubbles are located on the ground floor of the building. These systems can be monitored at the front desk in the main lobby.
Ceilings:	The ceilings are suspended systems with 2'x4' lay-in ceiling tiles and 8'6" in height.
Heating:	Primary heating for the building is provided by an electric forced air system with a plenum air return. Heat is removed from the system via two Evapco cooling towers located along the sub-grade exterior on the northeast corner of the building. The HVAC system features pneumatic controls.
Cooling:	Cooling is provided by a chiller and cooling tower system. Chilled water is produced by one 50-ton and one 200-ton four stage reciprocating Dunham-Bush chillers and two circulating pumps. Additionally, there are two air conditioning condenser units on a concrete pad northwest of the building. These units were installed in 2000 to provide supplemental cooling to the first floor mechanical rooms and a computer server room. In addition, the former tenant left several EDPAC and Liebert dry coolers, which provide supplemental cooling to areas with heat sensitive equipment. The chiller utilizes R-22 refrigerant.

Unobstructed Mountain Views



First Floor
44,575 SF



Second Floor
42,507 SF

9100 East Mineral Circle

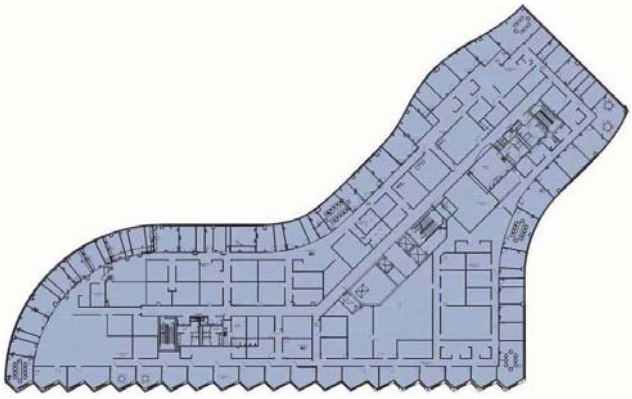
Englewood, Colorado

Building Training Facility

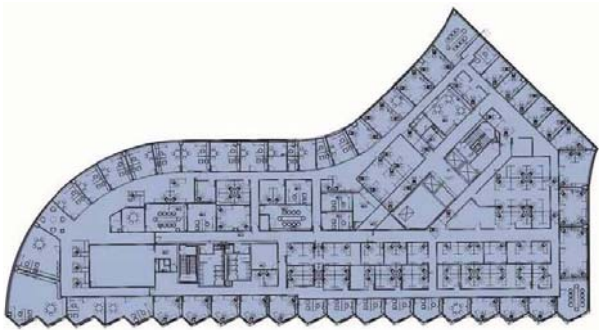
Building Cafeteria

Executive Conference Room

Life Safety:	A new, fully addressable state-of-the-art EST Quick Start fire life safety system is currently being installed, which includes new horns/strobes, wiring, enunciator, mount devices, smoke detectors, heat detectors and duct detectors. The building is sprinklered with a wet pipe system. The sprinkler control valve, which operates off of City water pressure, is located near the maintenance office on the ground floor.
Electrical:	A total of 4,000 amperes of three phase-four wire service is provided to the building.
Elevators:	There is one 4,000 pound and two 3,000 pound hydraulic elevators. The elevators were manufactured by Dover and were installed in 1988. New ADA compliant push button phones have been installed.
Data Center:	A 4,000 SF raised floor data center exists on the first floor and incorporates 100 tons of Liebert cooling, and a 300 KVA UPS and 125 KVA UPS. A pre-action air fire protection system covers this area.
ATO Switch:	An ATO switch exists at the building which allows the transfer of power between two separate Xcel Energy substations.
Signage:	The building offers monument signage on Chester Street and Mineral Avenue.
Building Amenities:	A state-of-the-art auditorium/conference facility exists on the first floor with full media capabilities and can accommodate 100 participants. As well, a sizable first floor cafeteria room exists.
Light Rail:	The Dry Creek Light Rail Station is 500 yards from the building and offers convenient walking access for employees at the building.
Access and Area Amenities:	Access to the building is highly convenient and I-25 is just a two-minute drive via the Dry Creek interchange. Numerous hotels exist within a 1 mile radius and dozens of restaurants can be found in the immediate area, not to mention Park Meadows Mall which is a three-minute drive to the south of the building.



Third Floor
40,263 SF



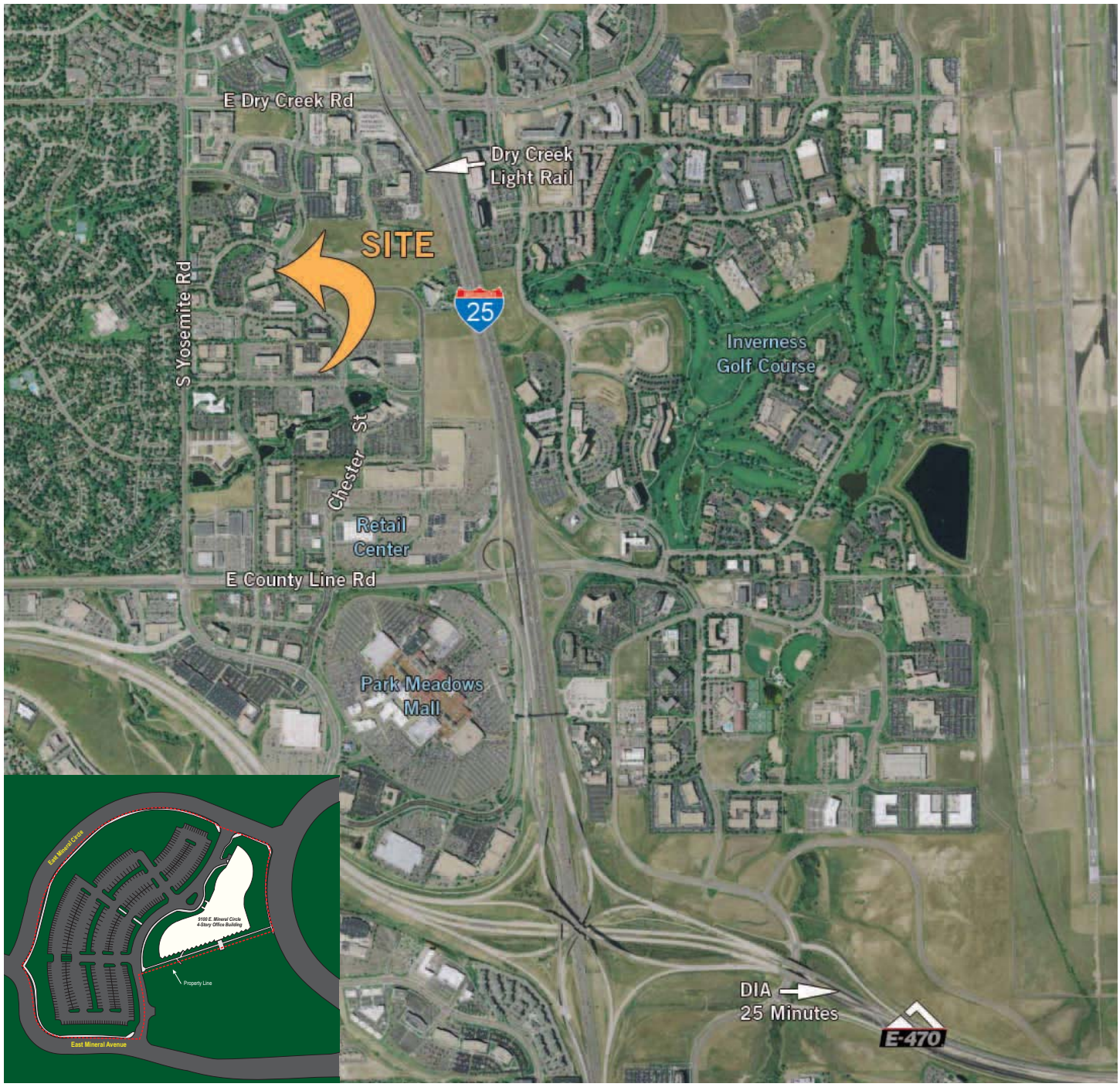
Fourth Floor
32,824 SF

The nformat on contained here n has been g ven to us by the owner of the property or other sources we deem reliab e. We have no reason to doubt its accuracy, but we do not guarantee it. A informat on shou d be ver fied pr or to purchase or ease.

Cassidy Turley / Fuller Real Estate

9100 East Mineral Circle

Englewood, Colorado



Listing #L21402

For more information, please contact:

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Village Center Station II

150,000 SF Class A Office Building

Greenwood Village
Colorado 80111

- Located on I-25, minutes from downtown
- Adjacent to Arapahoe Station Light Rail Station
- 40 minutes from DIA; 10 minutes from Centennial Airport
- Close proximity to Denver's premier executive housing
- On-site complimentary retail and restaurants
- Building signage available

- Land is owned fee simple by Shea Properties
- Architectural drawings are complete
- Building permits can be obtained quickly
- State-of-the-art building infrastructure with 9 foot 6 inch ceilings, continuous glass line, and clear span space
- Highly efficient floor plates
- Timelines can be altered to meet need of user
- Flexibility in final square footage needs

Shea Properties - a proven developer

For more than three decades, Shea Properties has been building places for people, cities and leading corporations. Today, we are a $2.5 billion full-service real estate firm responsible for land acquisition, development, construction and management of office, industrial, retail, apartment and mixed-use environments. Shea Properties is recognized for its financial strength and commitment to collaboration, integrity and quality. Shea Properties offers a range of capabilities matched by few developers.

The Shea Properties Colorado team has participated in the development of over 5 million square feet of office space in Denver since 1995. Major corporate users include CH2M Hill, Western Union, Oracle, Visa USA and RE/MAX. The Senior Team has a combined experience of over 120 years in the Development business.

Shea Properties

6380 S. Fiddlers Green Circle, Greenwood Village, CO 80111 303.773.1700

RIDGEVIEW

Prime Southeast Location
Near I-25 and RidgeGate Parkway
Lone Tree, CO

- **Permit Ready**
- **Build-to-Suit Opportunity**

For More Information Contact:

RidgeGate Investments
c/o Coventry Development Corporation
(720) 279-2581

* Information contained herein, while not guaranteed, is from sources we believe reliable.
Price, terms, and information are subject to change.

Ridgeview provides up to 120,000 rentable square feet of Class A office space less than 1/2 mile from I-25 and RidgeGate Parkway in Lone Tree, CO. The 30,000 square foot plates maximize efficiency on all four floors, while the site boasts a healthy 4:1000 parking ratio, comprised of both surface and covered parking.

The site is centrally located for the strong south metro employment base. Immediately adjacent to SkyRidge Hospital, occupants are also within walking distance of a variety of retail services and hiking/biking trails, and are provided easy access to Downtown Denver and Denver International Airport.

HIGHLIGHTS:

- Two easy points of access from Interstate I-25
- Strong presence on RidgeGate Parkway & Park Meadows Drive
- Available outdoor seating and upper level patio
- Excellent daylighting and views

RidgeGate is a 3,500-acre planned community within the City of Lone Tree. It is planned as a compact integrated, mixed-use community where people will live, work, shop and recreate in a pedestrian-friendly environment, with convenient access to transportation. It will include over 1,000 acres of open space including neighborhood and community parks and enhanced drainage corridors and wildlife habitat.

An extensive network of trails will provide the public with access to the bluffs, as well as connection with a regional trail system.

LOCATION

- Adjacent to SkyRidge Medical Center
- 1/2 mile to I-25 via RidgeGate Parkway
- 10 minutes to Centennial Airport
- 20 minutes to Downtown Denver
- 30 minutes to Denver International Airport

FEATURES

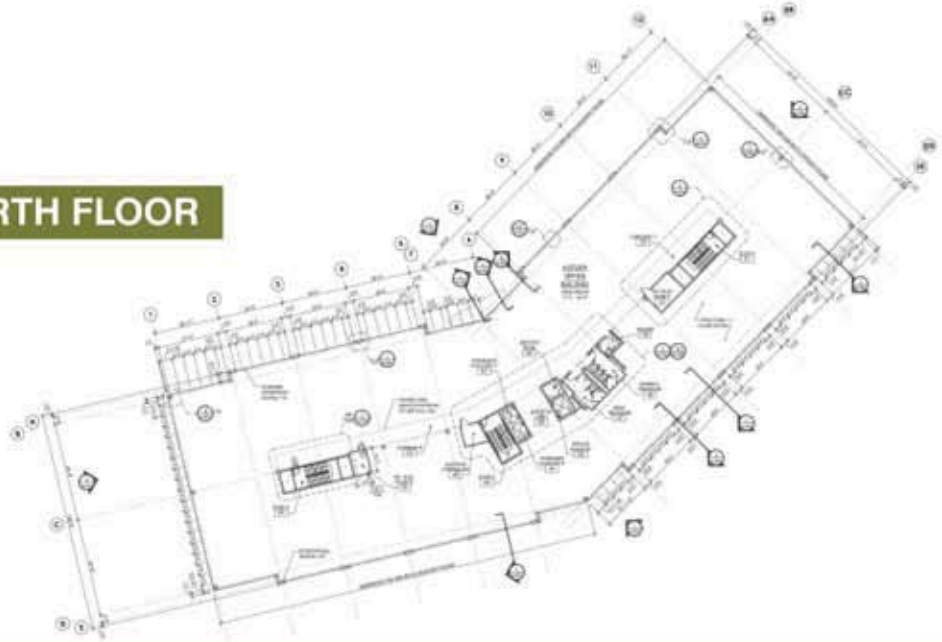
- Walking distance to restaurants & child care with easy access to I-25

RIDGEVIEW at RidgeGate

FIRST FLOOR

SECOND/THIRD FLOORS

FOURTH FLOOR



RIDGEVIEW at RidgeGate

Office Class
- Class A
- Permit ready for fast delivery

Building
- 120,000 rentable square feet
- 4 Stories
- Quality precast construction

Parking
- 4:1000 parking ratio
- Structured covered parking

For More Information Contact:

RidgeGate Investments, Inc.
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